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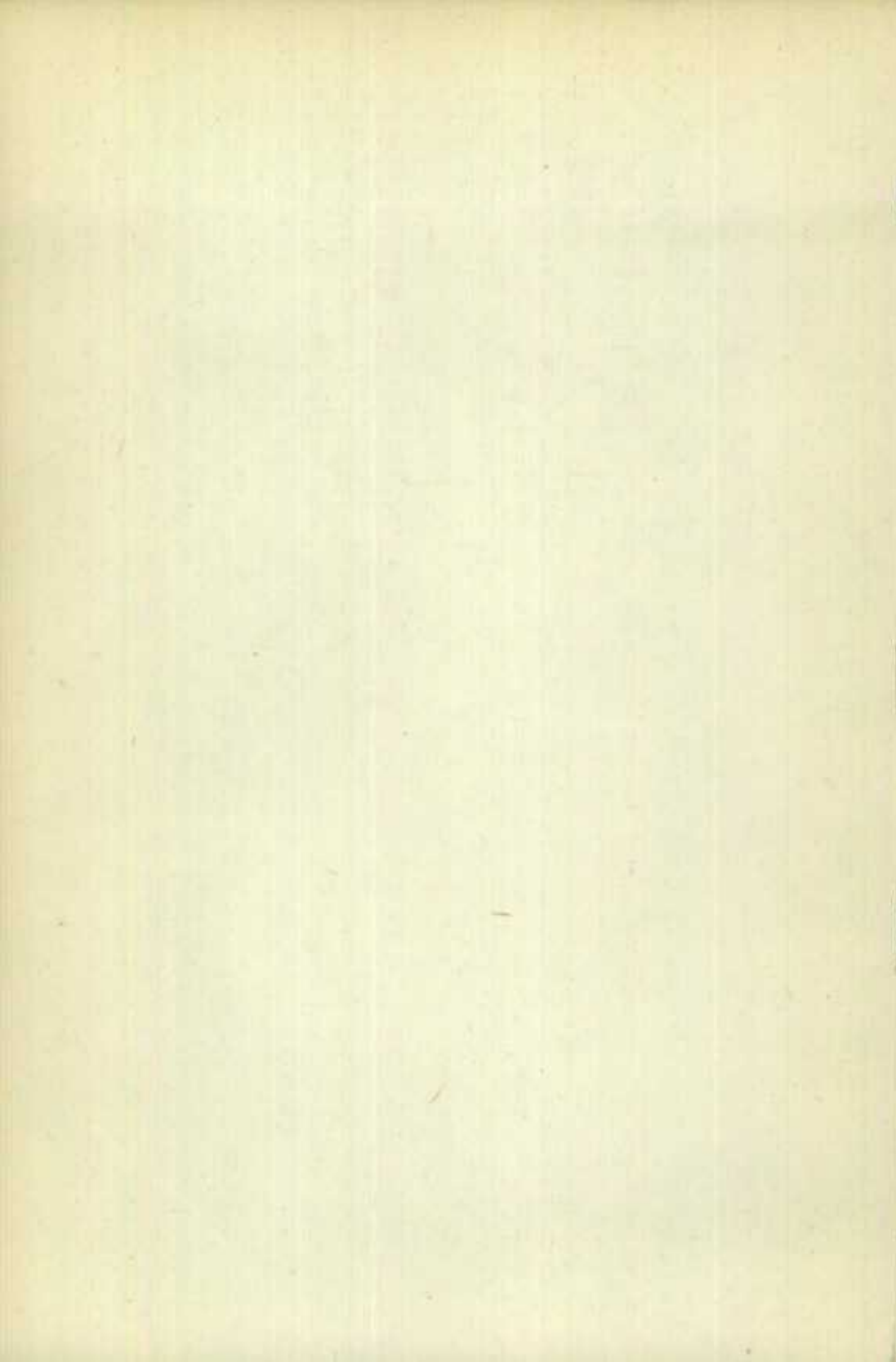
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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA, 1915.

Final Report for the Year ended December 31, 1915.

The year 1915 will be memorable for the most abundant grain harvest ever reaped in Canada up to that time. This result was due to a remarkable combination of circumstances. The small grain harvest of 1914, ripened early and expeditiously threshed and marketed under favourable weather conditions, enabled the western farmers to complete an unusually large proportion of fall ploughing in readiness for the next year's crop. In Ontario the acreage sown to fall wheat was increased by over 16 per cent, as compared with the previous year, and the increase of fall wheat for all Canada was over 9 per cent. A mild winter and spring brought the fall wheat crop through with considerably less loss from killing than usual. The spring opened early, and as a general rule the conditions for seeding were favourable. With the prospect of high prices for wheat and other cereals, and responding to appeals for increased production on patriotic grounds, the farmers of Canada took the fullest advantage of their opportunities, with the result that the area sown to wheat for the harvest of 1915 was not only the largest on record in Canada, but exceeded the area sown in the previous year by 1,964,400 acres, or nearly 18 per cent. Finally, the growing season was uniformly favourable, and the average yields per acre of all the principal cereals in Canada were higher than in any previous year on record. For wheat, the average yield per acre was close upon 29 bushels, or eight bushels more than the previous record of 21 bushels in 1913. Owing to the heavy rains of August in Ontario, Quebec, and the Maritime Provinces, the yield of potatoes turned out to be very poor, the average of 130.81 bushels to the acre being lower than in any previous year except 1910, when the average was 119.36 bushels. The total area estimated to be sown to field crops in Canada for 1915 was 37,063,455 acres, as compared with 35,102,175 acres, the sown area, and 33,436,675 acres, the harvested area, in 1914.

YIELD OF GRAIN CROPS.

As a result of the returns of the average yield per acre, made after threshing, the total yields of the grain crops in bushels for the season of 1915, compared with 1914, were as follows:—Wheat, 376,303,600, as against 161,280,000 in 1914; oats, 520,103,000, as against 313,078,000; barley, 53,331,300, as against 36,201,000; rye, 2,394,100, as against 2,016,800; peas, 3,478,850, as against 3,362,500; beans, 723,400, as against 797,500; buckwheat, 7,865,900, as against

8,626,000; flaxseed, 10,628,000, as against 7,175,200; mixed grains, 17,523,100, as against 16,382,500, and corn for husking, 14,368,000, as against 13,924,000 bushels. The average yields per acre in 1915 are, in bushels, as follows, the figures placed in brackets representing the yields of 1914 for comparison:—Fall wheat, 29·41 (21·41); spring wheat, 28·93 (15·07); all wheat, 28·98 (15·67); oats, 45·76 (31·12); barley, 35·33 (24·21); rye, 21·32 (18·12); peas, 17·73 (17·64); beans, 16·70 (18·20); buckwheat, 22·88 (24·34); flaxseed, 13·18 (6·62); mixed grains, 37·54 (35·36); and corn for husking, 56·72 (54·39). The average yields per acre for 1915, as now definitively returned, and consequently the estimated total yields, are thus larger than the two previous estimates published by the Census and Statistics Office, viz., the "preliminary" estimate of August 31 and the "provisional" estimate of September 30.¹

QUALITY OF GRAIN CROPS.

The quality of the grain crops in 1915, as determined by the weight in lb. per measured bushel, is, with the exception of one or two crops, superior to that of last year and is also superior to the average of the last five years. The weights per bushel for 1915 are as follows: Fall wheat 59·71 lb., spring wheat 60·31 lb., all wheat 60·19 lb., oats 36·61 lb., barley 48·26 lb., rye 56·32 lb., peas 60·74 lb., beans 59·61 lb., buckwheat 48·02 lb., flax 55·28 lb., mixed grains 44·98 lb., and corn for husking 56·32 lb.

YIELD OF ROOT AND FODDER CROPS.

The total estimated yield of potatoes is 62,604,000 bushels from 478,600 acres, an average yield per acre of 130·81 bushels. In 1914 the corresponding figures were 85,672,000 bushels from 475,900 acres, an average yield per acre of 180·02 bushels. In Ontario the average yield per acre is not more than 92·66 bushels, almost the lowest yield of potatoes on record for the province. In the other provinces the potato yield was also poor, excepting in Alberta and British Columbia. In Alberta the total yield was 5,155,000 bushels from 27,300 acres, an average of 188·84 bushels per acre, and in British Columbia the yield was 3,956,000 bushels from 16,000 acres, an average of 247·28 bushels. In both provinces the yield per acre was larger than in any recent year. In Alberta the yield was 211·64 bushels in 1912, and in British Columbia it was 252·31 bushels in 1911. Turnips and other roots for the whole of Canada yielded 64,281,000 bushels from 172,700 acres, as compared with 69,003,000 bushels from 175,000 acres in 1914, the yields per acre being 372·21 bushels in 1915, and 394·30 bushels in 1914. Of hay and clover the yield in 1915 was 10,953,000 tons from 7,875,000 acres, or 1·39 ton per acre; in 1914 the corresponding figures were 10,259,000 tons from

¹In addition to the returns from the regular crop-reporting correspondents of the Census and Statistics Office, a large number of estimates of the yields of wheat, oats, barley, rye and flax were received from rural postmasters in Manitoba, Saskatchewan and Alberta. These were brought into compilation and utilised for estimating the yields of the crops named.

7,997,000 acres, a yield per acre of 1.28 ton. Alfalfa yielded 261,955 tons from 92,685 acres, as compared with 218,360 tons from 90,315 acres in 1914, the average yield per acre being 2.83 tons, compared with 2.42 tons. Fodder corn yielded 3,429,870 tons from 343,400 acres, as compared with 3,251,480 tons from 317,000 acres in 1910, the average yield being 10 tons in 1915, and $10\frac{1}{4}$ tons in 1914. The yield of sugar beets was 141,000 tons from 18,000 acres, compared with 108,600 tons from 12,100 acres, the yields per acre being 7.83 tons in 1915 and 8.98 tons in 1914.

VALUE OF FIELD CROPS.

The values are estimated from local market prices as returned by the crop-reporting correspondents of the Census and Statistics Office. For all wheat, in 1915, the average price per bushel for the whole of Canada is 39 cents less than that of last year and 8 cents more than that of the quinquennial average. The total values of the principal grain crops of 1915 are as follows:—Wheat \$312,569,400, oats \$176,894,700, barley \$26,704,700, rye \$1,899,900, peas \$5,730,700, beans \$2,206,800, buckwheat \$5,913,000, flaxseed \$15,965,000, mixed grains \$10,034,700, corn for husking \$10,243,000. Including the root and fodder crops, particulars of which were published last November, the total value of the field crops of Canada in 1915 amounts to \$797,669,500, comprising grain crops \$568,161,900, potatoes and sugar beets \$36,739,500, and fodder crops \$192,768,100.

WHEAT, OATS, BARLEY AND FLAX IN THE NORTHWEST PROVINCES.

In the three northwest provinces of Manitoba, Saskatchewan, and Alberta, the production of wheat in 1915 is estimated at 342,948,000 bushels, as compared with 140,958,000 bushels in 1914; of oats at 334,840,600 bushels, compared with 150,843,000 bushels; of barley at 35,317,200 bushels, compared with 19,535,000 bushels, and of flax at 10,559,000 bushels, compared with 7,083,000 bushels.

The wheat production of 1915 in Manitoba was 96,425,000 bushels from 3,342,900 acres, in Saskatchewan 195,168,000 bushels from 6,838,100 acres and in Alberta 51,355,000 bushels from 1,563,700 acres.

DESCRIPTION OF TABLES.

Table I gives for Canada and the provinces the final estimates for 1915 of the area, yield, quality and value of the principal field crops, as compared with each of the years 1910 to 1914 and with the averages of these five years. Table II shows the estimated total acreage and production of wheat, oats, barley and flaxseed in the Northwest provinces for the years 1910 to 1915, and the averages of the five years 1910 to 1914. Table III shows for Canada and by provinces the total estimated areas and values of field crops for each of the years 1910 to 1915.

Census and Statistics Office,
Ottawa, January 19, 1916.

ERNEST H. GODFREY,
Editor.

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-15.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
Canada—						
Fall wheat.....1910	974,704	20.91	20,383,552	60.11	0.86	17,564,000
1911	1,161,205	22.23	25,814,000	61.12	0.83	21,458,000
1912	971,000	20.99	20,387,000	60.21	0.84	17,157,000
1913	970,000	23.29	22,592,000	60.25	0.80	18,185,000
1914	973,300	21.41	20,837,000	59.61	1.05	21,818,000
1915	1,208,700	29.41	35,551,600	59.71	0.90	32,001,500
Average.....1910-14	1,010,000	21.78	22,003,000	60.26	0.81	19,236,000
Spring wheat.....1910	7,888,447	14.16	111,665,230	59.71	0.73	81,966,000
1911	9,939,468	20.64	205,110,000	59.21	0.62	126,665,000
1912	10,025,700	20.32	203,772,000	58.90	0.60	121,933,000
1913	10,045,000	20.81	209,125,000	60.37	0.66	138,277,000
1914	9,320,600	15.07	140,443,000	59.16	1.24	174,600,000
1915	11,777,700	28.93	340,752,000	60.31	0.83	280,567,900
Average.....1910-14	9,444,000	18.42	174,023,000	59.47	0.74	128,088,000
All wheat.....1910	8,863,151	14.89	132,048,782	59.77	0.75	99,530,000
1911	11,100,673	20.80	230,924,000	59.42	0.64	148,123,000
1912	10,996,700	20.38	224,159,000	59.02	0.62	139,090,000
1913	11,015,000	21.04	231,717,000	60.36	0.67	156,462,000
1914	10,293,900	15.67	161,280,000	59.49	1.22	196,418,000
1915	12,986,400	28.98	376,303,600	60.19	0.83	312,569,400
Average.....1910-14	10,454,000	18.75	196,026,000	59.61	0.75	147,924,000
Oats.....1910	8,652,015	28.14	243,506,292	36.08	0.35	85,402,000
1911	9,630,760	37.92	365,179,000	34.65	0.36	132,949,000
1912	9,966,006	39.29	391,629,000	35.40	0.32	126,304,000
1913	10,434,000	38.78	404,669,000	36.48	0.32	128,893,000
1914	10,061,500	31.12	313,078,000	35.31	0.48	151,811,000
1915	11,365,000	45.76	520,103,000	36.61	0.34	176,894,700
Average.....1910-14	9,749,000	35.25	343,612,000	35.58	0.36	125,072,000
Barley.....1910	1,286,611	22.42	28,846,425	47.69	0.48	13,976,000
1911	1,521,694	29.19	44,415,000	46.97	0.56	24,704,000
1912	1,581,300	31.24	49,398,000	47.59	0.45	22,354,000
1913	1,613,000	29.96	48,319,000	48.41	0.42	20,144,000
1914	1,495,600	24.21	36,201,000	47.22	0.60	21,557,000
1915	1,509,350	35.33	53,331,300	48.26	0.50	26,704,700
Average.....1910-14	1,500,000	27.62	41,436,000	47.58	0.50	20,547,000
Rye.....1910	114,343	13.44	1,536,635	55.72	0.68	1,045,000
1911	131,240	18.99	2,492,000	55.11	0.76	1,899,700
1912	127,000	19.11	2,428,000	54.84	0.72	1,755,000
1913	119,300	19.28	2,300,000	55.66	0.66	1,524,000
1914	111,280	18.12	2,016,800	55.47	0.83	1,679,300
1915	112,300	21.32	2,394,100	56.32	0.79	1,890,900
Average.....1910-14	121,000	17.90	2,155,000	55.36	0.73	1,581,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops		Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
Canada—con.		acres	bush.	bush.	lb.	\$	\$
Peas.....	1910	355,262	13.50	4,808,145	58.73	0.87	4,177,000
	1911	294,750	15.83	4,666,000	59.58	1.02	4,766,600
	1912	259,550	15.07	3,913,000	59.88	1.26	4,944,400
	1913	218,980	18.05	3,951,800	60.00	1.11	4,382,000
	1914	205,550	17.64	3,362,500	60.53	1.46	4,895,000
	1915	196,210	17.73	3,478,850	60.74	1.66	5,730,700
Average.....	1910-14	267,000	15.51	4,140,000	59.14	1.11	4,633,000
Beans.....	1910	46,149	17.89	825,648	59.81	1.72	1,417,000
	1911	52,896	19.41	1,026,800	58.30	1.93	1,979,000
	1912	52,560	17.51	920,500	59.05	2.18	2,008,000
	1913	46,600	17.19	800,900	59.70	1.88	1,505,000
	1914	43,830	18.20	797,500	60.21	2.31	1,844,300
	1915	43,310	16.70	723,400	59.61	3.05	2,206,800
Average.....	1910-14	48,000	18.20	874,000	59.41	2.00	1,751,000
Buckwheat.....	1910	361,871	19.90	7,200,284	47.83	0.57	4,095,000
	1911	371,560	22.72	8,441,000	47.32	0.64	5,422,000
	1912	398,700	26.38	10,517,000	47.62	0.62	6,544,000
	1913	380,700	21.99	8,372,000	50.32	0.64	5,320,000
	1914	354,400	24.34	8,626,000	48.20	0.72	6,213,000
	1915	343,800	22.88	7,865,900	48.02	0.75	5,913,000
Average.....	1910-14	375,000	23.02	8,631,000	48.26	0.64	5,519,000
Mixed grains.....	1910	430,703	30.59	13,176,792	45.45	0.51	6,714,000
	1911	525,224	29.91	15,712,000	45.10	0.61	9,531,000
	1912	496,500	34.64	17,198,000	44.48	0.58	10,194,000
	1913	473,800	33.33	15,792,000	44.74	0.55	8,685,000
	1914	463,300	35.36	16,382,500	45.51	0.66	10,759,400
	1915	466,800	37.54	17,523,100	44.98	0.57	10,034,700
Average.....	1910-14	478,000	32.74	15,652,000	45.06	0.58	9,177,000
Flax.....	1910	582,326	7.29	4,244,566	54.96	2.06	8,778,000
	1911	878,872	11.46	10,075,500	58.29	1.51	15,130,000
	1912	2,021,900	12.92	26,130,000	54.88	0.90	23,608,000
	1913	1,552,800	11.30	17,539,000	55.79	0.97	17,084,000
	1914	1,084,000	6.62	7,175,200	52.49	1.03	7,368,000
	1915	806,600	13.18	10,628,000	55.28	1.50	15,965,000
Average.....	1910-14	1,224,000	10.65	13,033,000	55.28	1.10	14,394,000
Corn for husking.....	1910	293,775	48.75	14,321,833	57.14	0.53	7,667,500
	1911	321,875	59.60	19,185,000	50.31	0.64	12,357,000
	1912	298,190	56.84	16,949,700	55.67	0.62	10,540,700
	1913	278,140	60.30	16,772,000	56.27	0.64	10,784,300
	1914	256,000	54.39	13,924,000	56.62	0.71	9,808,000
	1915	253,300	56.72	14,398,000	56.32	0.71	10,243,000
Average.....	1910-14	290,000	55.97	16,231,090	55.20	0.63	10,232,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
Canada—con.	acres	bush.	bush.	lb.	\$	\$
Potatoes..... 1910	465,903	119.36	55,609,883	—	0.46	25,832,000
1911	479,211	148.66	71,238,000	—	0.59	42,359,000
1912	484,000	175.38	84,885,000	—	0.44	37,329,000
1913	473,500	165.88	78,544,000	—	0.49	38,418,000
1914	475,900	180.02	85,672,000	—	0.49	41,598,000
1915	478,600	130.81	62,604,000	—	0.57	35,964,000
Average..... 1910-14	476,000	157.96	75,190,000	—	0.49	37,107,000
Turnips, mangolds, etc..... 1910	177,423	290.84	51,602,057	—	0.23	11,697,000
1911	207,861	377.64	78,497,000	—	0.24	19,069,000
1912	198,200	403.71	80,016,000	—	0.24	18,924,000
1913	186,400	358.30	66,788,000	—	0.28	18,643,000
1914	175,000	394.30	69,003,000	—	0.27	18,934,000
1915	172,700	372.21	64,281,000	—	0.26	16,560,000
Average..... 1910-14	189,000	366.04	69,181,000	—	0.25 per ton	17,453,000
Hay and clover..... 1910	8,281,932	1.36	11,303,609	—	9.85	111,305,000
1911	8,617,251	1.62	13,989,000	—	11.64	162,846,000
1912	8,276,000	1.46	12,117,000	—	11.09	134,338,000
1913	8,169,000	1.33	10,859,000	—	11.48	124,696,000
1914	7,997,000	1.28	10,259,000	—	14.23	145,999,000
1915	7,875,000	1.39	10,953,000	—	14.22	155,807,000
Average..... 1910-14	8,268,000	1.42	11,706,000	—	11.61	135,867,000
Fodder corn..... 1910	294,009	9.19	2,703,399	—	4.70	12,707,500
1911	294,238	9.08	2,671,200	—	4.87	13,014,200
1912	299,390	10.15	3,037,500	—	4.93	14,977,000
1913	303,650	8.62	2,616,300	—	4.78	12,506,000
1914	317,000	10.25	3,251,480	—	4.91	15,949,700
1915	343,400	10.00	3,429,870	—	4.96	16,999,100
Average..... 1910-14	302,000	9.46	2,856,000	—	4.84	13,831,000
Sugar beets..... 1910	17,045	11.03	188,000	—	5.83	1,096,000
1911	20,677	8.46	175,000	—	6.59	1,154,000
1912	18,900	10.63	201,000	—	5.00	1,005,000
1913	17,000	8.71	148,000	—	6.12	906,000
1914	12,100	8.98	108,600	—	5.99	651,000
1915	18,000	7.83	141,000	—	5.50	775,500
Average..... 1910-14	17,000	9.65	164,000	—	5.86	962,000
Alfalfa..... 1910	56,818	2.07	117,601	—	10.16	1,195,340
1911	96,890	2.35	227,750	—	11.51	2,622,500
1912	100,660	2.84	285,700	—	12.00	3,429,000
1913	93,560	2.54	237,770	—	11.85	2,819,200
1914	90,315	2.42	218,360	—	14.17	3,095,600
1915	92,685	2.83	261,955	—	12.98	3,402,000
Average..... 1910-14	88,000	2.46	217,000	—	12.13	2,632,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
P. E. Island—						
Spring wheat..... 1910	28,721	17.45	501,295	60.00	0.96	481,000
1911	30,953	19.26	596,000	59.37	0.99	590,000
1912	32,000	18.39	582,000	58.93	0.96	559,000
1913	32,000	19.62	628,000	59.50	1.00	628,000
1914	32,000	25.28	809,000	57.51	1.04	841,000
1915	34,400	19.00	653,600	59.05	1.08	705,800
Average..... 1910-14	31,000	20.97	623,000	59.06	1.00	620,000
Oats..... 1910	181,636	28.69	5,211,588	37.20	0.37	1,928,000
1911	179,068	29.80	5,336,000	34.73	0.43	2,294,000
1912	180,000	40.77	7,358,000	37.16	0.43	3,164,000
1913	180,000	34.13	6,143,000	36.35	0.37	2,273,000
1914	183,000	41.51	7,596,000	37.46	0.48	3,646,000
1915	196,000	34.86	6,832,500	36.70	0.45	3,074,600
Average..... 1910-14	181,000	34.96	6,329,000	36.58	0.42	2,661,000
Barley..... 1910	4,878	23.46	114,430	48.32	0.57	65,000
1911	4,615	25.67	118,000	47.14	0.62	73,000
1912	5,000	32.04	145,000	47.75	0.65	94,000
1913	4,000	27.73	111,000	48.76	0.59	65,000
1914	3,800	31.25	119,000	47.33	0.64	76,000
1915	3,700	28.88	106,800	48.83	0.71	75,800
Average..... 1910-14	4,500	28.89	121,000	47.86	0.62	75,000
Peas..... 1910	35	18.49	647	59.00	0.90	600
1911	86	20.00	2,000	56.75	1.17	2,300
1912	90	22.33	2,000	59.00	1.14	2,000
1913	80	20.25	1,600	58.25	1.69	3,000
1914	80	40.00	3,200	60.00	2.00	6,400
1915	70	15.75	1,100	61.67	2.33	2,500
Average..... 1910-14	75	25.33	1,900	58.60	1.53	2,900
Buckwheat..... 1910	2,436	17.90	43,600	47.33	0.60	26,000
1911	2,765	26.75	74,000	47.78	0.61	45,000
1912	2,700	36.83	100,000	46.55	0.64	64,000
1913	2,700	24.00	65,000	47.67	0.64	42,000
1914	2,600	32.91	86,000	47.33	0.70	60,000
1915	2,600	29.00	75,400	48.15	0.75	56,500
Average..... 1910-14	2,640	28.03	74,000	47.33	0.64	47,000
Mixed grains..... 1910	6,559	34.66	227,374	44.73	0.40	91,000
1911	7,569	35.29	267,000	42.15	0.50	134,000
1912	7,700	45.83	355,000	44.35	0.49	174,000
1913	7,800	39.50	308,000	44.47	0.48	148,000
1914	7,860	45.75	360,000	46.04	0.56	202,000
1915	8,000	38.65	309,200	43.00	0.55	170,000
Average..... 1910-14	7,500	40.40	303,000	44.35	0.50	150,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Aver- age price per bush.	Total Value
P. E. Island—con.	acres	bush.	bush.	lb.	\$	\$
Potatoes..... 1910	30,607	137.30	4,202,525	—	0.33	1,387,000
1911	30,642	182.15	5,581,000	—	0.36	2,009,000
1912	33,000	206.39	6,741,000	—	0.26	1,753,000
1913	32,000	194.33	6,219,000	—	0.28	1,741,000
1914	32,000	212.70	6,806,000	—	0.23	1,565,000
1915	31,000	114.78	3,558,000	—	0.46	1,637,000
Average..... 1910-14	32,000	184.69	5,910,000	—	0.29	1,691,000
Turnips, mangolds, etc..... 1910	6,523	458.80	2,992,784	—	0.18	539,000
1911	7,776	477.57	3,714,000	—	0.21	780,000
1912	8,000	440.75	3,590,000	—	0.21	754,000
1913	8,000	503.04	4,024,000	—	0.24	966,000
1914	7,900	450.58	3,560,000	—	0.22	783,000
1915	7,900	449.46	3,551,000	—	0.26	923,000
Average..... 1910-14	7,600	470.53	3,576,000	—	0.21	764,000
		tons	tons		per ton	
Hay and clover..... 1910	215,083	1.21	260,294	—	8.30	2,160,000
1911	213,193	1.39	296,000	—	10.68	3,161,000
1912	194,000	1.28	248,000	—	11.64	2,884,000
1913	190,000	1.79	340,000	—	10.76	3,658,000
1914	192,000	1.74	334,000	—	13.04	4,355,000
1915	198,000	1.77	351,000	—	12.18	4,275,000
Average..... 1910-14	201,000	1.47	296,000	—	10.96	3,244,000
Fodder corn..... 1910	191	9.70	1,761	—	2.00	3,500
1911	283	10.12	3,000	—	3.00	9,000
1912	300	6.00	1,600	—	4.00	6,000
1913	300	11.20	3,400	—	2.50	8,500
1914	270	9.00	2,400	—	4.00	9,600
1915	260	13.00	3,400	—	3.00	10,200
Average..... 1910-14	270	8.88	2,400	—	3.04	7,300
Alfalfa..... 1910	2	2.00	4	—	10.80	40
1911	85	2.50	200	—	10.00	2,000
1912	90	2.63	220	—	10.00	2,000
1913	90	3.00	270	—	11.00	3,000
1914	—	—	—	—	—	—
1915	55	3.00	165	—	14.00	2,300
Average..... 1910-14	67	2.61	175	—	10.06	1,760
Nova Scotia—		bush.	bush.		per bush.	
Spring wheat..... 1910	12,152	18.29	222,285	59.75	1.12	249,000
1911	13,409	21.05	282,000	58.00	1.10	310,000
1912	13,000	20.19	265,000	58.82	1.08	286,000
1913	13,000	20.50	267,000	59.04	1.14	304,000
1914	12,000	21.87	262,000	59.81	1.25	328,000
1915	13,300	18.57	247,000	59.26	1.21	298,700
Average..... 1910-14	12,700	20.47	260,000	59.08	1.13	295,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per measured bush.	Average price per bush.	Total Value
Nova Scotia—con.	acres	bush.	bush.	lb.	\$	\$
Oats..... 1910	96,177	30.92	2,973,769	35.03	0.49	1,457,000
1911	101,010	20.24	2,454,000	33.24	0.53	1,301,000
1912	100,000	32.53	3,267,000	33.41	0.53	1,732,000
1913	101,500	32.42	3,291,000	34.68	0.53	1,747,000
1914	101,800	34.00	3,461,000	35.07	0.61	2,111,000
1915	112,000	31.14	3,487,700	34.18	0.59	2,057,700
Average..... 1910-14	100,000	30.89	3,089,000	34.28	0.54	1,670,000
Barley..... 1910	5,348	26.59	142,223	48.67	0.77	110,000
1911	5,551	25.77	143,000	47.75	0.76	109,000
1912	5,000	27.22	143,000	48.06	0.77	110,000
1913	5,000	26.89	134,000	48.59	0.75	101,000
1914	4,800	28.72	133,000	47.90	0.84	116,000
1915	4,900	26.20	123,400	48.39	0.80	102,700
Average..... 1910-14	5,140	27.25	140,100	48.19	0.78	109,000
Rye..... 1910	349	15.37	5,367	56.50	0.93	5,000
1911	315	16.00	5,000	54.00	0.93	4,700
1912	300	16.40	5,000	55.20	0.82	4,000
1913	300	27.00	8,000	58.33	0.07	8,000
1914	280	17.67	5,000	56.00	1.05	5,300
1915	300	15.00	4,500	56.00	1.08	4,900
Average..... 1910-14	310	18.30	5,675	56.00	0.95	5,400
Peas..... 1910	106	17.06	1,873	60.13	1.58	3,000
1911	210	23.40	5,000	58.62	1.45	7,300
1912	200	25.50	5,000	60.43	1.82	9,000
1913	200	33.25	6,700	59.36	1.85	12,000
1914	190	22.23	4,200	60.20	2.04	8,600
1915	190	18.66	3,550	59.00	2.01	7,100
Average..... 1910-14	180	25.30	4,555	59.74	1.75	7,980
Beans..... 1910	730	16.78	12,251	59.60	2.29	28,000
1911	945	21.90	21,000	58.49	2.03	43,000
1912	900	26.95	24,000	59.73	2.51	60,000
1913	900	24.93	22,000	59.09	2.40	53,000
1914	840	22.00	18,500	59.77	2.99	55,000
1915	840	17.50	14,700	59.83	3.87	56,800
Average..... 1910-14	865	22.66	19,600	59.33	2.45	48,000
Buckwheat..... 1910	9,536	21.60	206,005	47.85	0.64	132,000
1911	11,811	21.81	258,000	45.60	0.65	168,000
1912	11,000	26.27	296,000	47.72	0.65	192,000
1913	11,000	25.21	277,000	46.83	0.66	183,000
1914	10,000	25.94	259,000	48.05	0.72	186,000
1915	10,200	21.72	221,500	47.45	0.72	159,500
Average..... 1910-14	11,000	23.54	259,000	47.21	0.66	172,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre.	Total Yield	Weight per meas- ured bush.	Aver- age price per bush.	Total Value
Nova Scotia—con.	acres	bush.	bush.	lb.	\$	\$
Mixed grains..... 1910	2,420	32.38	78,369	44.32	0.60	47,000
1911	4,359	29.34	128,000	43.96	0.67	86,000
1912	4,000	34.70	150,000	44.10	0.68	102,000
1913	4,000	35.65	143,000	43.35	0.65	93,000
1914	3,900	37.18	145,000	43.45	0.71	103,000
1915	4,100	34.16	140,000	43.05	0.71	99,400
Average..... 1910-14	4,000	32.25	129,000	43.83	0.66	86,000
Corn for husking..... 1910	64	41.93	2,684	50.33	0.69	2,000
1911	137	35.00	5,000	54.66	0.66	3,300
1912	130	58.50	7,000	58.33	0.84	6,000
1913	100	27.50	3,000	55.00	0.69	2,000
1914	—	—	—	—	—	—
1915	—	—	—	—	—	—
Average..... 1910-13	85	47.06	4,000	43.66	0.75	3,000
Potatoes..... 1910	30,802	116.30	3,581,757	—	0.40	1,433,000
1911	30,686	183.83	5,641,000	—	0.50	2,821,000
1912	32,000	298.57	9,447,000	—	0.47	4,440,000
1913	32,000	167.79	5,369,000	—	0.52	2,792,000
1914	32,500	220.45	7,165,000	—	0.49	3,511,000
1915	33,700	141.23	4,759,000	—	0.58	2,760,000
Average..... 1910-14	32,000	195.03	6,241,000	—	0.48	2,999,000
Turnips, mangolds, etc..... 1910	9,526	365.15	3,478,442	—	0.26	904,000
1911	11,757	426.06	5,010,000	—	0.33	1,653,000
1912	12,000	475.54	5,606,000	—	0.34	1,906,000
1913	12,000	390.06	4,681,000	—	0.36	1,685,000
1914	9,000	387.42	3,487,000	—	0.38	1,325,000
1915	9,200	390.02	3,589,000	—	0.34	1,223,000
Average..... 1910-14	11,000	404.82	4,453,000	—	0.34	1,495,000
Hay and clover..... 1910	542,007	tons 1.34	tons 724,393	—	9.70	7,027,000
1911	528,838	1.71	904,000	—	11.77	10,640,000
1912	521,000	1.58	823,000	—	12.82	10,545,000
1913	531,000	1.65	876,000	—	11.57	10,135,000
1914	518,000	1.89	979,000	—	14.50	14,196,000
1915	538,000	1.78	958,000	—	13.33	12,770,000
Average..... 1910-14	528,000	1.63	861,000	—	12.21	10,509,000
Fodder corn..... 1910	561	9.28	5,205	—	6.33	33,000
1911	644	6.02	4,000	—	6.80	27,200
1912	600	8.58	5,300	—	5.00	27,000
1913	600	6.32	4,000	—	4.88	19,500
1914	520	7.67	4,000	—	6.00	24,000
1915	500	4.64	2,300	—	7.00	16,000
Average..... 1910-14	585	8.55	5,000	—	5.20	26,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Aver- age price per ton.	Total Value
Nova Scotia—con.	acres	tons	tons	lb.	\$	\$
Alfalfa.....1910	10	2.50	25	—	9.76	300
1911	31	3.00	100	—	10.00	1,000
1912	30	3.50	100	—	12.00	1,000
1913	30	3.75	100	—	14.00	1,400
1914	30	2.00	60	—	14.00	800
1915	30	2.30	70	—	13.00	900
Average.....1910-14	25	3.00	75	—	12.00	£00
New Brunswick—		bush.	bush.		per bush.	
Spring wheat.....1910	13,384	15.19	203,355	59.56	1.13	230,000
1911	13,897	20.39	283,000	59.75	1.07	303,000
1912	13,000	18.11	236,000	56.62	0.75	177,000
1913	13,000	20.72	269,000	59.31	1.12	301,000
1914	12,600	18.57	234,000	59.70	1.30	304,000
1915	14,000	19.09	267,000	59.69	1.26	335,000
Average.....1910-14	13,200	18.57	245,100	58.98	1.07	263,000
Oats.....1910	201,140	27.51	5,538,796	36.00	0.45	2,492,000
1911	207,408	28.86	5,986,000	35.91	0.50	2,993,000
1912	195,000	28.81	5,607,000	34.20	0.53	2,972,000
1913	195,000	30.49	5,946,000	34.43	0.51	3,032,000
1914	200,000	32.44	6,488,000	35.48	0.59	3,828,000
1915	201,000	27.66	5,559,600	36.33	0.55	3,058,000
Average.....1910-14	199,700	29.61	5,913,000	35.20	0.52	3,063,000
Barley.....1910	2,603	21.80	56,758	48.78	0.67	38,000
1911	2,791	28.16	79,000	46.30	0.41	32,000
1912	2,700	27.42	74,000	46.88	0.66	49,000
1913	2,500	29.64	74,000	48.21	0.69	51,000
1914	2,400	26.81	64,000	47.95	1.14	73,000
1915	2,100	22.96	48,000	48.85	0.85	40,800
Average.....1910-14	2,600	26.77	69,600	47.62	0.70	49,000
Peas.....1910	429	15.31	6,509	57.86	1.26	8,000
1911	701	24.00	17,000	59.15	1.39	24,000
1912	600	16.14	10,000	53.88	1.53	15,000
1913	500	21.30	11,000	59.46	1.49	16,000
1914	460	20.70	10,000	59.85	1.36	14,000
1915	420	17.08	6,700	60.27	2.52	16,900
Average.....1910-14	540	20.37	11,000	58.04	1.40	15,400
Beans.....1910	250	18.05	4,514	59.08	2.36	11,000
1911	366	21.75	8,000	58.42	2.33	19,000
1912	300	19.25	6,500	58.14	2.84	18,000
1913	300	14.33	4,300	59.67	2.46	11,000
1914	290	20.82	6,000	59.55	2.89	17,300
1915	270	21.37	5,700	60.71	4.03	23,000
Average.....1910-14	300	19.67	5,900	58.97	2.59	15,300

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Aver- age price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
New Brunswick—con.						
Buckwheat..... 1910	58,366	19.70	1,149,984	47.94	0.53	609,000
1911	65,491	26.44	1,732,000	47.67	0.57	987,000
1912	64,000	24.36	1,563,000	47.14	0.62	969,000
1913	64,000	27.85	1,782,000	48.10	0.54	962,000
1914	63,800	26.43	1,686,000	47.76	0.61	1,028,000
1915	58,000	22.68	1,315,000	47.51	0.73	960,000
Average..... 1910-14	63,000	25.13	1,583,000	47.72	0.58	911,000
Mixed grains..... 1910	724	28.21	20,426	46.15	0.57	12,000
1911	1,129	30.66	35,000	45.18	0.59	21,000
1912	1,000	27.36	28,000	43.67	0.73	21,000
1913	1,000	30.30	30,000	42.30	0.59	18,000
1914	950	30.33	29,000	40.92	0.65	19,000
1915	900	31.50	28,400	45.80	0.71	20,000
Average..... 1910-14	960	29.17	28,000	43.64	0.64	18,000
Corn for husking..... 1910	63	24.92	1,524	—	0.97	1,500
1911	75	13.00	1,000	—	0.65	700
1912	60	12.00	700	—	1.00	700
1913	40	39.50	1,600	—	0.80	1,300
Average..... 1910-13	50	19.40	970	—	0.87	840
Potatoes..... 1910	40,319	129.67	5,228,289	—	0.44	2,300,000
1911	41,147	214.49	8,826,000	—	0.52	4,590,000
1912	43,000	174.64	7,558,000	—	0.42	3,174,000
1913	43,500	214.35	10,029,000	—	0.44	4,677,000
1914	43,900	239.96	10,534,000	—	0.40	4,214,000
1915	40,000	144.31	5,772,000	—	0.64	3,694,000
Average..... 1910-14	42,000	203.69	8,555,000	—	0.44	3,791,000
Turnips, mangolds, etc..... 1910	8,578	311.89	2,675,383	—	0.26	696,000
1911	9,748	416.49	4,060,000	—	0.34	1,380,000
1912	10,000	284.75	2,721,000	—	0.32	871,000
1913	9,000	371.73	3,346,000	—	0.38	1,271,000
1914	8,400	289.96	2,436,000	—	0.35	853,000
1915	8,000	329.10	2,633,000	—	0.33	869,000
Average..... 1910-14	9,000	338.67	3,048,000	—	0.33	1,014,000
		tons	tons		per ton	
Hay and clover..... 1910	625,911	1.07	669,528	—	8.56	5,731,000
1911	635,446	1.42	902,000	—	8.13	7,333,000
1912	602,000	1.48	891,000	—	10.12	9,018,000
1913	577,000	1.21	698,000	—	10.91	7,615,000
1914	571,000	1.36	777,000	—	12.47	9,689,000
1915	569,000	1.39	791,000	—	14.00	11,074,000
Average..... 1910-14	602,000	1.31	788,000	—	10.00	7,878,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
New Brunswick—con.						
Fodder corn.....1910	235	9.85	2,315	—	4.66	11,000
1911	215	8.25	2,000	—	4.00	8,000
1912	190	7.30	1,400	—	6.13	8,000
1913	150	11.00	1,700	—	3.00	5,000
1914	120	4.00	480	—	6.00	3,000
1915	110	7.00	770	—	2.50	1,900
Average.....1910-14	180	8.89	1,600	—	4.38	7,000
Alfalfa.....1910	83	1.20	100	—	9.58	1,000
1911	116	3.00	450	—	10.00	4,500
1912	140	2.00	280	—	10.00	3,000
1913	140	3.00	400	—	12.00	4,800
1914	135	2.25	300	—	9.25	2,800
1915	140	2.25	320	—	12.00	3,800
Average.....1910-14	120	2.54	305	—	9.84	3,000
Quebec—						
Spring wheat.....1910	61,143	14.85	907,991	59.71	1.20	1,090,000
1911	68,999	17.73	1,223,000	59.36	1.18	1,443,000
1912	60,000	16.17	974,000	57.96	1.18	1,149,000
1913	58,000	18.17	1,054,000	59.71	1.21	1,275,000
1914	55,000	18.00	990,000	59.65	1.35	1,337,000
1915	71,000	19.88	1,411,000	59.62	1.34	1,891,000
Average.....1910-14	61,000	16.89	1,030,000	59.28	1.22	1,259,000
Oats.....1910	1,387,961	24.30	33,734,172	36.94	0.44	14,843,000
1911	1,430,309	26.22	37,500,000	35.65	0.53	19,875,000
1912	1,296,000	25.86	33,516,000	33.93	0.54	18,099,000
1913	1,303,000	29.95	39,025,000	36.85	0.48	18,732,000
1914	1,327,000	31.74	42,119,000	37.06	0.58	24,429,000
1915	1,400,000	30.13	42,182,000	36.92	0.55	23,200,000
Average.....1910-14	1,349,000	27.56	37,170,000	36.09	0.52	19,196,000
Barley.....1910	101,728	23.38	2,378,372	48.17	0.71	1,689,000
1911	99,762	22.76	2,271,000	47.71	0.78	1,771,000
1912	94,000	23.69	2,226,000	46.95	0.79	1,759,000
1913	89,000	25.43	2,263,000	48.46	0.77	1,743,000
1914	85,000	26.60	2,261,000	48.98	0.86	1,944,000
1915	85,000	26.53	2,255,000	48.79	0.86	1,939,000
Average.....1910-14	94,000	24.25	2,280,000	48.05	0.78	1,781,000
Rye.....1910	11,099	13.41	148,925	55.72	0.93	139,000
1911	12,735	15.72	200,000	55.67	1.01	202,000
1912	11,000	15.44	173,000	53.57	0.95	164,000
1913	10,000	15.60	156,000	54.56	1.06	165,000
1914	9,000	17.30	156,000	55.11	1.09	170,000
1915	8,700	16.71	145,000	55.90	1.12	162,000
Average.....1910-14	10,800	15.46	167,000	54.94	1.01	168,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Aver- age price per bush.	Total Value
Quebec—con.	acres	bush.	bush.	lb.	\$	\$
Peas.....1910	30,303	14.25	432,098	57.37	1.23	531,000
1911	32,507	15.91	517,000	60.58	1.37	708,000
1912	30,000	15.11	449,000	53.96	2.03	911,000
1913	26,000	17.34	451,000	61.03	1.97	888,000
1914	24,000	18.00	432,000	61.63	2.35	1,015,000
1915	24,400	16.56	404,000	61.14	2.47	998,000
Average.....1910-14	29,000	15.72	456,000	58.91	1.78	811,000
Beans.....1910	4,196	18.25	76,582	59.84	1.97	151,000
1911	6,065	17.14	114,000	60.57	1.97	225,000
1912	5,000	15.59	84,000	57.31	2.55	214,000
1913	5,000	19.35	97,000	60.16	2.31	224,000
1914	4,700	18.87	89,000	60.87	2.70	240,000
1915	4,700	21.89	103,000	59.38	3.17	327,000
Average.....1910-14	5,000	18.40	92,000	59.75	2.29	211,000
Buckwheat.....1910	124,220	18.87	2,468,479	47.74	0.66	1,629,000
1911	112,880	22.57	2,548,000	47.33	0.74	1,886,000
1912	117,000	26.44	3,094,000	47.27	0.73	2,259,000
1913	110,000	23.27	2,560,000	47.88	0.75	1,920,000
1914	102,000	24.28	2,477,000	48.60	0.83	2,056,000
1915	104,000	24.69	2,568,000	48.17	0.84	2,157,000
Average.....1910-14	113,000	23.27	2,629,000	47.76	0.74	1,950,000
Mixed Grains.....1910	94,237	23.26	2,192,770	46.16	0.61	1,338,000
1911	114,347	25.58	2,925,000	45.74	0.69	2,018,000
1912	104,000	26.74	2,783,000	44.21	0.67	1,864,000
1913	101,000	28.39	2,867,000	46.56	0.66	1,892,000
1914	99,000	30.00	2,970,000	46.95	0.77	2,287,000
1915	101,000	29.67	2,997,000	45.44	0.73	2,188,000
Average.....1910-14	102,500	26.83	2,750,000	45.92	0.68	1,880,000
Flax.....1910	1,361	9.80	13,350	-	2.06	28,000
1911	1,146	11.31	13,000	53.81	1.71	22,000
1912	900	9.66	9,000	53.07	1.76	15,000
1913	800	10.84	9,000	55.10	1.95	18,000
1914	700	11.70	8,200	54.48	1.93	16,000
1915	600	11.89	7,000	54.16	2.18	15,000
Average.....1910-14	980	10.71	10,500	54.12	1.90	20,000
Corn for husking.....1910	18,802	30.60	575,360	56.34	0.90	518,000
1911	23,473	30.30	712,000	55.13	1.01	719,000
1912	19,000	24.47	476,000	55.71	1.03	490,000
1913	18,000	32.58	586,000	55.88	1.00	586,000
1914	17,000	30.24	514,000	56.65	1.08	555,000
1915	16,300	31.17	508,000	56.85	1.12	569,000
Average.....1910-14	19,300	29.69	573,000	55.94	1.00	574,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
Quebec—con.	acres	bush.	bush.	lb.	\$	\$
Potatoes..... 1910	124,598	124.78	15,547,671	—	0.44	6,841,000
1911	124,381	126.73	15,763,000	—	0.67	10,561,000
1912	116,000	137.11	15,945,000	—	0.35	5,580,000
1913	116,000	176.76	20,504,000	—	0.46	9,432,000
1914	115,000	189.66	21,811,000	—	0.42	9,161,000
1915	117,000	149.66	17,510,000	—	0.55	9,631,000
Average..... 1910-14	119,000	150.46	17,914,000	—	0.46	8,315,000
Turnips, mangolds, etc..... 1910	13,697	369.19	5,056,798	—	0.35	1,770,000
1911	13,543	291.18	3,943,000	—	0.37	1,459,000
1912	12,000	251.60	3,050,000	—	0.28	856,000
1913	11,000	298.56	3,284,000	—	0.36	1,182,000
1914	10,500	328.20	3,449,000	—	0.37	1,275,000
1915	10,200	308.25	3,144,000	—	0.36	1,132,000
Average..... 1910-14	12,000	313.08	3,757,000	—	0.35	1,308,000
Hay and clover..... 1910	3,224,122	1.46	4,726,694	—	9.29	43,911,000
1911	3,294,230	1.90	6,260,000	—	10.17	63,664,000
1912	3,108,000	1.22	3,792,000	—	9.36	35,492,000
1913	3,014,000	1.35	4,069,000	—	12.08	49,154,000
1914	2,979,000	1.20	3,575,000	—	14.88	53,196,000
1915	2,922,000	1.26	3,682,000	—	15.89	58,507,000
Average..... 1910-14	3,124,000	1.44	4,485,000	—	10.95	49,083,000
Fodder corn..... 1910	41,082	9.17	377,014	—	4.77	1,798,000
1911	37,155	8.75	325,000	—	4.80	1,560,000
1912	34,000	7.38	251,000	—	3.79	962,000
1913	34,000	7.50	255,000	—	5.20	1,326,000
1914	33,000	7.18	237,000	—	6.40	1,517,000
1915	34,000	8.61	293,000	—	6.39	1,872,000
Average..... 1910-14	36,000	8.05	290,000	—	4.94	1,433,000
Alfalfa..... 1910	4,044	1.61	6,520	—	7.45	49,000
1911	3,634	3.75	14,000	—	9.63	135,000
1912	3,500	2.75	9,700	—	9.00	87,000
1913	3,000	2.11	6,300	—	8.30	52,000
1914	2,950	2.06	6,000	—	13.43	81,000
1915	2,860	2.84	8,100	—	11.78	95,000
Average..... 1910-14	3,400	2.50	8,500	—	9.53	81,000
Ontario—		bush.	bush.		per bush.	
Fall wheat..... 1910	759,916	23.50	17,863,306	59.94	0.88	15,720,000
1911	832,889	20.95	17,449,000	61.61	0.87	15,150,000
1912	735,000	20.63	15,163,000	60.53	0.92	13,950,000
1913	739,000	23.91	17,669,000	60.16	0.85	15,019,000
1914	727,400	21.51	15,646,000	59.77	1.08	16,898,000
1915	972,000	28.34	27,546,000	59.41	0.93	25,618,000
Average..... 1910-14	759,000	22.07	16,758,000	60.40	0.90	15,353,000

**I. Area, Yield, Quality, and Value of Principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Aver- age price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
Ontario—con.						
Spring wheat.....1910	110,439	17.92	1,979,325	59.87	0.89	1,762,000
1911	135,538	17.25	2,338,000	58.33	0.90	2,104,000
1912	120,000	18.77	2,258,000	57.93	0.88	1,987,000
1913	111,000	19.66	2,182,000	59.33	0.86	1,877,000
1914	107,000	18.80	2,012,000	59.05	1.07	2,153,000
1915	121,000	22.36	2,706,000	59.41	0.96	2,598,000
Average.....1910-14	117,000	18.41	2,154,000	58.90	0.92	1,977,000
All wheat.....1910	870,355	22.80	19,842,631	59.93	0.88	17,482,000
1911	968,427	20.43	19,787,000	61.22	0.87	17,284,000
1912	855,000	20.38	17,421,000	60.19	0.91	15,937,000
1913	850,000	23.35	19,851,000	60.07	0.85	16,896,000
1914	834,000	21.16	17,658,000	59.50	1.07	19,051,000
1915	1,093,000	27.67	30,252,000	59.41	0.93	28,216,000
Average.....1910-19 14	876,000	21.59	18,912,000	60.18	0.92	17,330,000
Oats.....1910	2,871,288	30.97	88,946,041	34.92	0.36	32,021,000
1911	2,806,203	30.24	84,860,000	31.57	0.45	38,187,000
1912	2,785,000	34.85	97,053,000	34.38	0.41	39,792,000
1913	2,814,000	37.37	105,159,000	34.08	0.38	39,960,000
1914	2,840,000	35.00	99,400,000	34.07	0.49	48,706,000
1915	3,095,000	39.68	122,810,000	34.67	0.39	47,896,000
Average.....1910-14	2,823,000	33.68	95,084,000	33.80	0.42	39,732,000
Barley.....1910	503,129	27.93	14,055,327	47.89	0.53	7,449,000
1911	519,967	26.39	13,722,000	46.18	0.70	9,605,000
1912	512,000	29.49	15,093,000	47.45	0.61	9,207,000
1913	485,000	30.08	14,589,000	48.08	0.56	8,170,000
1914	461,000	30.34	13,987,000	47.83	0.64	8,952,000
1915	449,000	34.23	15,369,000	47.83	0.56	8,607,000
Average.....1910-14	496,000	28.81	14,289,000	47.49	0.61	8,677,000
Rye.....1910	92,731	13.29	1,232,493	55.92	0.66	813,000
1911	96,751	17.86	1,728,000	55.00	0.78	1,348,000
1912	93,000	18.38	1,711,000	55.70	0.75	1,283,000
1913	85,000	18.43	1,567,000	55.76	0.69	1,081,000
1914	78,000	17.19	1,341,000	55.47	0.85	1,140,000
1915	78,000	19.88	1,551,000	56.89	0.79	1,225,000
Average.....1910-14	89,000	17.04	1,516,000	55.57	0.75	1,133,000
Peas.....1910	321,996	13.38	4,311,133	59.92	0.83	3,578,000
1911	258,461	15.69	4,055,000	55.35	0.97	3,933,000
1912	226,000	14.95	3,374,000	58.95	1.16	3,914,000
1913	190,000	18.06	3,431,000	59.31	0.99	3,397,000
1914	179,000	16.00	2,864,000	59.88	1.32	3,780,000
1915	169,000	17.79	3,007,000	59.86	1.54	4,631,000
Average.....1910-14	235,000	15.22	3,607,000	58.68	1.03	3,720,000

**I. Area, Yield, and Quality Value of principal Field Crops in Canada,
1910-1915—con.**

Crops		Area	Yield per acre	Total Yield	Weight per measured bush.	Average price per bush.	Total Value
		acres	bush.	bush.	lb.	\$	\$
Ontario—con.							
Barley.....	1910	40,626	17.80	726,955	60.08	1.67	1,214,000
	1911	45,130	19.40	876,000	59.48	1.91	1,673,000
	1912	46,000	17.57	801,000	61.27	2.13	1,706,000
	1913	40,000	16.74	670,000	59.17	1.79	1,199,000
	1914	38,000	18.00	684,000	59.88	2.24	1,532,000
	1915	37,500	16.00	600,000	59.76	3.05	1,800,000
Average.....	1910-14	42,000	17.90	752,000	59.97	1.95	1,465,000
Buckwheat.....	1910	167,313	19.91	3,332,216	48.05	0.51	1,699,000
	1911	178,613	21.44	3,829,000	47.18	0.61	2,336,000
	1912	204,000	26.74	5,464,000	48.29	0.56	3,060,000
	1913	193,000	19.11	3,688,000	47.46	0.60	2,213,000
	1914	176,000	23.40	4,118,000	47.83	0.70	2,883,000
	1915	169,000	21.81	3,686,000	48.21	0.70	2,580,000
Average.....	1910-14	184,000	22.21	4,086,000	47.76	0.60	2,438,000
Mixed grains.....	1910	323,329	32.75	10,590,756	44.67	0.49	5,189,000
	1911	389,366	31.04	12,086,000	43.17	0.59	7,131,000
	1912	371,000	36.54	13,553,000	46.96	0.58	7,862,000
	1913	352,000	34.37	12,098,000	43.53	0.53	6,412,000
	1914	344,000	36.66	12,611,000	44.58	0.63	7,945,000
	1915	345,000	39.91	13,769,000	44.76	0.54	7,435,000
Average.....	1910-14	356,000	34.23	12,188,000	44.58	0.57	6,908,000
Flax.....	1910	8,780	9.43	82,901	—	1.64	136,000
	1911	8,790	14.06	124,000	52.25	1.89	234,000
	1912	9,000	16.70	143,000	52.82	1.62	231,000
	1913	7,000	23.38	164,000	53.56	1.39	228,000
	1914	5,300	15.76	84,000	55.78	1.70	143,000
	1915	5,000	12.38	62,000	50.78	1.72	107,000
Average.....	1910-14	8,000	15.00	120,000	53.60	1.62	194,000
Corn for husking.....	1910	274,846	49.99	13,742,265	58.46	0.52	7,146,000
	1911	298,190	61.93	18,467,000	55.47	0.63	11,634,000
	1912	279,000	59.06	16,466,000	55.50	0.61	10,044,000
	1913	260,000	62.24	16,182,000	56.75	0.63	10,195,000
	1914	239,000	56.11	13,410,000	56.22	0.69	9,253,000
	1915	237,000	58.48	13,860,000	55.75	0.69	9,674,000
Average.....	1910-14	270,000	57.90	15,653,000	56.48	0.62	9,654,000
Potatoes.....	1910	158,363	109.21	17,295,370	—	0.46	7,950,000
	1911	156,990	102.19	16,043,000	—	0.80	12,834,000
	1912	158,000	143.90	22,690,000	—	0.59	13,387,000
	1913	152,000	119.11	18,195,000	—	0.65	11,768,000
	1914	154,000	167.35	25,772,000	—	0.47	12,113,000
	1915	155,000	92.66	14,332,000	—	0.76	10,915,000
Average.....	1910-14	156,000	128.09	19,932,000	—	0.58	11,612,000

**I. Area, Yield, Quality, and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
Ontario—con.	acres	bush.	bush.	lb.	\$	\$
Turnips, mangolds, etc..... 1910	132,529	267.92	35,505,868	—	0.20	7,101,000
1911	138,735	384.00	53,274,000	—	0.19	10,122,000
1912	130,000	436.25	56,795,000	—	0.19	10,791,000
1913	121,000	362.94	43,916,000	—	0.22	9,662,000
1914	114,000	430.31	49,055,000	—	0.21	10,302,000
1915	112,000	394.42	44,175,000	—	0.21	9,277,000
Average..... 1910-14	127,000	375.66	47,709,000	—	0.20 per ton	9,596,00
Hay and clover..... 1910	3,216,154	1.37	4,418,456	—	10.21	45,112,000
1911	3,445,907	1.37	4,721,000	—	13.99	66,047,000
1912	3,337,000	1.62	5,406,000	—	12.04	65,088,000
1913	3,312,000	1.19	3,941,000	—	11.07	43,627,000
1914	3,171,000	1.14	3,615,000	—	14.91	53,900,000
1915	3,082,000	1.32	4,068,000	—	14.06	57,186,000
Average..... 1910-14	3,206,000	1.34	4,420,000	—	12.38	54,755,000
Fodder corn..... 1910	245,048	9.37	2,296,841	—	4.67	10,726,000
1911	243,497	9.23	2,247,000	—	4.73	10,628,000
1912	251,000	10.70	2,685,000	—	4.84	12,997,000
1913	255,000	8.81	2,247,000	—	4.56	10,246,000
1914	267,000	10.95	2,924,000	—	4.72	13,801,000
1915	287,000	10.63	3,051,000	—	4.76	14,523,000
Average..... 1910-14	252,000	9.84	2,480,000	—	4.71	11,680,000
Sugar beets..... 1910	15,966	11.40	182,124	—	5.86	1,067,000
1911	18,882	8.53	161,000	—	6.73	1,084,000
1912	17,000	11.16	188,000	—	5.00	938,000
1913	15,000	9.23	138,000	—	6.20	856,000
1914	12,000	9.00	108,000	—	6.00	648,000
1915	18,000	7.83	141,000	—	5.50	775,500
Average..... 1910-14	16,000	9.68	155,000	—	5.92	919,000
Alfalfa..... 1910	45,625	2.10	95,138	—	9.65	918,000
1911	75,000	2.03	152,000	—	11.08	1,684,000
1912	76,000	2.76	211,000	—	11.75	2,478,000
1913	69,000	2.32	160,000	—	12.03	1,925,000
1914	61,000	2.26	138,000	—	15.01	2,071,000
1915	60,000	2.72	163,000	—	13.41	2,186,000
Average..... 1910-14	65,000	2.32	151,000	—	12.02 per bush.	1,815,000
Manitoba—		bush.	bush.			
Fall wheat..... 1910	4,553	18.92	86,176	—	0.83	72,000
1911	13,291	28.56	380,000	59.66	0.67	255,000
1912	15,000	22.22	333,000	59.13	0.67	223,000
1913	19,000	20.44	388,000	61.50	0.69	268,000
1914	15,000	16.00	240,000	59.50	0.89	214,000
1915	10,900	33.30	363,000	61.33	0.88	319,000
Average..... 1910-14	13,000	21.92	285,000	59.94	0.73	206,000

**1. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
Manitoba—con.	acres	bush.	bush.	lb.	\$	\$
Spring wheat.....	1910 2,755,818	12.35	34,039,773	59.74	0.80	27,232,000
	1911 3,081,542	20.22	62,309,000	59.14	0.67	41,747,000
	1912 2,824,000	22.20	62,684,000	60.77	0.67	41,998,000
	1913 2,785,000	19.01	52,943,000	60.83	0.71	37,590,000
	1914 2,604,000	14.75	38,365,000	59.39	1.01	38,749,000
	1915 3,332,000	28.83	96,062,000	61.18	0.85	81,653,000
Average.....	1910-14 2,809,000	17.82	50,068,000	59.97	0.74	37,463,000
All wheat.....	1910 2,760,371	12.36	34,125,949	—	0.80	27,304,000
	1911 3,094,833	22.56	62,689,000	59.14	0.67	42,002,000
	1912 2,839,000	22.20	63,017,000	60.76	0.67	42,221,000
	1913 2,804,000	19.02	53,331,000	60.83	0.71	37,858,000
	1914 2,616,000	14.84	38,605,000	59.39	1.01	38,963,000
	1915 3,342,900	28.84	96,425,000	61.18	0.85	81,972,000
Average.....	1910-14 2,823,000	17.84	50,354,000	60.03	0.74	37,670,000
Oats.....	1910 1,209,173	25.12	30,378,379	34.94	0.31	9,417,000
	1911 1,307,434	45.92	60,037,000	35.51	0.32	19,212,000
	1912 1,348,000	42.40	57,154,000	35.63	0.28	16,003,000
	1913 1,398,000	40.60	56,759,000	36.32	0.28	15,893,000
	1914 1,331,000	28.25	31,951,000	34.21	0.48	15,336,000
	1915 1,441,000	48.21	69,471,000	36.36	0.32	22,231,000
Average.....	1910-14 1,319,000	35.83	47,256,000	35.32	0.30	15,172,000
Barley.....	1910 416,016	15.64	6,506,634	46.61	0.39	2,538,000
	1911 448,105	33.36	14,949,000	47.75	0.48	7,176,000
	1912 481,000	32.92	15,826,000	47.47	0.37	5,855,000
	1913 490,000	28.84	14,305,000	47.57	0.34	4,864,000
	1914 468,000	21.00	9,828,000	46.00	0.55	5,405,000
	1915 490,000	36.25	17,763,000	47.70	0.50	8,882,000
Average.....	1910-14 462,000	26.59	12,283,000	47.08	0.42	5,168,000
Rye.....	1910 2,738	10.66	29,205	52.00	0.71	21,000
	1911 4,725	22.00	104,000	—	0.70	73,000
	1912 5,000	21.00	105,000	—	0.58	61,000
	1913 5,000	20.64	103,000	60.00	0.58	60,000
	1914 5,000	20.00	100,000	57.00	0.90	90,000
	1915 5,800	26.74	155,000	57.50	0.73	113,000
Average.....	1910-14 4,500	19.55	88,000	56.33	0.69	61,000
Peas.....	1910 298	16.31	4,863	48.00	0.60	3,000
	1911 414	22.00	9,000	—	1.26	11,000
	1912 400	25.00	10,000	—	1.50	15,000
Average.....	1910-12 370	21.50	7,955	48.00	1.22	9,670
Mixed grains.....	1910 473	18.54	8,772	—	0.44	4,000
	1911 1,541	35.00	54,000	—	0.44	24,000
	1912 1,500	45.00	68,000	—	0.45	31,000
	1913 1,500	27.17	41,000	—	0.29	12,000
	1914 1,490	20.25	30,000	—	0.48	14,400
	1915 1,550	32.50	50,000	43.00	0.41	21,000
Average.....	1910-14 1,300	31.07	40,400	—	0.42	17,100

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per measured bush.	Average price per bush.	Total Value
Manitoba—con.	acres	bush.	bush.	lb.	\$	\$
Flax.....1910	34,684	5.09	176,675	55.00	2.09	369,000
1911	79,765	14.44	1,152,000	55.31	1.76	2,028,000
1912	100,000	12.49	1,252,000	55.76	1.04	1,302,000
1913	54,000	11.70	632,000	56.16	1.05	664,000
1914	40,000	8.44	338,000	55.41	1.10	372,000
1915	34,000	11.00	374,000	55.00	1.54	576,000
Average.....1910-14	62,000	11.45	710,000	55.52	1.33	947,000
Potatoes.....1910	26,210	109.34	2,865,839	—	0.54	1,548,000
1911	26,488	207.35	5,490,000	—	0.42	2,306,000
1912	27,000	231.55	6,182,000	—	0.35	2,164,000
1913	26,000	196.93	5,120,000	—	0.36	1,843,000
1914	26,900	117.91	3,172,000	—	0.72	2,284,000
1915	28,300	109.67	3,104,000	—	0.54	1,676,000
Average.....1910-14	26,500	172.30	4,566,000	—	0.44	2,029,000
Turnips, mangolds, etc.....1910	2,008	247.35	496,674	—	0.44	219,000
1911	4,167	325.46	1,356,000	—	0.38	515,000
1912	4,000	354.20	1,451,000	—	0.38	551,000
1913	4,000	252.80	1,011,000	—	0.41	415,000
1914	3,900	268.50	1,047,000	—	0.54	565,000
1915	4,300	269.01	1,157,000	—	0.35	405,000
Average.....1910-14	3,600	297.78	1,072,000	—	0.42	453,000
Hay and clover.....1910	137,671	0.91	124,954	—	10.21	1,276,000
1911	153,372	1.66	255,000	—	9.54	2,433,000
1912	151,000	1.71	259,000	—	9.40	2,434,000
1913	162,000	1.48	240,000	—	8.64	2,074,000
1914	162,000	1.24	201,000	—	9.12	1,833,000
1915	159,000	1.93	307,000	—	9.63	2,956,000
Average.....1910-14	153,000	1.40	214,000	—	9.39	2,010,000
Fodder corn.....1910	4,603	3.08	14,158	—	6.64	94,000
1911	9,919	7.71	76,000	—	9.00	684,000
1912	11,000	7.68	84,000	—	11.00	924,000
1913	11,000	8.09	89,000	—	8.50	757,000
1914	13,000	5.55	72,000	—	7.60	547,000
1915	18,000	3.36	60,000	—	8.33	500,000
Average.....1910-14	9,900	6.77	67,000	—	8.82	601,000
Alfalfa.....1910	539	1.07	569	—	12.87	7,000
1911	3,324	2.00	7,000	—	12.00	84,000
1912	3,500	2.73	9,400	—	9.20	86,000
1913	4,000	2.82	11,000	—	10.67	117,000
1914	4,500	2.04	9,000	—	13.21	119,000
1915	4,700	2.19	10,300	—	11.17	115,000
Average.....1910-14	3,200	2.31	7,400	—	11.22	83,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915.—con.**

Crops.	Area.	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
Saskatchewan—						
Fall wheat..... 1910	1,230	11.66	14,343	—	0.76	11,000
1911	2,638	22.00	58,000	59.00	0.58	34,000
1912	3,000	21.56	65,000	59.50	0.76	49,000
1913	4,000	23.57	94,000	59.78	0.71	67,000
1914	4,300	15.50	67,000	60.33	0.99	66,000
1915	4,100	30.76	126,000	—	0.81	102,000
Average..... 1910-14	3,000	20.00	60,000	59.65	0.75	45,000
Spring wheat..... 1910	4,226,992	15.84	66,964,653	59.60	0.69	46,206,000
1911	5,253,836	20.75	109,017,000	59.98	0.58	63,230,000
1912	5,579,000	19.16	106,895,000	59.63	0.56	59,861,000
1913	5,716,000	21.35	121,465,000	61.23	0.64	77,738,000
1914	5,344,000	13.74	73,427,000	59.04	1.48	108,672,000
1915	6,834,000	28.54	195,042,000	60.75	0.81	157,984,000
Average..... 1910-14	5,224,000	18.30	95,554,000	59.89	0.74	71,141,000
All wheat..... 1910	4,228,222	15.84	66,978,996	—	0.69	46,217,000
1911	5,256,474	20.75	109,075,000	59.98	0.58	63,264,000
1912	5,582,000	19.16	106,960,000	59.63	0.56	59,910,000
1913	5,720,000	21.25	121,559,000	61.23	0.64	77,805,000
1914	5,348,300	13.74	73,494,000	59.07	1.48	108,738,000
1915	6,838,100	28.54	195,168,000	—	0.81	158,086,000
Average..... 1910-14	5,227,000	18.30	95,613,000	59.97	0.74	71,187,000
Oats..... 1910	1,888,359	31.20	58,922,791	36.27	0.29	17,088,000
1911	2,332,912	46.12	107,594,000	35.69	0.29	31,202,000
1912	2,556,000	45.99	117,537,000	36.64	0.23	27,033,000
1913	2,755,000	41.42	114,112,000	37.78	0.25	28,528,000
1914	2,520,000	24.53	61,816,000	33.71	0.45	27,817,000
1915	2,937,000	53.67	157,628,600	37.48	0.28	44,136,000
Average..... 1910-14	2,410,000	38.17	91,996,000	36.01	0.29	26,334,000
Barley..... 1910	129,621	23.61	3,061,007	46.59	0.36	1,102,000
1911	273,988	31.61	8,661,000	46.52	0.47	4,071,000
1912	292,000	32.87	9,595,000	48.15	0.33	3,166,000
1913	332,000	31.39	10,421,000	48.86	0.30	3,126,000
1914	290,000	16.90	4,901,000	43.87	0.50	2,451,000
1915	287,000	36.83	10,570,200	47.54	0.43	4,545,000
Average..... 1910-14	264,000	27.76	7,328,000	46.79	0.38	2,783,000
Rye..... 1910	754	15.43	11,639	54.06	0.50	6,000
1911	2,271	27.00	61,000	—	0.53	32,000
1912	2,700	21.00	57,000	—	0.56	32,000
1913	3,000	22.67	68,000	—	0.40	27,000
1914	2,600	20.90	54,000	58.50	0.67	36,000
1915	2,700	28.00	75,000	55.17	0.75	57,000
Average..... 1910-14	2,200	22.73	50,000	56.58	0.54	27,000

**I. Area, Yield, Quality and Value of Principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per measured bush.	Average price per bush.	Total Value
Saskatchewan—con.	acres	bush.	bush.	lb.	\$	\$
Peas.....1910	236	11.06	2,612	—	1.27	3,300
.....1911	389	20.00	8,000	—	1.10	9,000
.....1912	400	28.00	11,000	—	1.00	11,000
.....1913	400	17.50	7,000	—	0.85	6,000
.....1915	400	23.00	9,200	61.00	1.40	13,000
Average.....1910-13	355	20.00	7,100	—	1.03	7,300
Mixed grains.....1910	637	14.07	8,967	—	0.53	5,000
.....1911	1,876	35.00	66,000	—	0.53	35,000
.....1912	2,000	36.40	73,000	—	0.60	44,000
.....1913	2,000	38.40	77,000	—	0.40	31,000
.....1914	1,900	15.50	29,500	—	0.51	15,000
.....1915	1,950	30.00	58,500	48.33	0.45	26,300
Average.....1910-14	1,600	31.25	51,000	—	0.51	26,000
Flax.....1910	506,425	7.68	3,893,160	55.24	2.08	8,098,000
.....1911	682,000	11.25	7,672,500	53.89	1.50	11,509,000
.....1912	1,780,000	12.94	23,033,000	55.32	0.89	20,503,000
.....1913	1,386,000	11.24	15,579,000	56.04	0.95	14,800,000
.....1914	958,000	6.40	6,131,000	51.02	1.01	6,192,000
.....1915	697,000	13.00	9,061,000	55.89	1.50	13,592,000
Average.....1910-14	1,062,000	10.60	11,262,000	54.30	1.09	12,220,000
Potatoes.....1910	24,046	121.32	2,917,340	—	0.59	1,721,000
.....1911	30,040	183.43	5,510,000	—	0.51	2,810,000
.....1912	31,000	209.70	6,552,000	—	0.40	2,621,000
.....1913	31,000	165.74	5,138,000	—	0.47	2,415,000
.....1914	30,600	133.51	4,085,000	—	1.05	4,289,000
.....1915	30,300	146.15	4,428,000	—	0.49	2,170,000
Average.....1910-14	29,000	166.90	4,840,000	—	0.57	2,771,000
Turnips, mangolds, etc.....1910	990	177.21	175,436	—	0.43	75,000
.....1911	13,907	285.25	3,966,000	—	0.43	1,705,000
.....1912	14,000	304.47	4,165,000	—	0.42	1,749,000
.....1913	13,000	254.24	3,305,000	—	0.50	1,653,000
.....1914	12,900	248.91	3,211,000	—	0.71	2,280,000
.....1915	12,400	236.75	2,936,000	—	0.52	1,527,000
Average.....1910-14	11,000	269.45	2,964,000	—	0.50	1,492,000
Hay and clover.....1910	37,694	tons 1.19	tons 45,129	—	per ton 9.56	431,000
.....1911	47,720	1.50	72,000	—	9.73	701,000
.....1912	53,000	1.70	90,000	—	7.71	693,000
.....1913	62,000	1.84	114,000	—	7.38	841,000
.....1914	70,000	1.74	122,000	—	6.84	834,000
.....1915	67,000	1.41	94,000	—	6.96	654,000
Average.....1910-14	54,000	1.65	89,000	—	7.87	700,000

**I. Area, Yield, Quality and Value of Principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per ton	Total Value
Saskatchewan—con.	acres	tons	tons	lb.	\$	\$
Fodder corn..... 1910	675	1.44	977	—	6.34	6,000
1911	1,357	7.00	9,500	—	6.50	62,000
1912	1,300	1.50	2,000	—	8.00	16,000
1913	1,600	7.00	11,000	—	8.00	88,000
1914	1,900	3.66	7,000	—	3.50	24,500
1915	2,000	4.16	8,300	—	3.00	25,000
Average..... 1910-14	1,400	4.29	6,000	—	6.50	39,000
Alfalfa..... 1910	182	1.09	199	—	13.55	3,000
1911	1,168	1.50	2,000	—	13.00	26,000
1912	1,400	2.19	3,000	—	11.66	35,000
1913	1,600	2.27	3,700	—	15.25	56,000
1914	1,800	2.59	5,000	—	15.00	75,000
1915	1,800	1.71	3,000	—	14.50	44,000
Average..... 1910-14	1,200	2.25	2,700	—	14.44	39,000
Alberta—		bush.	bush.	per bush.		
Fall wheat..... 1910	204,636	11.35	2,323,530	60.48	0.72	1,673,000
1911	305,788	25.28	7,730,000	59.46	0.75	5,798,000
1912	212,000	21.83	4,628,000	59.63	0.59	2,731,000
1913	202,000	21.00	4,242,000	60.96	0.62	2,630,000
1914	221,100	21.30	4,709,000	58.26	0.94	4,426,000
1915	215,700	33.92	7,316,000	61.32	0.79	5,780,000
Average..... 1910-14	229,000	20.64	4,727,000	59.75	0.73	3,452,000
Spring wheat..... 1910	674,665	9.98	6,736,680	59.64	0.68	4,581,000
1911	1,334,186	21.64	28,872,000	58.90	0.58	16,746,000
1912	1,378,000	21.54	29,675,000	58.01	0.53	15,728,000
1913	1,310,000	23.00	30,130,000	61.12	0.61	18,379,000
1914	1,150,000	21.00	24,150,000	60.75	0.91	21,977,000
1915	1,348,000	32.67	44,039,000	61.57	0.79	34,791,000
Average..... 1910-14	1,169,000	20.46	23,913,000	59.68	0.65	15,482,000
All wheat..... 1910	879,301	10.30	9,060,210	59.86	0.69	6,254,000
1911	1,639,974	22.32	36,602,000	59.02	0.62	22,544,000
1912	1,590,000	21.57	34,303,000	58.23	0.54	18,459,000
1913	1,512,000	22.73	34,372,000	61.10	0.61	21,009,000
1914	1,371,100	21.05	28,859,000	60.17	0.91	26,403,000
1915	1,563,700	32.84	51,355,000	61.52	0.79	40,571,000
Average..... 1910-14	1,398,000	20.49	28,639,000	59.67	0.66	18,934,000
Oats..... 1910	783,072	20.56	16,099,223	38.05	0.32	5,152,000
1911	1,221,217	48.34	59,034,000	37.34	0.28	16,530,000
1912	1,461,000	46.30	67,630,000	38.94	0.24	16,231,000
1913	1,639,000	43.65	71,542,000	38.67	0.24	17,170,000
1914	1,502,000	38.00	57,070,000	38.01	0.42	23,972,000
1915	1,912,000	56.35	107,741,000	39.78	0.27	29,090,000
Average..... 1910-14	1,321,000	41.09	54,276,000	38.20	0.29	15,811,000

**I. Area, Yield, Quality and Value of Principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
Alberta—con.						
Barley.....1910	121,435	20.42	2,480,165	47.92	0.38	942,000
1911	164,132	26.54	4,356,000	46.84	0.41	1,786,000
1912	187,000	33.05	6,179,000	48.12	0.33	2,039,000
1913	197,000	32.15	6,334,000	49.00	0.31	1,964,000
1914	178,000	27.00	4,806,000	48.47	0.51	2,451,000
1915	185,000	37.75	6,984,000	49.57	0.35	2,444,000
Average.....1910-14	170,000	28.30	4,811,000	48.07	0.38	1,836,000
Rye.....1910	6,672	16.33	109,006	56.22	0.56	61,000
1911	14,443	27.30	394,000	55.27	0.61	240,000
1912	15,000	25.56	377,000	54.00	0.56	211,000
1913	16,000	24.89	398,000	57.07	0.46	183,000
1914	16,400	22.00	360,800	55.83	0.66	238,000
1915	16,800	28.61	463,000	56.63	0.73	338,000
Average.....1910-14	14,000	23.43	328,000	55.67	0.57	187,000
Peas.....1910	287	15.23	4,371	—	1.29	7,000
1911	493	16.00	8,000	—	1.10	9,000
1912	460	18.50	9,000	—	0.93	8,400
1913	500	17.00	8,500	—	0.85	7,000
1914	470	17.25	8,100	58.66	1.47	12,000
1915	430	20.00	8,600	62.00	1.65	14,200
Average.....1910-14	440	17.26	7,595	58.66	1.14	8,680
Mixed grains.....1910	1,798	20.33	36,556	—	0.47	17,000
1911	2,789	30.00	84,000	—	0.42	35,000
1912	2,800	34.50	97,000	—	0.40	39,000
1913	2,000	36.67	73,000	—	0.34	25,000
1914	1,800	40.00	72,000	—	0.47	34,000
1915	1,700	39.17	67,000	47.20	0.34	23,000
Average.....1910-14	2,260	32.30	73,000	—	0.41	30,000
Flax.....1910	31,076	2.53	78,480	54.93	1.87	147,000
1911	107,171	10.39	1,114,000	53.43	1.20	1,337,000
1912	132,000	12.83	1,693,000	54.76	0.92	1,557,000
1913	105,000	11.00	1,155,000	56.26	1.19	1,374,000
1914	80,000	7.67	614,000	55.78	1.05	645,000
1915	70,000	16.05	1,124,000	56.37	1.49	1,675,000
Average.....1910-14	91,000	10.23	931,000	55.03	1.09	1,012,000
Potatoes.....1910	20,086	116.49	2,339,901	—	0.64	1,498,000
1911	23,863	193.03	4,606,000	—	0.42	1,935,000
1912	27,000	211.64	5,775,000	—	0.39	2,252,000
1913	26,000	167.32	4,350,000	—	0.39	1,697,000
1914	26,300	138.86	3,652,000	—	0.65	2,374,000
1915	27,300	188.84	5,155,000	—	0.33	1,701,000
Average.....1910-14	25,000	165.80	4,145,000	—	0.47	1,951,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per measured bush.	Average price per bush.	Total Value
	acres	bush.	bush.	lb.	\$	\$
Alberta—con.						
Turnips, mangolds, etc..... 1910	1,333	177.18	236,178	—	0.47	111,000
1911	4,828	300.61	1,451,000	—	0.29	421,000
1912	5,000	260.98	1,281,000	—	0.57	730,000
1913	5,000	246.77	1,234,000	—	0.50	617,000
1914	4,900	255.53	1,252,000	—	0.60	751,000
1915	4,900	276.73	1,356,000	—	0.39	529,000
Average..... 1910-14	4,200	259.76	1,091,000	—	0.48	526,000
		tons	tons		per ton	
Hay and clover..... 1910	149,973	0.84	125,662	—	14.58	1,832,000
1911	162,411	1.66	270,000	—	12.24	3,305,000
1912	171,000	1.70	291,000	—	9.09	2,644,000
1913	176,000	1.56	275,000	—	8.69	2,390,000
1914	176,000	1.73	304,000	—	8.31	2,526,000
1915	173,000	1.80	311,000	—	8.61	2,678,000
Average..... 1910-14	167,000	1.52	253,000	—	10.04	2,539,000
Fodder corn..... 1910	1,259	1.89	2,392	—	7.53	18,000
1911	739	1.95	1,400	—	8.00	11,000
1912	600	2.00	1,200	—	8.50	10,000
1913	600	3.70	2,200	—	9.00	20,000
1914	800	2.00	1,600	—	3.50	5,600
1915	1,100	5.14	5,700	—	5.00	29,000
Average..... 1910-14	800	2.25	1,800	—	7.22	13,000
Sugar beets..... 1910	1,079	5.45	5,876	—	5.00	29,000
1911	1,795	8.00	14,000	—	5.00	70,000
1912	1,900	7.00	13,000	—	5.00	67,000
1913	2,000	5.00	10,000	—	5.00	50,000
1914	100	6.00	600	—	5.00	3,000
1915	—	—	—	—	—	—
Average..... 1910-14	1,400	6.21	8,700	—	5.00	44,000
Alfalfa..... 1910	2,592	1.98	5,133	—	15.94	82,000
1911	7,890	2.62	21,000	—	12.00	252,000
1912	9,300	2.56	24,000	—	10.70	256,000
1913	9,000	2.77	25,000	—	8.25	206,000
1914	11,400	2.77	32,000	—	11.41	365,000
1915	11,000	3.06	34,000	—	9.31	317,000
Average..... 1910-14	8,000	2.62	21,000	—	11.05	232,000
		bush.	bush.		per bush.	
British Columbia—						
Fall wheat..... 1910	4,369	28.55	96,197	—	0.91	88,000
1911	6,599	29.81	197,000	61.00	0.97	191,000
1912	6,000	33.00	198,000	58.50	1.03	204,000
1913	6,000	33.14	199,000	59.25	1.01	201,000
1914	5,500	31.82	175,000	60.00	1.22	214,000
1915	6,000	33.44	200,600	60.46	0.91	182,500
Average..... 1910-14	5,700	30.35	173,000	59.68	1.04	180,000

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Average price per bush.	Total Value
British Columbia—con.	acres	bush.	bush.	lb.	\$	\$
Spring wheat.....1910	5,133	21.40	109,873	—	1.23	135,000
1911	7,108	26.73	190,000	57.20	1.01	192,000
1912	6,700	30.33	203,000	60.25	0.93	188,000
1913	7,000	26.67	187,000	60.00	0.99	185,000
1914	7,000	27.77	194,000	59.50	1.23	239,000
1915	10,000	32.43	324,400	58.40	0.96	311,400
Average.....1910-14	6,600	26.82	177,000	59.23	1.06	188,000
All wheat.....1910	9,492	21.70	206,070	—	1.08	223,000
1911	13,707	28.23	387,000	59.13	0.99	383,000
1912	12,700	31.57	401,000	59.39	0.98	392,000
1913	13,000	29.69	386,000	59.61	1.00	386,000
1914	12,500	29.52	369,000	59.74	1.23	453,000
1915	16,000	32.80	525,000	59.32	0.94	493,900
Average.....1910-14	12,300	28.46	350,000	59.46	1.05	367,000
Oats.....1910	33,209	51.24	1,701,533	—	0.59	1,004,000
1911	45,299	52.50	2,378,000	35.46	0.57	1,355,000
1912	45,000	56.00	2,507,000	35.00	0.51	1,278,000
1913	48,500	55.50	2,692,000	40.83	0.58	1,561,000
1914	56,700	55.93	3,171,000	35.63	0.62	1,966,000
1915	71,000	61.84	4,390,600	36.28	0.49	2,151,400
Average.....1910-14	46,000	54.13	2,490,000	36.73	0.58	1,433,000
Barley.....1910	1,853	27.79	51,509	—	0.83	43,000
1911	2,783	41.66	116,000	50.50	0.70	81,000
1912	2,600	45.33	117,000	48.00	0.64	75,000
1913	2,500	35.25	88,000	48.00	0.68	60,000
1914	2,600	37.29	97,000	48.83	0.92	89,000
1915	2,650	40.36	106,900	49.89	0.64	68,400
Average.....1910-14	2,500	37.60	94,000	48.83	0.74	70,000
Peas.....1910	1,572	27.97	43,979	—	0.99	44,000
1911	1,489	30.25	45,000	62.50	1.40	63,000
1912	1,400	30.66	43,000	62.50	1.38	59,000
1913	1,300	26.67	35,000	63.00	1.50	53,000
1914	1,350	30.00	41,000	60.00	1.45	59,000
1915	1,300	29.75	38,700	60.00	1.24	48,000
Average.....1910-14	1,500	27.73	41,600	62.00	1.35	56,000
Mixed grains.....1910	526	24.33	12,802	—	0.84	11,000
1911	2,248	30.00	67,000	—	0.70	47,000
1912	2,500	35.00	88,000	—	0.65	57,000
1913	2,500	62.00	155,000	—	0.35	54,000
1914	2,400	56.67	136,000	48.00	1.03	140,000
1915	2,600	40.00	104,000	—	0.50	52,000
Average.....1910-14	2,050	44.88	92,000	48.00	0.67	61,800

**I. Area, Yield, Quality and Value of principal Field Crops in Canada,
1910-1915—con.**

Crops	Area	Yield per acre	Total Yield	Weight per meas- ured bush.	Ave- age price per bush.	Total Yield
British Columbia—con.	acres	bush.	bush.	lb.	\$	\$
Potatoes..... 1910	10,872	150.03	1,631,211	—	0.74	1,148,000
1911	14,974	252.31	3,778,000	—	0.66	2,493,000
1912	17,000	233.15	3,995,000	—	0.49	1,958,000
1913	15,000	207.30	3,110,000	—	0.66	2,053,000
1914	14,700	182.00	2,675,000	—	0.78	2,087,000
1915	16,000	247.28	3,956,000	—	0.45	1,780,000
Average..... 1910-14	14,500	209.52	3,038,000	—	0.64	1,948,000
Turnips, mangolds, etc..... 1910	2,239	439.70	984,494	—	0.29	282,000
1911	3,400	506.65	1,723,000	—	0.60	1,034,000
1912	3,200	415.90	1,351,000	—	0.53	716,000
1913	3,400	584.35	1,987,000	—	0.60	1,192,000
1914	3,500	431.00	1,509,000	—	0.53	800,000
1915	3,800	455.61	1,731,000	—	0.39	675,000
Average..... 1910-14	3,150	479.68	1,511,000	—	0.53	805,000
Hay and clover..... 1910	133,317	tons 1.56	tons 203,499	—	per ton 18.34	3,825,000
1911	136,134	2.27	309,000	—	18.00	5,562,000
1912	139,000	2.28	317,000	—	17.45	5,540,000
1913	145,000	2.11	306,000	—	17.00	5,202,000
1914	158,000	2.23	352,000	—	15.54	5,470,000
1915	167,000	2.34	391,000	—	14.57	5,697,000
Average..... 1910-14	142,300	2.10	298,500	—	17.15	5,120,000
Fodder corn..... 1910	355	7.70	2,736	—	6.46	18,000
1911	429	7.69	3,300	—	7.50	25,000
1912	400	7.50	3,000	—	9.00	27,000
1913	400	7.50	3,000	—	12.00	36,000
1914	390	8.00	3,000	—	6.00	18,000
1915	430	12.62	5,400	—	4.00	22,000
Average..... 1910-14	400	7.50	3,000	—	8.33	25,000
Alfalfa..... 1910	3,741	2.64	9,903	—	13.58	135,000
1911	5,642	5.50	31,000	—	14.00	434,000
1912	6,700	4.20	28,000	—	17.00	481,000
1913	6,700	4.60	31,000	—	14.66	454,000
1914	8,500	3.33	28,000	—	13.60	381,000
1915	12,100	3.52	43,000	—	14.84	638,000
Average..... 1910-14	6,300	4.13	26,000	—	15.39	400,000

II. Comparative Areas and Yields of Wheat, Oats, Barley and Flaxseed in the Northwest Provinces, 1910-1915.

AREAS.

Provinces	1910	1911	1912	1913	1914	1915	Average for the five yrs. 1910-1914
	acres	acres	acres	acres	acres	acres	acres
N.W. Provinces							
Wheat.....	7,867,894	9,091,281	10,011,000	10,036,000	9,335,400	11,744,700	9,448,000
Oats.....	3,880,604	4,801,563	5,365,000	5,792,000	5,353,000	6,290,000	5,050,000
Barley.....	667,072	886,225	960,000	1,025,000	936,000	962,000	895,000
Flax.....	572,185	868,936	2,012,000	1,545,000	1,078,000	801,000	1,215,000
Manitoba—							
Wheat.....	2,760,371	3,094,833	2,839,000	2,804,000	2,616,000	3,342,900	2,823,000
Oats.....	1,209,173	1,307,434	1,348,000	1,398,000	1,331,000	1,441,000	1,319,000
Barley.....	416,016	448,105	481,000	496,000	468,000	480,000	462,000
Flax.....	34,684	79,705	100,000	54,000	40,000	34,000	62,000
Saskatchewan—							
Wheat.....	4,228,222	5,256,474	5,582,000	5,720,000	5,348,300	6,838,100	5,227,000
Oats.....	1,888,359	2,332,912	2,556,000	2,755,000	2,520,000	2,937,000	2,410,000
Barley.....	129,621	273,988	292,000	332,000	290,000	287,000	264,000
Flax.....	506,425	682,000	1,780,000	1,386,000	958,000	697,000	1,062,000
Alberta—							
Wheat.....	879,301	1,639,974	1,590,000	1,512,000	1,371,100	1,563,700	1,398,000
Oats.....	783,072	1,221,217	1,461,000	1,639,000	1,502,000	1,912,000	1,321,000
Barley.....	121,435	164,132	187,000	197,000	178,000	185,000	170,000
Flax.....	31,076	107,171	132,000	105,000	80,000	70,000	91,000

YIELDS.

	bush.	bush.	bush.	bush.	bush.	bush.	bush.
N.W. Provinces							
Wheat.....	110,165,155	298,360,000	204,280,000	209,262,000	140,958,000	342,948,000	174,606,000
Oats.....	105,400,393	176,292,000	242,321,000	242,413,000	150,843,000	334,840,000	183,454,000
Barley.....	12,047,806	27,966,000	31,600,000	31,060,000	19,535,000	35,317,200	24,442,000
Flax.....	4,148,315	9,938,500	25,978,000	17,366,000	7,083,000	10,559,000	12,903,000
Manitoba—							
Wheat.....	34,125,949	62,689,000	63,017,000	53,331,000	38,605,000	96,425,000	50,354,000
Oats.....	30,378,379	60,037,000	57,154,000	56,759,000	31,951,000	69,471,000	47,256,000
Barley.....	6,506,634	14,949,000	15,826,000	14,303,000	9,828,000	17,763,000	12,283,000
Flax.....	176,675	1,152,000	1,252,000	632,000	338,000	374,000	710,000
Saskatchewan—							
Wheat.....	66,978,996	109,075,000	106,960,000	121,559,000	73,494,000	195,168,000	95,613,000
Oats.....	58,022,791	107,594,000	117,537,000	114,112,000	61,816,000	157,628,000	91,996,000
Barley.....	3,061,007	8,661,000	9,595,000	10,421,000	4,901,000	10,570,200	7,328,000
Flax.....	3,803,160	7,672,500	23,033,000	13,579,000	6,131,000	9,061,000	11,262,000
Alberta—							
Wheat.....	9,060,210	36,602,000	34,303,000	34,372,000	28,859,000	51,355,000	28,639,000
Oats.....	16,099,223	59,034,000	67,630,000	71,542,000	57,076,000	107,741,000	54,276,000
Barley.....	2,480,165	4,356,000	6,179,000	6,334,000	4,806,000	6,984,000	4,831,000
Flax.....	78,480	1,114,000	1,693,000	1,555,000	614,000	1,124,000	931,000

A Promising Wheat District.—The postmaster of Hudson Bay Junction, a station on the Canadian Northern Railway in Saskatchewan, writes as follows:—"The first and only wheat ever grown in this district was harvested this past fall. It was a plot of about three acres and was sown by hand in fresh, broken soil. The crop, cut and threshed by hand, averaged over ninety bushels to the acre. It was all sold for seed grain at a very good price. When standing it averaged about six feet high. This is merely to show the outside world what may be expected of this bush country in the future."

III. Total Areas and Values of Field Crops in Canada, 1910-1915.

AREAS.

Provinces	1910	1911	1912	1913	1914	1915
	acres	acres	acres	acres	acres	acres
Canada.....	30,279,336	34,545,672	35,575,550	35,375,430	33,436,675	37,063,455
P. E. Island.....	476,071	477,035	462,880	456,970	461,510	481,985
Nova Scotia.....	709,788	709,703	700,160	711,630	693,860	727,200
New Brunswick.....	952,085	978,530	931,990	906,130	904,055	893,940
Quebec.....	5,242,593	5,375,066	5,010,400	4,898,800	4,863,850	4,901,700
Ontario.....	9,288,078	9,648,909	9,349,000	9,200,000	8,973,700	9,391,500
Manitoba.....	4,594,784	5,134,087	4,971,400	4,965,000	4,671,790	5,592,550
Saskatchewan.....	6,817,841	8,644,102	10,315,800	10,307,600	9,238,000	10,877,650
Alberta.....	1,999,963	3,351,745	3,603,000	3,690,100	3,369,270	3,966,930
British Columbia.....	197,533	226,495	230,800	238,700	260,640	292,880

VALUES.

	\$	\$	\$	\$	\$	\$
Canada.....	396,635,240	597,926,000	557,344,100	552,771,500	638,580,300	797,669,500
P. E. Island.....	6,681,140	9,099,300	9,456,000	9,535,500	11,544,000	10,932,700
Nova Scotia.....	11,430,300	17,174,500	19,420,000	17,132,900	21,066,700	19,556,700
New Brunswick.....	12,146,500	17,695,200	17,295,700	17,965,100	20,045,100	20,096,400
Quebec.....	76,325,000	106,248,000	69,901,000	88,589,000	99,279,000	104,683,000
Ontario.....	149,607,000	195,764,000	198,715,300	167,835,000	196,220,000	207,043,500
Manitoba.....	42,800,000	76,548,000	71,647,000	64,557,000	65,528,300	119,447,000
Saskatchewan.....	71,755,300	115,426,000	115,813,000	129,376,000	152,751,500	224,875,300
Alberta.....	16,150,000	48,475,000	44,503,300	46,712,000	59,779,600	79,409,200
British Columbia.....	6,746,000	11,496,000	10,593,000	11,060,000	11,463,000	11,625,700

* NOTE.—In 1914 the total areas estimated to be sown to field crops amounted to 35,102,175 acres; but the productive surface in the Northwest provinces was reduced by the following areas of crops which failed in consequence of the drought: Wheat 728,100 acres, oats 753,000 acres, barley 102,000 acres, flax 79,600 acres and sugar beets 2,000 acres in Alberta, and 1,400 acres in Ontario.

EXPORTABLE SURPLUS OF CANADIAN WHEAT, 1915.

In the Census and Statistics Monthly of October, 1915 (Vol. 8, No. 86, p. 255), the quantity of Canadian wheat available for export was estimated at 228,132,200 bushels out of the total yield then provisionally placed at 336,258,000 bushels. The following is the revised calculation in the light of the final estimate of production, viz., 376,303,600 bushels:

	Bushels.	Bushels.
Final estimate of total yield.....		376,303,600
Average loss in cleaning, and allowance for grain not of merchantable quantity, say 10 per cent.....	37,630,400	
Total retained for seeding crop of 1916, say 14 million acres at 1.75 bushel per acre.....	24,500,000	
Required for food, say 0.25 bushels per head for a population of 8 millions.....	50,000,000	112,130,400
Balance available for export.....		264,173,200

Accordingly, the quantity of wheat now estimated as available for export out of the crop of 1915 is 264,173,200 bushels.

The largest quantity of wheat and wheat flour previously exported

from Canada in any one fiscal year was 142,574,000 bushels in 1913-14. The quantity now estimated as available for export is 121,599,200 bushels in excess of this amount, and represents about 70 per cent of the total estimated wheat production of Canada in 1915. Moreover, for the first time, the Canadian wheat surplus proves more than sufficient to supply the annual average wheat deficit of the United Kingdom, which, according to official calculations published in the *Journal of the English Board of Agriculture* for September last, amounts to 215,209,300 bushels.

PRODUCTION OF FLAX FIBRE IN ONTARIO.

According to information furnished by Mr. James A. McCracken, Secretary, Canadian Flax Growers, St. Mary's, Ontario, the area under flax grown for fibre in southern Ontario during 1915 was about 4,000 acres. From this area the production of flax fibre was about 800 tons, which at the average price of approximately 20 cents per lb., or \$400 per ton, was of the total value of \$320,000. In addition, 80 tons of tow at \$35 per ton realised \$2,800. The same crop also produced seed at the average rate of nearly 12 bushels per acre, or a total yield of 48,000 bushels, the value of which at the average rate of \$1.60 per bushel, was \$76,800. About 30 per cent of the total production of fibre is shipped to Ireland, the rest being exported to New England States.

Most of the crop is secured on land rented from the farmer at from \$10 to \$14 an acre. Flaxstraw brought by the ton (seed on) realises upwards of \$14.50 a ton delivered at the mill. Under the straight rental system, the farmer always performs the cultivation, and in some cases hauls in the crop when harvested. The mill operator arranges for the seeding, weeding and harvesting. The mills manufacture the retted straw into flax fibre ready for the hackles of the spinner. Retting in Canada has heretofore been done almost exclusively by the dew retting or meadow system.

REPORTS ON THE CONDITION OF LIVE STOCK.

Prince Edward Island.—The fall was a favourable one, with little frost up till the middle of December, so that live stock went into winter quarters later than usual and in good condition. There is plenty of hay, which makes up for a shortage of straw. Potatoes were a poor crop, and as a result many swine were killed, which foreshadows a scarcity of young pigs in the spring. Horses are a large stock, but the market is said to be very dull.

Nova Scotia.—All stock are said to be in good condition. The mildness of the fall proved a great saving of fodder, so that there will be sufficient for the winter months. Any shortage of roots will be counterbalanced by the large quantities of hay and straw. Cows are giving a good flow of milk. The stock of beef cattle is larger than usual, but the local markets are said to be glutted, and low prices prevail.

New Brunswick.—Live stock are everywhere reported to be in healthy condition. A sufficient supply of fodder is on hand to last the winter months if carefully fed. As in the other Maritime provinces, roots were a light crop, and more grain and hay will be fed.

Quebec.—Owing to fine autumn weather and the heavy after feed, live stock entered the winter in good condition. Hay is rather scarce, and commands an unusually high price, \$20 per ton being frequently quoted by correspondents. Abundant root and fodder crops will, however, equalise conditions, although some farmers have had to sell a portion of their stock in order to buy hay.

Ontario.—All live stock are generally reported as in a healthy thriving condition. The mild, open fall, with an extraordinary after growth, allowed of the animals staying out till very late and proved a great saving of fodder. Throughout the province hay of first quality is said to be scarce and dear as a result of the unusually wet weather at harvesting. However, fodder corn this year yielded such a satisfactory crop, both as to quality and quantity, that the lack of hay is not being seriously felt. Straw is very plentiful, and roots yielded fairly well; so that on the whole the supply of fodder is adequate.

Manitoba.—Snow followed soon after the late threshing, and covered the stubble, so that the live stock had not the usual amount of late forage. However, all stock went into the stables in fairly good condition. There is an abundance of feed of the rougher sort, such as green-cut oats, straw, and coarse grains, to carry the animals well on into the spring. Wild hay was a very light crop, and is said to be getting lighter yearly, as a result of so much breaking and drainage of the land. Skunk grass and weeds, too, are infesting the meadows. Fodder corn was only a partial success, suffering severely from frosts. From some districts come complaints of a scarcity of water, many wells having gone dry. Milch cows are showing the result of being fed upon roughage instead of hay in a decreased flow of milk.

Saskatchewan.—Live stock stayed out late on the ranges, and at the end of December were still running at large during the day. All are reported to be in a healthy condition, except for a few cases of blackleg amongst cattle and influenza amongst horses. Hay is none too plentiful, but an abundance of straw with crushed grain and roots is said to make even better rations than all hay. Where corn was grown it proved to be a very satisfactory crop. Oats cut while green make excellent feed and are being quite generally used. Several reports mention a scarcity of water, wells having gone dry and creeks frozen to the bottom, so that melted snow was the only source of water.

Alberta.—Weather conditions have been very favourable for grazing cattle, which were still getting most of their living off the ranges at the end of November. Hay is fairly plentiful, enough at least for work horses and milch cows. There is a large supply of straw and coarse grains. Roots and silage crops are not grown to

any extent. Animals are generally reported as being in a healthy condition, with the exception of a few cases of blackleg. Prices for beef cattle are said to be low.

British Columbia.—Live stock came off the ranges in good condition and later than usual. The market prices of potatoes and other roots are low and so are being fed heavily to stock. Although some of the hay is of poor quality, there is a fair supply. In many districts a great proportion of the holdings are small, being devoted chiefly to fruit and poultry, so that a good deal of fodder has to be imported. Cows are giving a good flow of milk.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during December have ranged higher than during the closing month of last year, the mean being 20.66, as compared with 16.88 a year ago. The highest temperature is 37 and the lowest —8.2; while a year ago the extremes recorded were 45.6 and —25. The precipitation totals 4.21 inches, made up of 0.36 of an inch of rain and 38.5 inches of snow; whereas in the previous December it amounted to 2.46 inches, of which 0.66 of an inch was rain and 18 inches were snow. The bright sunshine averages 2.07 hours a day, compared with 2.95 hours in December, 1914.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The weather during December has been very unsettled. Rain fell on nine different days, and snow flurries occurred on twelve different days. The temperatures have been moderate, with only comparatively slight variations for the season of the year, the mean maximum being 35.16 degrees, and the mean minimum 24.26 degrees, giving a monthly mean of 29.71 degrees. The first half of the month was very open, and ploughing continued up to the 16th. The surface of the ground then froze to a depth of about three inches. Sufficient snow fell to make good sleighing on Christmas Day. This was followed by such mild weather that ploughing was started again on the 27th. An incubator cellar, with work-room and office, was added to the poultry plant, and the yards extended to include about three acres of "Rotation F." The cement foundation for the Laboratory of Plant Pathology was laid on the 3rd and 4th, the temperatures being such that the cement set splendidly before frost occurred. A few loads of straw were used to protect it in case of a sudden cold snap."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "December has been unusually mild and dull, the mean temperature being 29.14, as against 22.89 last year, and the bright sunshine totalling 56.4 hours, compared with 85.1 hours in the corresponding period of 1914. On thirteen different days no sunshine at all has been recorded. The precipitation aggregates 3.87 inches, made up of

1.95 inch of rain distributed over seven different days, 1.14 inch being registered on the 18th, and 1.92 inch of snow. Sleighing began with a fall of six inches of snow on the 30th. December closes with very little frost in the ground, and streams generally have been quite open. Hay is costing \$12 per ton at the barn of the seller, and straw \$7 per ton. Pressed hay is worth \$14.50, and baled straw \$9.50 per ton."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "December has not been very typical of winter. Four inches of snow fell on the first day, but did not stay on the ground very long, milder weather being experienced until the 7th. The 9th was marked by rain and snow, after which fine but cold weather prevailed until the 18th, when a heavy rain was recorded. Snow again fell on the 24th, but rapidly disappeared on the following day. On the 26th an inch of rain fell; but from then to the end of the month fine, cold weather has been experienced. During the first three or four days it was possible to do some ploughing on the under-drained soil. The remaining number of steers needed for experimental feeding have been purchased. These steers, together with a number of two-year-old heifers and three-year-olds, were dehorned, and the steers prepared for their experimental feeding test, which is starting in January. Owing to the shortage of stable room, only sixteen steers are being fed; the average weight of row No. 1, in three consecutive weighings, was 1,078 lb., and of row No. 2, 1,135 lb., all being well-bred Shorthorns. All other live stock is in fair condition and making satisfactory progress. Two hundred men interned on account of the war have been employed part of the month in clearing land, some four to five acres being chopped down, the logs piled, and the brush burned. The logs are being taken off this land, and at present some 600 logs are yarded up in the woods."

Fredericton N.B.—W. W. Hubbard, Superintendent, reports: "December has been almost a record-breaking month for temperature. The average mean temperature for the month at Fredericton for the last forty-one years has been 16 degrees. The mean temperature for the present December is 24.6 degrees. At no time has the mercury dropped to zero. The precipitation is considerably above the average, being 4.49 inches, of which only 0.8 of an inch is due to snowfall. From the 9th there has been a covering of from one to two inches of snow. The weather has been favourable for live stock and such farm work as could be done with bare ground; but it has been a great loss to many lumber operators, especially those who have much transporting of supplies, as the roads and swamps have been bare and soft. One case may be cited where a man with five teams had to keep four of them hauling in supplies to keep one hundred men and the other team in food. Such was the state of the road that 900 lb. is all that a good team could haul on a wagon, and it has necessitated a two-day trip in and a one-day journey out."

Ste. Anne de la Pocatière, Que.—Joseph Begin, Superintendent, reports: "At this Station the highest temperature recorded during

December is 34.6, the lowest —10.2, and the mean 20.9, compared with extremes of 47.4 and —24.6 and a mean of 9.6 in the corresponding period of last year. The bright sunshine recorded averages only 2.11 hours a day. The precipitation has been rather light, amounting to 1.95 inches, distributed over twelve different days, and consisting of light showers and only flurries of snow, except on the 25th, when a good covering of snow fell evenly, making the first permanent sleighing of the season. The ground has been in better condition at the approach of winter than during the last three years at the same date, and there seems good prospect for the next hay crop."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports : " Compared with the average for the last three years, December has been milder, drier, and duller than usual. The mean temperature for 1915 is 21.09 F., the precipitation 2.83 inches, and the number of hours of sunshine 36.2; against averages for 1912, 1913, and 1914 of mean temperature, 17.2° F., precipitation, 3.0 inches, and hours of sunshine, 53.1. Wheels could be used until the 17th, which is quite unusual for this district, and there has not been a storm so far, such as is often experienced even as early as November. The experiments continued this winter are the following: Wintering idle horses economically; cost of feed for weanling, year-old and two-year-old colts; rearing young horses outside, with sheds only as shelter; cost of feed for heifers until they drop their first calves; unlimited versus limited meal rations for dairy cows. For the last two weeks of December farmers around Quebec have been hauling straw and hay to this market, where prices are very high."

Brandon, Man.—W. C. McKillican, Superintendent, reports : " The weather for December has been different from normal winter weather in Manitoba in that there have been a large number of cloudy, dark days, much dampness in the atmosphere, and an unusually heavy snowfall, amounting to sixteen inches, which fortunately was not accompanied by much wind. This snowfall was equalled in 1910, otherwise it is the heaviest for many years. The temperature has been somewhat above the average."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports : " The weather during December has been moderate, with eleven inches of snow and, as there has been very little wind during the month, the snow is at present lying on the fields. Sleighting was never better at this time of the year, but little or no wheat is being marketed, on account of all the elevators being filled to capacity."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports : " December has been mild, the lowest temperature being —20.7 on the 26th. There was sufficient snow to make excellent sleighing, but during the last week in the month a heavy fall blocked the roads. The mild weather, coupled with good roads, facilitated the marketing of a great deal of wheat. The handicap to more complete marketing was the shortage of cars. The steers and sheep purchased in November are making satisfactory progress under conditions similar

to those that obtain on almost any farm. They are being fed in corrals and given the shelter of an open shed.

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports : "Weather conditions for December have, for the most part, been satisfactory. Severe storms, strong winds and low temperatures have been absent. The hours of bright sunshine recorded total only 72. Snow covers the fields to a depth of from four to six inches, with very few drifts. Wheeled vehicles are still being used for all heavy loads. Live stock running on the prairie appears to be thriving well. Very little live stock has been shipped out this season, while quite a number of animals are being shipped in from Alberta. Twenty head of cattalo and other hybrid buffalo, purchased by the Dominion Government from the Mossom M. Boyd estate, Bobcaygeon, Ont., are being wintered at the Station; the animals are running in a large pasture field. Two cars of grain have been shipped during the month, one to the Central Experimental Farm, and the other to the Experimental Farm at Indian Head."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports : "The weather during December has been favourable for stock. There have been no extremes of temperature and no severe storms. Cattle on feed at this Station have made satisfactory gains. The experiment this year consists in a comparison of coarse fodders, timothy hay, prairie hay, green sheaves, prairie hay and straw, and prairie hay and green sheaves. December 1 was local farmers' visiting day, the visit being arranged by one of the local unions of the United Farmers of Alberta. This Union has been arranging semi-annual visits to the Station for the past two years, and the interest appears to be increasing."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports : "The precipitation during December has been very light, so that there has been practically no snow on the ground. The month has been marked by an unusual amount of wind. Conditions have been such that the soil has not drifted, but no doubt there has been considerable loss of moisture on account of the winds. Reports indicate that there is still a little threshing to be done in the extreme south end of the province. In some districts this is placed as high as ten per cent, but four or five per cent would probably cover the amount unthreshed in the backward localities."

Invermere, B.C.—G. E. Parham, Superintendent, reports : "Weather conditions during December have been variable. Rain has fallen on three occasions, giving a total precipitation of 0.28 of an inch. Snow has been registered on five days, giving a total of three inches. The feeding of range cattle has now become general. Sleighing was poor during the earlier part of the month, the constant winds leaving some of the roads completely bare. There has been a good local demand for the turkeys reared and fattened at the Station; forty-two killed at Christmas averaged 12 lb. Twenty-three birds had been previously shipped to Ottawa and Lacombe for stock purposes."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The weather during December has been rather cool, with about the usual amount of precipitation. The lowest temperature is two degrees higher than the corresponding month of last year. This year there has been a fall of 16 inches of soft snow, a portion of which remained on the ground until the end of the month. On account of a small crew, very little land clearing or extra fall work has been undertaken. All classes of live stock are now in excellent condition. Winter experimental work with the cow herd has been progressing favourably. A finished trial of clover versus corn silage yields results which lead to the belief that, valuing them at the same rate per ton, they are practically equal for milk and butter production. Experimental work with hogs is running to capacity, and it is expected to move into the new piggery by the beginning of next month. Most of the winter litters of pigs have arrived, giving the following average results: 11.5 pigs farrowed and 8.25 pigs raised per litter. These were farrowed in a cheap shed at the edge of the bush, and are being raised in the open. On account of the snow, some hay and turnips have had to be fed to the sheep, and this will have to continue as long as the snow lasts. Amongst the poultry, the pullets have laid a most satisfactory number of eggs, and the price has been reasonably good. Fall ploughing of stubble land has been stopped by the snow, and the horses have been enabled to haul out a large quantity of manure."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Heavy and well distributed rainfall during December interfered with farming operations generally. Ploughing, draining, land clearing, road improvement and the marketing of grain, potatoes and hay have been the principal lines of agricultural endeavour in this district. At the Experimental Station considerable landscape work has been carried out. This consisted of the planting of Japanese shrubs, trees and lilies, and also of road improvements. The holly was harvested, and a good yield of foliage and berries secured from the grafted trees. Considerable damage has been done to bulb plantings by English pheasants, necessitating the covering of all bulb areas with wire netting. All autumn-sown cereals are in good condition."

The records of temperature, precipitation, and sunshine at the several Experimental Farms and Stations for the month of December are given in the following table:—

Meteorological Record for December, 1915.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	Highest	Lowest	Mean		Possible	Actual
Ottawa, Ont.....	37.0	-8.2	20.66	4.21	272	64.2
Charlottetown, P.E.I.....	50.0	11.0	29.71	7.35	269	48.1
Kentville, N.S.....	54.0	6.0	29.14	3.87	274	56.4
Nappan, N.S.....	52.0	6.0	28.59	4.76	271	64.4
Fredericton, N.B.....	47.0	3.0	24.60	4.49	270	61.7
Ste. Anne de la Pocatière, Que.....	34.6	-10.2	20.90	1.95	264	65.5
Cap Rouge, Que.....	40.0	-3.1	21.09	2.83	264	36.2
Brandon, Man.....	33.0	-27.8	8.30	1.60	254	72.9
Indian Head, Sask.....	39.0	-18.0	9.68	1.10	248	67.0
Rosthern, Sask.....	28.0	-20.7	6.80	0.82	233	83.2
Scott, Sask.....	38.2	-13.8	12.50	0.10	238	72.0
Lacombe, Alberta.....	48.8	-12.1	17.57	0.00	238	83.4
Lethbridge, Alberta.....	55.2	-11.5	24.80	0.27	254	96.1
Invermere, B.C.....	40.0	-16.0	21.12	0.58	251	43.4
Agassiz, B.C.....	52.0	18.0	38.01	15.39	256	23.0
Sidney, Vancouver I., B.C.....	51.0	26.0	39.05	6.89	259	58.6

Ottawa, January 13, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (January 1) that the wet and often stormy weather very largely prevented work in the fields during December. The early-sown wheat, although backward, is generally a good plant, but late sowings have been very slow in germinating, and where they are up they are not so satisfactory as the early sown, more especially on wet lands. As very little could be done during the month, the acreage now under wheat is only about three-fourths of the area intended for this crop; and, as compared with the end of 1914 (when probably over 80 per cent had been got in), the acreage actually sown is about 6 or 7 per cent less. Winter oats and beans, although also backward, are generally satisfactory. With little work possible during December, the shortage of labour has not, as a rule, been badly felt, but there is everywhere scarcity, and wages are high.

India.—The Department of Statistics published (December 29, 1915) the first wheat forecast for the season 1915-16. This stated that the total area so far reported as sown to wheat was 27,604,000 acres, as against 28,852,000 acres, the revised figure for the same tracts on the corresponding date of the previous year—a decrease of 1,248,000 acres, or 4 per cent. The condition and prospects of the crop were reported to be on the whole from fair to good; but rain was urgently required in the Punjab and in the western districts of the United Provinces.

Cereal Crops in France, 1915.—The following approximate estimate of the yield of the principal cereal crops in France for the year 1915, as compared with 1914, has been published by the French Department of Agriculture:

Crop	1914	1915	1914	1915
	acres	acres	bush.	bush.
Wheat.....	15,105,700	14,064,700	289,184,600	237,805,800
Meslin.....	295,000	258,700	5,092,500	4,341,200
Rye.....	2,669,600	2,544,100	44,813,800	39,085,500
Barley.....	1,830,900	1,711,800	46,135,900	36,113,300
Oats.....	9,098,100	8,450,900	302,517,600	242,911,600

This statement shows that the yield of cereals in France in 1915 was disappointingly small. Not only are the areas sown less than in 1914, but the average yield is one of the poorest recorded for a long time. The area under wheat is less by 2,060,800 acres than the mean of the four normal years 1910 to 1913, and the yield per acre (16.45 bushels) is lower than in any year since the disastrous one of 1910, when it was not more than 15.37 bushels. The figures given do not include the districts occupied by the enemy.

Numbers of Live Stock in France.—The following report on the numbers of farm live stock in France on July 1, 1915, as compared with December 31, 1914, are published in the December Bulletin of Agricultural and Commercial Statistics by the International Institute of Agriculture. The figures of 1914 are placed within brackets. Horses, 2,227,209 (2,205,192); mules, 152,266 (151,709); asses, 333,244 (336,714); cattle, 12,286,849 (12,668,243); sheep, 13,483,189 (14,038,361); swine, 5,490,796 (5,926,291); goats, 469,487 (1,308,155). These statistics do not include the numbers of live stock in the districts occupied by the enemy.

Grain Elevators in Siberia.—The English Board of Trade Journal of December 23 states that, according to an article in the Russian press, grain elevators are to be erected in Siberia. At Alexeyevsk in the Ouesk district an elevator of 1,600 tons capacity has been completed; it is provided with all the necessary drying and cleaning appliances, as is also the elevator at Mozlikovo station. Eight credit societies are erecting an elevator of 6,025 tons capacity at the station of Koeknevo. At Kalachinsk, in the district of Ouesk, and at Ouesk itself, grain stores are to be built; while a large elevator of 16,070 tons capacity is projected for the town of Novo-Nikolaievsk.

Rumania.—The Rumanian Department of Agriculture estimates the yield of wheat in Rumania for 1915 at 89,787,000 bushels. In 1914 the yield of wheat in Rumania was exceptionally poor, not having been more than 45,930,000 bushels. For 1915 the yield is slightly over the average of the five years 1909-13, viz., 87,792,000

bushels. The yield of barley in 1915 is estimated at 29,032,000 bushels, of oats at 28,174,000 bushels, and of rye at 2,822,000 bushels. The production of corn is about 98,421,000 bushels.

United States.—Unusually small stocks of potatoes were held on January 1 in the important potato-producing states, according to a report of the Bureau of Crop Estimates issued on January 21. This is the reverse of conditions a year ago. Supplies on hand at January 1, 1916, for market are estimated to be about 38 per cent smaller than a year ago and 15 per cent smaller than two years ago. In 19 of the northern States, which produced 66 per cent of the 1915 crop, the total stocks of potatoes on January 1 are estimated at 105,345,000 bushels, as compared with 169,554,000 bushels a year ago. Of the total, 83,909,000 bushels are estimated as being in the growers' hands and 21,436,000 bushels in dealers' hands. The average price per bushel on December 1, 1915, was 60 cents, as compared with 42.9 cents on December 1, 1915.

Farm Animals in the United States.—The Crop-Reporting Board of the United States Department of Agriculture issued (January 18) the following estimates of the numbers and values of farm animals in the United States on January 1, 1916, as compared with January 1, 1915:—

Farm animals	1915	1916	1915	1916	1915	1916
	No.	No.	\$ per head	\$ per head	\$	\$
Horses.....	21,195,000	21,166,000	103.33	101.60	2,190,102,000	2,150,468,000
Mules.....	4,479,000	4,565,000	112.36	113.87	503,271,000	519,824,000
Milch cows.....	21,262,000	21,988,000	55.33	53.00	1,176,338,000	1,185,119,000
Other cattle.....	37,067,000	39,453,000	33.38	33.49	1,237,376,000	1,321,135,000
Sheep.....	49,956,000	49,162,000	4.50	5.17	224,687,000	254,348,000
Swine.....	61,618,000	68,047,000	9.87	8.40	637,479,000	571,890,000

In numbers horses have decreased 29,000; mules increased 86,000; milch cows increased 726,000; other cattle increased 2,386,000; sheep decreased 794,000; swine increased 3,429,000. In average value per head, horses decreased \$1.73; mules increased \$1.51; milch cows decreased \$1.43; other cattle increased \$0.11; sheep increased \$0.67; swine decreased \$1.47. In total value, horses decreased \$39,634,000; mules increased \$16,553,000; milch cows increased \$8,781,000; other cattle increased \$83,759,000; sheep increased \$29,661,000; and swine decreased \$65,589,000. The total value on January 1, 1916, of all animals enumerated above was \$6,002,784,000, as compared with \$5,969,253,000 on January 1, 1915, an increase of \$33,531,000, or 0.6 per cent.

THE GRADING OF CANADIAN GRAIN.

A supplement to Broomhall's Corn Trade News of January 4, 1916, publishes a statement of the London Corn Trade Association with reference to complaints by European grain buyers concerning the conditions of trading in respect of the quality of grain exported from the United States on certificate. The statement contains the following paragraphs relating to Canadian grain:—

“Prior to 1912 serious complaints were made against Canadian grading, but the Dominion Grain Act of 1912, and the administrative arrangements ancillary thereto, have effected very great improvements; so that all European buyers have now confidence in Canadian certificates, and though a great number prefer trading on sample or on standard, they acquiesce in the system of grading and its concomitant ‘certificate final,’ as established by Canadian law and carried out by Canadian practice. Therefore in this brief historical review no mention need be made of the communications between European buyers and Canadian representative bodies.

“One very important fact which has greatly enhanced the reputation of Canadian grading is this. Both in the United States and Canada a large proportion of the crop is sold before it is reaped. The buyer should be in a position to rely upon the grading rules current at the time the deals are made; in other words, the grain when it is reaped should be graded on its intrinsic merits according to rules which should not be changed from season to season. Canadian law and practice embody this principle. When the weather has been bad during harvest in Canada and the quality of the crop has therefore been depreciated, the statutory grades have nevertheless not been changed, and buyers have obtained grain of the quality they expected and had a right to expect.”

From these paragraphs it is satisfactory to learn that the complaints in question do not apply to Canada.

POINTERS ON PRACTICAL AGRICULTURE.

COMMUNICATED BY CROP-REPORTING CORRESPONDENTS.

Effect of Summer Fallows in a Wet Season.—The abundance of rain this year (1915) has enabled me to prove that the value of summer fallowing, which is incontestable, is not altogether confined to conservation of moisture in the soil and the destruction of weeds. As the moisture was everywhere excessive, and as the crops on the summer fallow were, as always, much better, there is another reason which has not been given up to the present and which alone can explain this superiority. For my part I do not hesitate to attribute it to the following cause. During the year of summer fallow a more or less considerable quantity of nitrates are formed, which are conserved in the ground, because the soil, which is frozen for several

months, and the subsoil do not allow the rains, which are, by the way, then less abundant, to wash them away. These easily assimilable nitrates give to the summer fallow crops a great superiority over other crops which have at their disposal only the annual formation. It is noteworthy that the formation of nitrates only begins after the soil is warmed, and for that one must wait until June. It would be quite easy to verify my statement: (1) by analysis of the assimilable nitrogen contained in neighbouring lands in summer fallow and in winter and spring ploughing; (2) by spreading crossways over the field ploughed in autumn or spring nitrate of soda, in order to compare with summer fallows (dose of nitrate of soda about 90 pounds to the acre). It would be of enormous importance if one could procure in Canada nitrogenous manures at possible prices. In any case, thanks to the numerous waterfalls, one could easily manufacture artificial nitrates, as is done in Sweden.—CTE. BARLE DE FORAS, High River, Alberta.

NOTE.

Questions relating to nitrification and the nitrogen contents of soils in the West have frequently been dealt with in the reports of the Chemical Division of the Experimental Farms. The report for 1900 gave the results of analyses of soils made monthly in 1900 at Brandon and Indian Head, which showed considerably more nitrate nitrogen in the fallow soil than in that under crop, the reason being that the crop was drawing upon the supplies of this soluble and immediately available nitrogen. There is no doubt that summer fallowing favours nitrification. The nitrates so formed may be largely lost to the surface soil if the later autumn months are wet; it is for the purpose of retaining these soluble nitrates that catch crops sown in late summer are frequently used. The loss through leaching of the soluble nitrates is probably reduced to a minimum in the Canadian Northwest, from the fact that the autumn and winter are there usually cold and dry.—ED.

Control of Weeds by Grazing with Sheep.—Taking the experience of the last five years as to the growth and increase in the extent and variety of weeds, it will become imperative before long to seed down this land in our locality for a few years as pasture. In no other way can I see at present how the Canada thistle can be got under subjection. Isolated plants soon seem to become huge patches. One neighbour with whom I discussed this problem said that he had two patches, now he had only one and that was all over his field. This field of 160 acres is now under grass—brome, rye, and timothy. He has 90 acres of summer fallow for wheat in 1916, and then grass for the same reason. Now if this goes on we shall soon have a sheep and cattle country again, and the sooner the better, for it is eminently fitted for this purpose; but it involves another question that only those who can afford to tide over the transition can stay. Quite a

few have had to leave already, and some form of rural credit will have to be brought about if the small man is to be able to adapt himself to the change which must come, for with us the bare fallow is not always a success. Forage crops and sheep, to my mind, would prepare the land for a splendid crop, weather conditions being right. One farmer bought land full of wild oats. The first crop was nearly all wild oats. He bought a flock of sheep and they, while the farmer encouraged the growth of the oats, eat it off as fast as it came along. This year he has a wonderful crop, and I am looking forward with interest to see what it yields when threshed. The wild oats are not to be seen, and this in a year when wild oats are so prolific, having saved themselves up in the dry years. But it needs money to buy sheep and adequate fences, so that while one patch is growing wheat, the other patch can be grazed.—JOSEPH STENSON, Macleod, Alberta.

THE ILLUMINATION OF JOSEPH KEELER.¹

The author of this book, Dr. Peter H. Bryce, Chief Medical Inspector of the Immigration Branch of the Department of the Interior, has long been an earnest student of the economic situation created in Canada and the United States by rural depopulation and urban over-population. In contributions to periodical literature and in papers read before scientific bodies he has adduced evidence to show the baleful influence of excessive urban concentration in both countries and the need for a saner balance between the functions of rural and urban communities. In these studies he has drawn largely upon census statistics, including those of the Canadian Census of 1911, which showed that during the previous ten years, when the total population had increased by 34·13 per cent, the increase in the total rural population was only 17·16 per cent, whilst the total urban population had increased by 62·25 per cent. The effect of the over-population of cities in relation to national character was the subject of a brief article by him in the *Census and Statistics Monthly* of November, 1914 (Vol. 7, No. 75, pp. 294-296).

But in the little book before us Dr. Bryce has treated the old subject in a new way, and we doubt if census data, statistical phenomena and economic facts have ever been more alluringly placed before the general reader. In a foreword, written by Prof. W. T. Sedgwick, of the Massachusetts Institute of Technology, Dr. Bryce's work is described as an allegory portraying social and economic conditions in the Dominion. Whether the book fulfils all the conditions of allegorical presentation may be questioned; but it certainly possesses much of the charm which a good allegory conveys. It represents a successful city merchant of Toronto, who is led to study the early history of his family on Presqu'île Bay, and incidentally to contrast the conditions of the rural community of 100 years ago with the life

¹ *The Illumination of Joseph Keeler, Esq., or On to the Land*, by Peter H. Bryce, M.A., M.D., 8vo. 97 pp., published by the American Journal of Public Health, Boston, Mass., 1915. Canadian Agents: Hope and Sons, Sparks Street, Ottawa.

now lived under high pressure in the city. His periodical conversations with an old-country university professor of social economics lead to mutual enlightenment; whilst interwoven with these conversations is the story of the present-day Keeler family, interesting because of its evident fidelity to type. How a lawyer son gets into trouble through land speculation, gambling and drink, and a daughter loses health through over-indulgence in the social gaieties of city life, but are restored, the one to moral, and the other to physical health, by life on a farm purchased by the father near the home of his ancestors, is, in brief, the plot of the fictitious part of the work. Problems of agricultural credit, co-operation and cold storage are solved in connection with the new farm, which points the way to the agricultural revival of a whole district.

Those acquainted with Dr. Bryce's literary work need not be told that his language is felicitous and scholarly; strangers to it may be recommended to read this example without delay. And the hope of the author, expressed in his preface, may be echoed: "that the attention of the best and most substantial citizens of both countries, leaders in industrial enterprises and in the application of scientific knowledge, may be directed to the imperative national need for their active interest and practical intervention in the problem of the reconstruction of rural prosperity and of social progress in all, but especially in the older, states and provinces."

THE WEATHER DURING DECEMBER.

The Dominion Meteorological Service reports that the mean temperature of December was above average in all parts of the Dominion, excepting southwestern Ontario, and the larger part of British Columbia. The widest positive departures occurred in Quebec and New Brunswick, in many parts of which provinces the excess was between 6° and 9° , while in Alberta and western Saskatchewan the excess was from 4° to 6° . The negative departures ranged between 1° and 3° in the peninsula of Ontario, and were about the same in northern British Columbia. At the close of the month the ground was covered with snow in nearly all parts of the Dominion. In British Columbia on the mainland the depth ranged from one inch in the vicinity of Vancouver to two feet in the northern interior districts. There was little or no snow in some southern sections of Alberta, and throughout that province the covering was quite light, but farther eastward the depth increased to ten or fourteen inches in southeastern Saskatchewan and Manitoba. In Ontario there was a depth of nearly two feet in some districts in the northern part of the province, but farther southward this gradually diminished to a few inches near Lakes Erie and Ontario. The province of Quebec had a covering of from seven to twenty inches, while in the Maritime Provinces there was a depth of only one to five inches. There were no pronounced differences from the normal precipitation in any of the provinces.

PRICES OF AGRICULTURAL PRODUCE, 1915.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1915.

Grain and Grade	Dec. 4		Dec. 11		Dec. 18		Dec. 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 02½	— 1 08½	1 05	— 1 12½	1 07½	— 1 10½	1 12	— 1 16½
No. 2 Nor.....	0 99½	— 1 05½	1 02½	— 1 09½	1 04½	— 1 07½	1 09½	— 1 13½
No. 3 Nor.....	0 94½	— 1 01½	0 99	— 1 06	1 01½	— 1 04½	1 05½	— 1 08½
No. 4.....	0 90½	— 0 98½	0 94½	— 1 03½	0 97½	— 1 01	1 01½	— 1 04½
No. 5.....	0 85½	—	—	—	—	—	0 96	— 0 96½
No. 6.....	0 80½	—	—	—	—	—	0 88½	—
Feed.....	0 75½	—	—	—	—	—	—	—
Oats—								
No. 2 C.W.....	0 40	— 0 42	0 39	— 0 42½	0 38½	— 0 39½	0 39½	— 0 40
No. 3 C.W.....	0 37	— 0 40½	0 36	— 0 41½	0 35½	— 0 36½	0 36½	— 0 37½
No. 1 Feed Ex.....	0 37	— 0 40½	0 36	— 0 41½	0 35½	— 0 36½	0 36½	— 0 37½
No. 1 Feed.....	0 36	— 0 38½	0 34½	— 0 39½	0 33½	— 0 34	0 35½	—
No. 2 Feed.....	0 35	— 0 37½	0 33½	— 0 38½	0 32½	— 0 33	0 34½	— 0 34½
Barley—								
No. 3 C.W.....	0 65	— 0 68	0 68	— 0 69	0 65	—	0 64	— 0 65
No. 4 C.W.....	0 60	— 0 63½	—	—	—	—	—	—
Rejected.....	0 52	— 0 54	—	—	—	—	—	—
Feed.....	0 52	— 0 54	—	—	—	—	—	—
Flax—								
No. 1 N.W.C.....	1 81½	— 1 84	1 78½	— 1 83½	1 80½	— 1 84½	1 86	— 1 88
No. 2 C.W.....	1 78½	— 1 81	1 75½	— 1 80½	1 77½	— 1 81½	1 83	— 1 85

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1915.

Grade and Market	September		October		November		December	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 06	— 1 22	1 09	— 1 29	1 11	— 1 25	1 15	— 1 29
Chicago.....	0 98	— 1 19½	1 08	— 1 20½	1 10½	— 1 14½	1 17	— 1 28½
Corn, No. 2 Mixed—								
St. Louis.....	0 65	— 0 78	0 58½	— 0 66	0 60	— 0 65	0 65	— 0 75½
New York (f.o.b. afloat).....	0 76	— 0 86	0 59½	— 0 67	0 74	— 0 79½	0 79½	— 0 83½
Corn, No. 2—								
Chicago.....	0 65½	— 0 78	0 59½	— 0 67	0 61½	— 0 68½	0 69½	— 0 75
Oats, No. 2—								
St. Louis.....	0 33	— 0 36	0 34	— 0 37	0 35	— 0 37½	0 39	— 0 44½
Chicago.....	0 36	— 0 38	0 35½	— 0 39½	0 37½	— 0 41½	0 40½	— 0 44
Rye, No. 2—								
Chicago.....	0 91	— 1 00½	0 95	— 1 07	0 94	— 1 03	0 94½	— 0 98½

III. Range of Prices of Imported Grain and Flour at British Markets, 1915.

MARK LANE, LONDON, E.C.

Description	Dec. 6		Dec. 13		Dec. 20		Dec. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian best hard.....	1 81	—1 81½	1 81	—1 81½	1 84	—1 84½	1 87	—1 87½
“ No. 1 new.....	1 78½	—1 79½	1 78½	—1 79½	1 81	—1 81½	1 84	—1 87½
“ No. 2 “.....	1 75½	—1 76½	1 75½	—1 76½	1 78½	—1 79½	1 81	—1 81½
“ No. 3 “.....	1 72½	—1 73½	1 72½	—1 73½	1 75½	—1 76½	1 78½	—1 79½
“ No. 4 “.....	1 69½	—1 70½	1 69½	—1 70½	1 72½	—1 73½	1 75½	—1 76½
American best winter.....	1 74	—1 77	1 74	—1 77	1 79½	—1 82½	1 79½	—1 82½
“ poor “.....	1 65	—1 68	1 65	—1 68	1 68	—1 71	1 68	—1 71
Durum.....	—	—	1 75½	—1 77	1 75½	—1 77	1 77	—1 79½
Californian.....	1 81½	—1 86½	1 81½	—1 86½	1 81½	—1 86½	1 81½	—1 86½
Indian.....	1 79½	—1 81	1 79½	—1 81	1 81½	—1 84	1 87	—1 88½
Oats (per bush.)—								
Canadian.....	0 77½	—0 80½	—	—	—	—	—	—
American.....	0 80½	—0 82½	0 80½	—0 81½	0 84½	—0 85½	0 85½	—0 86½
Buenos Aires.....	0 80½	—0 84½	0 84½	—0 84½	0 85½	—0 86½	0 87	—0 87½
Bahia Blanca.....	0 84½	—0 87	0 87	—0 87½	0 88½	—0 89½	0 89½	—0 90½
Flour (per 280 lb.)—								
Canadian best.....	11 30	—11 54	11 54	—11 78	—	—	—	—
“ medium.....	10 33	—10 81	10 81	—11 06	11 42	—11 66	11 42	—11 66
“ common.....	9 61	—9 86	9 86	—10 09	10 69	—10 94	10 69	—10 94
American best spring.....	11 54	—11 66	11 78	—11 91	—	—	—	—
“ medium spring.....	10 69	—11 06	11 06	—11 30	11 78	—11 91	11 78	—11 91
“ common spring.....	9 61	—9 86	9 86	—10 09	—	—	—	—
“ best winter.....	11 30	—11 54	11 54	—11 78	—	—	—	—
“ medium winter.....	10 81	—10 94	11 06	—11 18	—	—	11 18	—11 42
“ common winter.....	9 86	—9 97	10 09	—10 21	10 21	—10 69	10 21	—10 69
Californian.....	11 42	—11 66	11 66	—11 91	11 66	—11 78	11 66	—11 78
Japanese.....	9 74	—9 97	—	—	—	—	—	—

LIVERPOOL.

Description	Dec. 7		Dec. 14		Dec. 21		Dec. 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1 old.....	1 91	—	1 89½	—	—	—	—	—
“ No. 1 new.....	1 82½	—1 82½	1 80	—1 80½	—	—	—	—
“ No. 2 old.....	1 89½	—	1 88	—	—	—	—	—
“ No. 2 new.....	—	—	—	—	—	—	—	—
“ No. 3 new.....	1 77½	—1 78½	1 74½	—1 75	1 83½	—1 85	1 87	—1 88
Sample Man.....	1 81½	—1 82½	—	—	—	—	1 92½	—1 94
Durum.....	—	—	1 85	—1 85½	1 78½	—	—	—
No. 2 hard winter.....	1 85	—	—	—	—	—	—	—
No. 2 hard winter Gulf, new.....	1 73½	—1 74½	1 70½	—1 71	1 75	—1 77½	1 81½	—1 82½
Ch. white Karachi.....	—	—	1 88	—	1 91	—	—	—
Oats (per bush.)—								
Chilian white.....	0 87½	—0 88½	0 87½	—0 88½	0 87½	—0 88½	0 87½	—0 88½
“ tawny.....	—	—	—	—	—	—	—	—
“ black.....	0 86	—0 87½	0 85	—0 86	0 85	—0 86	0 85	—0 86
“ mixed.....	0 86	—0 87½	0 86	—0 87½	—	—	0 82½	—0 83½
Flour (per 280 lb.)—								
Canada spring patents.....	10 81	—11 06	10 81	—11 06	11 06	—11 30	11 18	—11 42
America “.....	10 94	—11 18	10 94	—11 18	11 18	—11 42	11 42	—11 66
America soft winter patents.....	10 94	—11 18	10 94	—11 18	11 18	—11 42	11 30	—11 54
Kansas patents.....	10 81	—11 06	10 81	—11 06	11 06	—11 30	11 18	—11 42
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	9 74	—9 86	9 74	—9 86	9 74	—9 86	9 74	—9 86
“ middle cut.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61
“ fine cut.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61
“ pinhead.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61

IV. Average Prices of British-grown Grain, 1915.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
October 2.....	43 5	1 32	40 4	1 18	26 5	0 70
" 9.....	44 1	1 34	41 0	1 20	26 5	0 70
" 16.....	45 9	1 39	42 3	1 23	27 1	0 72
" 23.....	48 2	1 47	44 0	1 28	28 1	0 74
" 30.....	50 3	1 52	46 2	1 35	29 1	0 77
Average.....	46 4	1 47	42 9	1 25	27 5	0 73
November 6.....	51 6	1 57	47 3	1 38	30 4	0 80
" 13.....	52 8	1 61	47 5	1 39	30 11	0 82
" 20.....	53 6	1 63	47 11	1 40	31 3	0 82
" 27.....	54 2	1 65	48 7	1 42	31 1	0 83
Average.....	53 0	1 62	47 10	1 40	30 11	0 82
December 4.....	53 7	1 63	48 11	1 43	30 11	0 82
" 11.....	52 10	1 61	47 10	1 40	30 4	0 80
" 18.....	53 11	1 64	47 5	1 39	30 6	0 81
" 25.....	53 10	1 64	47 2	1 38	30 7	0 81
Average.....	53 7	1 63	47 10	1 40	30 7	0 81

V. Average Prices of Imported Meat and Cheese at British Markets, 1915.

FRESH MEATS (per cwt. of 100 lb.).

Description and Market	Dec. 1		Dec. 8		Dec. 15		Dec. 22		Dec. 29	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—										
Birmingham.....	13 69	11 66	13 69	11 66	14 19	—	15 72	12 71	14 70	12 71
Edinburgh.....	14 70	12 70	14 20	12 20	14 20	12 20	14 20	12 70	14 70	12 95
Argentine chilled—										
Birmingham.....	15 21	12 15	14 70	11 66	15 72	12 15	17 23	13 18	16 73	12 71
Leeds.....	14 70	11 91	14 45	11 40	14 95	12 71	16 73	13 18	16 21	12 15
Liverpool.....	15 72	12 15	14 70	12 15	15 21	12 71	16 73	13 69	15 72	13 18
London.....	14 70	11 66	14 70	11 15	15 72	12 15	17 23	12 15	16 73	12 71
Manchester.....	15 72	12 15	14 70	12 15	15 21	12 71	16 73	13 69	15 72	13 18
Dundee.....	—	—	—	—	12 70	—	—	—	—	—
Edinburgh.....	15 70	12 70	15 20	11 93	16 20	13 20	16 70	13 70	16 70	12 70
Glasgow.....	14 70	12 20	—	11 66	—	—	—	—	—	13 20
Australian frozen—										
Birmingham.....	12 15	11 15	12 15	11 15	13 18	11 66	13 18	—	13 18	11 15
Liverpool.....	13 18	11 15	13 18	11 15	13 18	11 15	14 19	12 15	13 69	12 15
Manchester.....	13 18	11 15	13 18	11 15	13 18	11 15	14 19	12 15	13 69	12 15

GREEN BACON (per cwt. of 100 lb.).

Description and Market	Dec. 1		Dec. 8		Dec. 15		Dec. 22		Dec. 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—										
Bristol.....	20 66	— 19 78	20 66	— 20 00	20 22	— 19 35	19 78	— 18 69	19 78	— 18 69
Liverpool.....	20 66	— 20 00	20 66	— 20 00	20 22	— 19 56	19 78	— 19 13	19 78	— 19 13
London.....	20 66	— 19 56	20 66	— 19 56	20 22	— 19 56	20 22	— 19 56	20 22	— 19 35
Glasgow.....	20 66	— 20 22	20 66	— 20 44	20 22	— 20 00	20 22	— 20 00	20 44	— 20 22
Canadian Cumberland cut.										
Liverpool.....	20 66	— 18 91	20 44	— 18 91	20 00	— 18 69	19 56	— 18 69	19 35	— 18 47
Danish sides—										
Bristol.....	22 54	— 21 66	22 32	— 21 44	21 88	— 21 00	21 88	— 21 00	22 54	— 21 22
Liverpool.....	22 54	— 21 66	22 32	— 21 44	22 10	— 21 22	21 88	— 21 22	21 88	— 21 22
London.....	22 76	— 21 66	22 32	— 21 22	22 32	— 21 22	22 32	— 21 00	22 76	— 21 88
Glasgow.....	21 88	—	21 66	—	21 00	—	21 22	—	21 66	—

GREEN HAMS (per cwt. of 100 lb.).

	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—										
London.....	22 32	— 21 66	23 42	— 22 10	22 54	— 21 66	22 54	— 21 66	21 66	— 21 00
American long cut—										
Bristol.....	—	—	—	—	22 10	— 21 66	22 10	— 21 66	21 22	— 20 88
Liverpool.....	—	—	21 66	— 21 22	21 66	— 21 00	21 44	— 20 66	21 22	— 20 33
London.....	22 10	— 21 22	22 10	— 21 22	22 10	— 21 22	21 22	— 20 66	20 66	— 19 56
Glasgow.....	21 66	—	21 66	— 21 22	21 66	— 21 22	21 66	— 21 22	21 66	— 21 22
American short cut—										
Bristol.....	20 88	— 20 44	21 22	— 20 88	21 22	— 20 88	21 22	— 20 88	20 88	— 20 44
Liverpool.....	—	—	—	—	—	—	21 66	— 21 00	21 66	— 21 00
London.....	21 22	— 20 44	21 66	— 20 88	21 22	— 20 88	21 22	— 20 88	21 22	— 20 44
Glasgow.....	21 22	— 20 88	21 66	—	21 44	— 21 22	21 66	— 21 22	21 66	— 21 22

CHEESE (per cwt. of 100 lb.).

	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
Canadian—										
Bristol.....	20 22	— 19 56	20 22	— 19 56	20 22	— 19 56	20 22	— 19 56	20 44	— 19 78
Liverpool.....	20 33	— 19 56	20 44	— 19 78	20 44	— 19 78	20 44	— 19 78	20 44	— 19 78
London.....	20 00	— 19 56	20 22	— 19 56	20 44	— 19 78	20 66	— 20 00	20 66	— 20 00
Glasgow.....	20 22	— 20 00	20 22	— 20 00	20 22	— 20 00	20 22	— 20 00	20 44	—
New Zealand—										
London.....	—	—	19 56	— 19 35	19 78	— 19 35	20 00	— 19 56	20 00	— 19 56
Glasgow.....	—	—	19 78	— 19 56	20 00	— 19 78	20 00	—	20 22	—

SCHEME OF CROP-REPORTING FOR 1916.

(Subject to revision.)

January.—Farm values, including values of farm land, wages of farm help and values of farm live stock.

March.—Farm products on hand and percentage of merchantable quality. Condition of live stock.

April.—Areas winter killed of fall wheat, hay and clover. Condition of the growing crops of fall wheat and of hay and clover. Progress of seeding operations (spring wheat, oats and barley).

May.—Preliminary estimate of areas sown to spring wheat, oats, barley, rye, peas, mixed grains, hay and clover, alfalfa and pastures. Condition of these crops and also of fall wheat.

June.—Final estimate of areas sown to spring wheat, oats, barley, rye, peas, mixed grains, hay and clover, alfalfa and pastures. Condition of these crops and of fall wheat. Areas of late-sown cereals and hoed crops, including buckwheat, flax, corn for husking, beans, potatoes, turnips, sugar beets, mangolds, carrots, etc., and corn for fodder. Numbers and condition of live stock.

July.—Preliminary estimate of the yield per acre of fall wheat, hay and clover and alfalfa. Condition of spring wheat, oats, barley, rye, peas, beans, buckwheat, mixed grains, flaxseed, corn for husking, potatoes, turnips, mangolds, carrots, etc., hay and clover, alfalfa, corn for fodder, sugar beets and pasture.

August.—Estimate of the yield per acre of spring wheat, rye, oats, barley and flax. Estimate of areas sown to these cereals that from any cause will not produce a crop. Condition of spring wheat, oats, barley, rye, peas, beans, buckwheat, mixed grains, flaxseed, corn for husking, potatoes, turnips, mangolds, carrots, etc., hay and clover, alfalfa, corn for fodder, sugar beets, and pasture.

September.—Estimate of the yield per acre of fall wheat, spring wheat, oats, barley, rye, peas, beans, buckwheat, mixed grains, flaxseed and corn for husking. Quality of these crops when harvested. Condition of potatoes, turnips, mangolds, carrots, etc., sugar beets, corn for fodder and alfalfa.

October.—Yield per acre, quality and average price of potatoes, sugar beets, turnips, corn for husking, other roots (mangolds, carrots, etc.), hay and clover, fodder corn and alfalfa. Acreage sown to fall wheat. Condition of fall wheat. Percentage of fall ploughing completed. Acreage summer fallowed in percentage of previous year.

December.—Final estimates of yields per acre based upon reports of threshing results. Average market prices and weight per measured bushel of cereals.

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE.
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

AGRICULTURAL VALUES IN CANADA, 1915.

Compiled from Returns of Correspondents, January 31, 1916.

This report on agricultural values in Canada for the year 1915 is compiled from returns made by crop-reporting correspondents of the Census and Statistics Office at the end of January, 1916. It includes estimates of (1) average values of farm land; (2) average wages paid for farm help and (3) average values of farm live stock and of wool throughout Canada. The averages obtained by similar inquiries for the years 1908 to 1910 and 1914 are given for comparison in the accompanying tables.

AVERAGE VALUES OF FARM LAND.

For the whole of Canada the average value of farm land held for agricultural purposes, whether improved or unimproved, and including the value of dwelling houses, farms, stables and other farm buildings, is approximately \$39 per acre. Last year the average value was returned as \$38.41. By provinces the averages per acre range from \$22.48 in New Brunswick to about \$125 in British Columbia, the values for the other provinces being as follows: Prince Edward Island, \$37.64; Nova Scotia, \$28; Quebec, \$51.36; Ontario, \$52.49; Manitoba, \$30.36; Saskatchewan \$24.20 and Alberta \$23.15. In British Columbia the higher average is due to orcharding and fruit growing.¹

AVERAGE WAGES OF FARM HELP.

The wages paid for farm labour in 1914 fell to a lower point than in any other year. The causes for this decrease were the small crops of 1914, for the gathering of which fewer hands were required, the release of other labourers on the outbreak of the war and the increased cost of board. In 1915, owing to the abundant harvest and the effects of recruiting for the army, there was some reaction, and the average wages paid were more than in 1914 if not quite equal to those paid in 1910, the date of the previous inquiry. For the Dominion the average wages per month during the summer, including board, were \$37.10 for male and \$20.20 for female help, as compared with \$35.55 and \$18.81 in 1914. For the year 1915, including board, the average wages were \$341 for males and \$200 for females, as compared with \$323.30 and \$189.55 in 1914. The average value of board per month works out to \$14.57 for males and \$11.45 for females, the corresponding figures of 1914 being \$14.27 and \$11.24. Average

¹Census returns of the average values of farm land were published in the Census and Statistics Monthly of February, 1915 (Vol. 8, No. 78, p. 52).

wages per month were lowest in Prince Edward Island, viz., \$26.67 for males and \$14.59 for females; in Nova Scotia the averages were \$32.95 and \$15.85; in New Brunswick \$33.73 and \$16.11; in Quebec \$33.08 and \$16.44; in Ontario \$31.09 and \$17.12; in Manitoba \$45.18 and \$27.29; in Saskatchewan \$42.22 and \$23.81; in Alberta \$44.02 and \$24.25 and in British Columbia \$49.37 and \$31.21.

AVERAGE VALUES OF FARM LIVE STOCK AND OF WOOL.

The value of horses is somewhat less than that of last year; but the prices of cattle show an increase, especially for milch cows. Swine are appreciably dearer, except in Nova Scotia and New Brunswick, where they are about the same as last year. Sheep too have risen in price, and there is a notable increase in the value of wool, the average for Canada being 28 cents per lb. for unwashed and 38 cents per lb. for washed wool, as compared with 19 and 26 cents respectively in 1914. The average values for Canada are as follows: Horses \$123 as against \$126 in 1914; milch cows \$61 as against \$57; other cattle \$44 against \$42; sheep \$8 as against \$7 and swine \$15 as against \$12. The total value of farm animals in Canada at the end of December may be estimated at \$750,667,000 as compared with \$725,530,000 in 1914, the values for each description being as follows: Horses \$370,378,000 as against \$371,430,000 in 1914; milch cows \$164,224,000 as against \$153,633,000; other cattle \$151,477,000 as against \$143,498,000; sheep \$16,225,000 as against \$14,551,000 and swine \$48,363,000 as against \$42,418,000. These figures are arrived at by multiplication of the numbers, as estimated in June 1915, by the average values per head as calculated from the returns at the end of January 1916. They have not the exactitude of census returns, and can only be regarded as approximate.

Census and Statistics Office,
Ottawa, February 29, 1916.

ERNEST H. GODFREY,
Editor.

I. Average Values per acre of Occupied Farm Lands in Canada, as estimated by Correspondents, 1908, 1909, 1910, 1914 and 1915.

Provinces	1908	1909	1910	1914	1915
	\$	\$	\$	\$	\$
Canada.....	35.70	38.60	38.45	38.41	39.70
Prince Edward Island.....	33.70	32.07	31.24	38.65	37.64
Nova Scotia.....	25.00	30.50	24.72	27.99	28.00
New Brunswick.....	21.40	23.77	18.50	25.61	22.48
Quebec.....	41.90	43.37	42.50	47.00	51.36
Ontario.....	47.30	50.22	48.00	54.45	52.49
Manitoba.....	27.30	28.94	28.67	31.67	30.36
Saskatchewan.....	20.40	21.54	22.00	23.82	24.20
Alberta.....	18.20	20.46	24.00	21.03	23.15
British Columbia.....	76.10	73.44	74.00	150.00	125.00

**II. Average Wages of Farm Help in Canada as estimated by Correspondents,
1909, 1910, 1914 and 1915.**

Provinces		Per month in summer season, including board		Per year, including board		Average value of board per month	
		males	females	males	females	males	females
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canada.....	1909	33-69	19-08	336-29	206-08	10-00	8-00
	1910	35-15	20-70	347-70	209-69	12-49	9-56
	1914	35-55	18-81	323-30	189-35	14-27	11-24
	1915	37-10	20-20	341-00	200-00	14-57	11-45
P. E. Island.....	1909	25-27	13-87	226-47	144-27	8-00	6-00
	1910	26-60	15-00	244-89	149-25	10-15	7-60
	1914	24-71	13-48	220-93	135-89	10-12	7-62
	1915	26-67	14-59	237-52	136-80	10-28	9-44
Nova Scotia.....	1909	31-20	15-00	310-85	165-13	10-00	7-00
	1910	33-70	16-90	321-30	175-60	11-50	7-90
	1914	31-20	14-80	301-00	155-47	11-48	8-11
	1915	32-95	15-85	309-78	168-81	11-66	8-36
New Brunswick.....	1909	32-59	16-02	239-55	172-13	10-00	8-00
	1910	33-90	16-70	289-40	151-65	11-25	7-50
	1914	31-93	15-10	301-55	164-79	11-23	7-76
	1915	33-73	16-11	307-96	153-44	14-17	8-48
Quebec.....	1909	33-33	16-75	330-97	176-89	10-00	8-00
	1910	36-40	18-98	313-41	177-94	11-56	8-00
	1914	33-56	15-65	296-35	152-38	13-29	9-37
	1915	33-08	16-44	301-00	159-00	13-37	9-60
Ontario.....	1909	31-52	18-22	331-56	203-37	10-00	8-00
	1910	31-40	20-10	335-84	211-10	12-00	9-60
	1914	32-09	16-67	297-29	172-00	13-09	10-43
	1915	31-09	17-12	304-00	179-00	13-30	10-58
Manitoba.....	1909	35-95	23-97	365-55	261-84	11-00	9-00
	1910	40-00	25-00	400-00	282-00	14-70	11-30
	1914	39-13	22-35	364-41	225-61	15-49	12-98
	1915	45-18	27-29	390-47	244-79	15-21	12-75
Saskatchewan.....	1909	38-30	24-23	389-90	263-86	16-00	10-00
	1910	40-00	24-50	402-50	263-60	14-00	13-00
	1914	40-51	22-96	365-90	234-93	16-50	13-96
	1915	42-22	23-81	386-06	240-90	16-78	13-97
Alberta.....	1909	40-08	26-16	421-62	285-12	15-00	12-00
	1910	40-00	27-50	416-00	300-00	16-70	13-90
	1914	40-26	23-63	364-80	236-32	16-36	13-91
	1915	44-02	24-25	404-00	253-00	16-94	14-17
British Columbia.....	1909	45-50	25-27	428-33	265-00	15-00	10-00
	1910	57-40	38-00	-	-	20-00	17-00
	1914	47-85	31-18	459-72	324-44	21-40	17-58
	1915	49-37	31-21	463-04	286-68	19-15	16-00

III. Average Values of Farm Animals and of Wool, as estimated by Correspondents, 1908, 1909, 1910, 1914 and 1915.

Provinces	Horses				Milch cows	Other horned cattle			Swine per 100 lb. live weight	Sheep	Wool per lb.	
	Under 1 year	1 year to under 3 years	3 years and over	Under 1 year		1 year to under 3 years	3 years and over	Un-washed			Washed	
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$ c.	\$ c.	
Canada.....1908	46	100	143	34	9	21	32	5-86	5-23	0-18	0-24	
1909	49	106	150	36	10	23	33	7-90	5-89	0-17	0-24	
1910	54	119	171	42	12	26	39	7-85	6-30	0-18	0-24	
1914	55	114	165	57	16	37	54	7-24	7-07	0-19	0-26	
1915	54	111	160	62	17	38	55	8-58	7-13	0-28	0-38	
P.E. Island....1908	37	75	119	29	8	17	27	5-69	4-46	0-19	-	
1909	34	87	126	31	8	19	28	7-33	4-55	0-16	0-22	
1910	44	102	140	32	8	19	28	6-70	5-82	0-17	0-24	
1914	46	95	143	39	11	23	35	7-14	6-05	0-21	0-27	
1915	42	92	136	42	11	25	37	8-02	6-97	0-32	0-40	
Nova Scotia...1908	35	76	112	30	7	20	32	5-87	3-81	0-20	-	
1909	40	90	133	33	9	23	37	7-26	4-13	0-19	0-24	
1910	46	95	145	37	9	24	40	7-25	4-48	0-20	0-25	
1914	53	116	166	40	10	25	42	7-75	4-70	0-21	0-26	
1915	53	108	167	45	11	28	44	7-94	5-28	0-31	0-40	
N. Brunswick.1908	42	96	140	29	7	18	26	5-58	3-86	0-19	-	
1909	40	90	137	29	8	18	28	7-36	4-22	0-18	0-24	
1910	50	112	157	33	8	19	31	7-05	4-60	0-18	0-23	
1914	54	123	183	40	11	24	39	8-16	4-03	0-22	0-28	
1915	59	127	182	40	11	25	37	8-17	5-25	0-30	0-40	
Quebec.....1908	41	97	140	32	8	17	26	6-72	4-97	0-25	-	
1909	41	98	145	33	8	19	29	9-62	5-47	0-21	0-29	
1910	46	103	155	39	9	21	32	8-78	5-72	0-21	0-29	
1914	49	107	164	47	11	27	41	8-91	6-60	0-23	0-30	
1915	48	104	159	51	12	28	42	9-81	7-48	0-33	0-43	
Ontario.....1908	49	103	141	36	11	24	36	5-91	5-91	0-15	-	
1909	53	110	144	40	12	26	38	7-33	6-63	0-14	0-20	
1910	60	127	174	48	14	31	46	7-30	7-00	0-14	0-20	
1914	54	111	152	64	20	43	62	7-74	8-70	0-19	0-25	
1915	51	102	142	70	20	45	64	8-90	10-03	0-26	0-33	
Manitoba.....1908	38	125	176	32	9	20	30	5-06	5-83	0-11	-	
1909	63	132	187	34	10	21	30	7-00	7-08	0-09	0-14	
1910	68	146	207	40	11	24	36	6-50	6-50	0-10	0-13	
1914	61	126	176	62	17	38	56	6-28	8-76	0-14	0-18	
1915	63	124	178	65	18	41	60	7-75	8-56	0-21	0-29	
Saskatchewan.1908	53	117	170	37	10	23	37	4-84	5-09	0-10	-	
1909	56	123	180	38	11	25	40	6-80	7-01	0-10	0-13	
1910	50	137	200	41	12	27	40	7-50	7-00	0-09	0-14	
1914	63	133	187	66	18	41	61	5-74	7-08	0-15	0-20	
1915	64	132	180	69	20	44	62	8-26	7-97	0-20	0-24	
Alberta.....1908	36	78	118	34	11	22	33	5-31	5-82	0-11	-	
1909	47	97	150	35	11	23	33	7-20	6-80	0-12	0-18	
1910	51	108	164	39	12	25	38	7-60	6-30	0-11	0-18	
1914	45	91	137	66	21	42	61	5-99	6-96	0-14	0-18	
1915	47	97	142	69	22	45	64	7-70	7-57	0-23	0-25	
Br. Columbia.1908	48	99	150	48	12	25	37	6-53	5-95	0-08	-	
1909	44	111	165	51	12	26	38	7-50	6-72	0-10	0-15	
1910	63	144	225	57	13	28	43	-	-	0-10	0-15	
1914	46	93	162	89	22	48	73	8-00	8-33	0-15	0-16	
1915	42	93	136	91	21	48	67	9-09	7-86	0-19	0-20	

IV. Numbers in June and Values in December of Farm Live Stock in Canada, as estimated by Correspondents, 1914 and 1915.

Farm animals	1914	1915	1914	1915	1914	1915
	No.	No.	\$ per head	\$ per head	\$	\$
Canada—						
Horses.....	2,947,738	2,996,009	126-00	123-82	371,430,363	370,378,482
Milch cows.....	2,673,286	2,666,846	57-47	61-57	153,632,637	164,223,592
Other cattle.....	3,363,531	3,399,155	42-66	44-56	143,498,156	151,477,474
Sheep.....	2,058,045	2,038,662	7-07	7-96	14,550,710	16,224,667
Swine.....	3,434,261	3,111,900	12-35	15-54	42,418,325	48,363,346
Prince Edward Island—						
Horses.....	36,114	36,898	111-14	106-27	4,013,710	3,921,150
Milch cows.....	47,317	47,043	39-09	41-56	1,849,622	1,955,107
Other cattle.....	61,048	59,503	25-48	27-41	1,555,503	1,516,136
Sheep.....	85,351	86,640	6-05	6-97	516,374	603,881
Swine.....	41,718	40,792	14-74	12-44	614,923	507,452
Nova Scotia—						
Horses.....	62,581	63,244	121-35	120-36	7,594,204	7,612,048
Milch cows.....	128,237	128,814	39-98	44-51	5,120,915	5,733,511
Other cattle.....	148,269	144,458	28-93	31-95	4,289,422	4,615,433
Sheep.....	211,921	205,542	4-70	5-28	996,029	1,085,202
Swine.....	53,892	53,402	15-77	17-97	849,677	959,634
New Brunswick—						
Horses.....	65,702	65,827	137-90	136-39	9,080,306	8,978,145
Milch cows.....	102,713	101,665	40-00	39-96	4,108,520	4,062,533
Other cattle.....	99,256	90,437	26-75	27-92	2,655,098	2,602,521
Sheep.....	121,739	111,026	4-63	5-25	563,652	582,897
Swine.....	73,325	72,533	17-73	17-49	1,300,052	1,268,602
Quebec—						
Horses.....	372,009	372,567	134-69	133-63	50,105,892	49,766,128
Milch cows.....	733,476	720,429	47-10	50-74	34,546,720	36,554,111
Other cattle.....	625,958	612,500	39-60	40-26	24,787,937	24,659,250
Sheep.....	571,287	554,491	6-60	7-48	3,770,494	4,147,593
Swine.....	634,569	632,729	14-32	14-52	9,087,028	9,167,225
Ontario—						
Horses.....	904,975	903,527	116-46	107-75	105,393,389	97,355,034
Milch cows.....	1,085,843	1,077,808	64-28	69-55	69,797,988	74,961,546
Other cattle.....	970,445	935,696	45-30	47-26	43,961,159	44,216,710
Sheep.....	640,416	611,789	8-70	10-03	5,571,619	6,136,244
Swine.....	1,553,624	1,469,573	12-62	14-12	19,606,735	20,750,371
Manitoba—						
Horses.....	316,707	317,847	131-40	133-16	41,634,302	42,324,507
Milch cows.....	156,306	157,494	61-90	65-12	9,673,341	10,256,000
Other cattle.....	251,096	246,603	41-15	43-89	10,369,635	10,823,496
Sheep.....	45,303	50,880	8-76	8-56	396,854	435,533
Swine.....	186,270	193,308	10-92	14-38	2,034,134	2,348,369
Saskatchewan—						
Horses.....	609,521	630,062	147-70	146-79	90,026,252	92,486,801
Milch cows.....	204,624	211,684	65-84	69-14	13,472,444	14,635,832
Other cattle.....	474,436	543,609	44-27	47-39	21,093,282	25,701,631
Sheep.....	126,027	133,311	7-08	7-97	892,271	1,062,489
Swine.....	454,703	411,324	9-67	23-97	4,396,078	9,859,436
Alberta—						
Horses.....	519,424	544,772	108-49	113-21	56,352,310	61,673,638
Milch cows.....	179,068	183,974	66-38	68-64	11,886,534	12,627,975
Other cattle.....	633,032	660,000	45-78	48-81	28,980,205	32,214,600
Sheep.....	211,001	238,579	6-96	7-57	1,468,567	1,800,043
Swine.....	397,123	229,696	10-23	12-65	4,062,568	2,905,654
British Columbia—						
Horses.....	60,705	61,355	119-43	101-72	7,249,998	6,241,131
Milch cows.....	37,702	37,944	88-75	90-58	3,168,553	3,436,968
Other cattle.....	90,091	100,439	59-50	49-56	5,895,915	4,977,757
Sheep.....	45,000	46,404	8-33	7-86	371,850	364,735
Swine.....	39,031	38,543	11-94	14-96	466,030	576,603

PRODUCTION IN CANADA OF BEETROOT SUGAR, 1915.

It is estimated by the Census and Statistics Office that, in 1915, 18,000 acres of sugar beetroots were grown in Canada, all in Ontario, for the manufacture of beetroot sugar, as compared with 12,100 acres in 1914. The total estimated yield of roots in 1915 was 141,000 tons, as compared with 108,600 tons in 1914, the average yield per acre being 7.83 tons, as compared with 8.98 tons in 1914. At an average price of \$5.50 per ton, the total value of the crop in 1915 was \$775,500, as compared with \$5.99 per ton and a total value of \$651,000 in 1914. The production of refined sugar made from Canadian sugar beets grown in 1915 was returned as 36,838,267 lb., as compared with 27,545,248 lb. in 1914 and 23,964,272 lb. in 1913.

REPORTS FROM THE PROVINCES.

Prince Edward Island.—The demand for horses is very poor throughout the province, very few changing hands and these bringing the lowest prices for some time. Swine, milch cows and beef cattle are selling at fair prices. The price of wool has advanced considerably. The number of pure bred stock is increasing. Efficient farm help is scarce.

Nova Scotia.—The market for horses is very dull, and low prices prevail. Oxen are largely used in many districts, and sell at a good price. Sheep-raising is on the increase as wool prices are good. Farm help as a rule is hired for the harvest months only, and is difficult to obtain in some districts where many men have enlisted or gone into munition factories.

New Brunswick.—Prices are good for all stock except horses. The decline in the price of horses is partly attributed to the quietness of the lumber business, with little hauling being done. Dogs are said to have killed many sheep in some districts.

Quebec.—There is little demand for horses, and the prices for them have fallen considerably. On the other hand, cattle both for beef and the dairy are selling well at good prices. Sheep are profitable where they can be kept, owing to the high prices both for wool and meat. Many farmers complain, however, that sheep cannot be kept owing to their destruction by dogs. Swine are higher in price than a year ago. Farm labour is scarce and difficult to obtain.

Ontario.—The market for horses is very dull, and prices are low, except for the better bred animals. Good prices prevail for beef and pork. Milch cows bring a good price owing to the high prices of butter and cheese. Wool is higher than for some years, but fewer sheep are kept than formerly. High wages are offered for capable help, but such is hard to obtain. The war has taken many men, and domestics seem to flock to the cities; so that a serious problem has to be faced by the farmer.

Manitoba.—Prices for live stock are good, except for horses which have decreased in value noticeably, partly, it is thought, owing to the increased use of gasoline power in both city and country.

Sheep are few in number, the expense of fencing material being given as one cause. Noxious weeds are said to be on the increase because of the few sheep kept. So many men have enlisted that experienced help is very scarce. The winter has been a hard one, with abnormal snowfalls and in some places a shortage of fuel and water.

Saskatchewan.—Horses have decreased in value except for the best class of animals. Milch cows, beef and pork command a good price. Little mutton or wool is for sale in this province. The high cost of fencing and the existence of wolves in the newly settled districts are accountable for the few sheep kept. Good farm labour is scarcely to be had at any price, though in some districts there is plenty of foreign help. The winter has been a severe one with a great depth of snow, and a scarcity of fuel is reported from several districts where the railway service has been put out of order.

Alberta.—There are prospects for higher prices for horses in the spring. Sheep and cattle on the ranges have suffered from the severity of the winter. Labour is scarce and dear except where enemy aliens in some places are glad to work cheaply out on the farms.

British Columbia.—Horses have declined in value, but all other stock are in good demand at fair prices. Many farmers are going in for pure bred cattle and swine. Skilled farm help is scarce and dear owing to the war, but common labour is plentiful and cheap, mostly Chinese and Hindoos.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during January has been more changeable than for many years, the thermometer on one occasion dropping from 40 degrees above to below zero in a few hours, and snow and rain sometimes following each other in rapid succession, and at the close of the month a large part of the surface is covered with ice. The highest temperature recorded is 42, the lowest -16 and the mean 16·84, compared with 40 and -25·4 and a mean temperature of 14·78 for the corresponding period of 1915. The precipitation totals 4·2 inches, 2·02 inches of rain and 21·75 inches of snow. In the previous January the precipitation amounted to 3·12 inches, 0·97 of an inch of rain and 21·5 inches of snow. Rain or snow fell on twenty different days, as against fourteen days a year ago. The bright sunshine averages 2·81 hours a day, being practically the same as last year, when the average was 2·80 hours.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The weather during the first half of January was very mild; the fields were bare and the travelling was almost wholly on wheels. The third week was very changeable, with several cold gales, the thermometer dropping to 10 degrees below zero on the 18th. A very heavy rain on the 23rd was followed by remarkably mild weather for the week, the lowest temperature on the 26th being 24 degrees. The mild, open winter has been favourable for feeding stock and has enabled farmers to save considerable feeding material. A series of Agricultural

Short Courses, held in Prince county during January, was a great success, the attendance greatly exceeding expectations. The average attendance during the thirteen sessions at Palmer Road was 99; at O'Leary 60; at Egmont Bay 110; and at Mont Carmel 127. Most of the lecture periods were in the form of conferences, at which local conditions in connection with live stock and the maximum production of field crops by thorough cultivation were discussed. The winter roads by way of the rivers and bays have been good. The new ice-breaker steamer, *Prince Edward Island*, has made regular trips throughout the month between Charlottetown and Pictou."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The mean temperature for January is 23.25, which is 0.42 of a degree higher than the corresponding month in 1915 and 3.57 degrees higher than in 1914. It will be seen, therefore, that it has been unusually mild. The thermometer registered below zero only once, 4 below, on the 18th, this being the first time it has gone below the zero mark this winter. There has been very little sleighing during the month. Sleighing was fair from the 1st to the 5th, but it rained on the 5th, and all the snow disappeared. Rain on the 14th formed ice on the ground, which made it difficult for traffic. This was followed by a light snowfall on the 16th and 17th, resulting in fair sleighing in places, which, however, was ended by a thaw on the 22nd, the ground being left without snow until the end of the month. The rainfall amounts to 0.65 of an inch and the snowfall 11.5 inches, making a total precipitation of 1.8 inch. The fall of snow being light, with no heavy rains, the usual January thaws have not caused any damage from flooding. The month has been normal as to sunshine, 93.4 hours having been recorded."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "January has been quite unseasonable, and there has not been sufficient snow at any time for good sleighing either in the woods or on the roads. The snowfall aggregates 11 inches, distributed over five different days, the heaviest fall being 3 inches on the 28th, and the rainfall 0.2 of an inch, making a total precipitation of 1.3 inch, compared with 4.09 inches in 1915, made up of 14 inches of snow and 2.69 inches of rain. The mean temperature is 19.17, while in January, 1915, it was 21.61; the lowest reading of the thermometer for both years is the same, namely, 10 below zero. All live stock at this Station are in good condition and doing nicely. The sixteen steers in the experimental feeding period have made very satisfactory progress, their average daily gain during the month being 2.13 lb. This is pretty good, considering the fact that they were deborned on December 14th."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "January has followed December in being unusually mild. The mean temperature is 15.2 degrees, against an average mean for the last forty-one years of 12 degrees. The precipitation amounts to 2.28 inches, of which 0.52 of an inch is from snow and hail. The average precipitation for the month during the past forty-one years is 4.1 inches; while the bright sunshine totals 123.75 hours, against an

average of 112 hours. In this part of New Brunswick it has been a most favourable month for all lumber and farm operations. The fields have been bare for part of the time, but there has been ice on the roads and snow in the woods sufficient to make passable hauling. In the southern part of the province, there has been practically no sleighing at all, and lumbermen have been much handicapped. The weather has been very favourable for live stock, less hay being consumed than usual to date, but it has been very unhealthy from a human standpoint. Such farm work as could be done has progressed well, and farmers generally are in good heart, as prices for everything they have to sell are abnormally high."

Ste. Anne de la Pocatière, Que.—Joseph Begin, Superintendent, reports: "During January, the temperature has fallen below zero on twelve different days, with the lowest recorded 18.2 and the mean 11.42, which is exactly four degrees lower than in January, 1915. The bright sunshine averages only 2.29 hours a day, and the precipitation amounts to 2.42 inches, made up of 1.90 inch of snow and 0.50 of an inch of rain. Light rains fell on the 5th, 12th, 22nd and 31st. The temperature rose about twelve degrees above freezing on the 5th, and almost all snow disappeared, leaving meadows soaked with water and unprotected most of the month. From an agricultural standpoint, the weather of January has been very unfavourable in this section, for the fields are so completely covered with ice that it is probable clover will be killed. Wagons and sleighs were used concurrently from the 8th to the 24th. Work at the Station has included caring for the stock and preparing seed grain for the spring. All classes of live stock are doing well. A lot of eighteen seven-month old bacon pigs were sold at a good profit after three months' feeding, notwithstanding the very high price of grain."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "The temperature has been higher during January than the average for four years, and there was more precipitation, with less sunshine. It rained on six different days during the month, which is quite unusual for this time of the year. A crust formed on the snow and got so hard at certain places that horses could walk on it without going through. The work at the Station has included the care of live stock and poultry and the preparation of grain, as well as of vegetable and flower seeds, for distribution. On the 26th and 27th, the Station had an exhibit at the Quebec Seed Fair, which attracted considerable attention and elicited much praise. There were shown over one hundred and fifty varieties of grain, vegetable and flower seed all grown at the Station in 1915, which indicates the possibilities of the district. Work is still going on at the Sheep Barn, 114 x 44 feet, which, when finished, promises to be the largest and best of its kind in eastern and central Quebec."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "January has been rather a mild month, especially the latter part, on ten days of which it thawed, leaving the roads bare in places and very icy. The fields are almost bare of snow, making conditions very

unfavourable for the wintering of young orchards, grasses and clovers. The minimum temperature recorded is -28 , compared with -46 last year; while the maximum is 49 compared with 48 last year. The total precipitation amounts to 3.63 inches, of which 1.14 inch is rain. The bright sunshine totals 61.5 hours. The live stock at the Station consists of 18 horses, 91 beef cattle and 100 sheep, all of which are in healthy condition. Feeding experiments are being conducted on the wintering of idle horses and on the feeding of beef cattle and lambs."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "January has been a month of extreme cold. The minimum temperature recorded, 51 degrees below zero, is the lowest in twenty-three years. Only once in the history of the Experimental Farm has a lower temperature been recorded, and then only one degree lower. Not only has it been cold, but a considerable part of the time it has been stormy, the snowfall amounting to 27 inches. The country roads are in an almost impassable condition, and the railways have had much difficulty in keeping their trains going."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "January has been the coldest on record at the Indian Head Experimental Farm. With a mean temperature of -14.58 , 19 inches of snow, and a great deal of wind, conditions have been most severe throughout the district. In addition, there is a shortage of coal in the province, especially on the branch lines, where the railroads have been unable to keep their trains in operation as usual. The scarcity of water is being severely felt by farmers who have much stock, and a great many are at present using snow-melters to obtain their supply. It is gratifying to report that, notwithstanding the very severe weather, the steers being fed in the open have made satisfactory gains."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The mean temperature for January is -17.9 , which is the lowest monthly average recorded since the establishment of this Station; and the lowest, -59.3 , is a record, the nearest approach to it being -53.8 in 1913 . Coupled with the low temperature has been a heavy snowfall, and the prevailing winds have made the roads almost impassable. Notwithstanding the cold weather and stormy winds, the eighteen steers in the open, which are being fed for experiment, made a gain of $1,078$ lb. during the four weeks ending Jan. 17th, on a ration of 6 lb. of oat and barley chop, and what prairie hay and oat straw they would eat."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "January has been an unusually cold and stormy month, with a mean temperature of -18.1 . Only on five days did the thermometer register above zero. Previous to January 3, the weather had been moderate, but severe weather began on the 3rd and continued up to the 16th. From the 17th to the 20th, inclusive, a moderate spell was experienced, and the remainder of the month has been cold and stormy. The thermometer registered -55.4 on the 11th, which is a record for the Scott Station. Snow has fallen on ten different days, amounting to 12.5

inches, which is equivalent to a total precipitation of 1.25 inch. The herd of buffalo crosses known as Cattalo, received early in the winter, is proving quite hardy. Notwithstanding the severe weather conditions, these animals continued to find pasturage, which is supplemented by one oat sheaf each per day. A large straw stack has been threshed in the field, but they make no use of it, preferring the hillsides of the ravines for shelter. One hundred sheep that are being wintered in a straw shed are thriving splendidly at a cost for feed of approximately $1\frac{3}{4}$ cent a head per day."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The mean temperature for January, -13.5, is the lowest average on record since 1907, when the taking of meteorological records at this Station was begun. In addition to the low temperatures, there have been considerable wind and one or two driving snowstorms. The gains made by cattle on feed during the month have been small, though the extreme weather has not prevented the steers on feed outside making some gain even during the coldest period of two weeks. There has been sufficient snow for sleighing for almost the entire month. The snow, however, has drifted more than usual, and many of the more exposed fields are still comparatively bare."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "January, 1916, has earned the distinction of being the coldest month that has occurred since observations were made at this Station. The mean temperature, -8.9 degrees, speaks for itself. There has been only one day in the month when the thermometer did not register below zero. There are seven or eight inches of snow on the ground, and sleighing has been good all through the month. Live stock in the district is doing well and there is an abundance of feed in sight, although the demand for hay is becoming more keen. It is estimated that in the districts lying south of the Crow's Nest line of the Canadian Pacific Railway there is from thirty to forty per cent of the wheat crop yet in the farmers' hands. The feeding experiments with cattle and sheep at this Station are progressing satisfactorily."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The weather during January has been the coldest on record in this district. On thirteen different days the highest temperature has not been above zero and during the period from the 11th to the 19th, inclusive, the highest temperature was -2 degrees and the lowest -34 degrees. A chinook was experienced on the 22nd and 23rd, a rapid thaw set in and practically all the snow on the level disappeared. This was succeeded by a very sudden change to zero temperatures, making the conditions for range cattle very precarious. Owing to the prolonged excessively low temperature, the frost has penetrated many of the root cellars, damaging a large percentage of the roots, which will probably result in a local rise in price in the spring. At the Experimental Station, the cutting and hauling of wood and ice have been about the only forms of work possible apart from caring for the stock. A small structure has been built to accommodate a room brooder stove for use during the coming season."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "January has been one of the coldest months on record for many years, and the cold has been severely felt in this section. A great many potatoes have been frozen throughout the district and much damage has been caused by frozen plumbing. The chief work of the month, outside of the usual stock tending and winter experiments, has been hauling manure and harvesting ice. A full supply of ice has been secured very cheaply for this district. The ice harvested is ten inches thick and of excellent quality; it had to be loaded and hauled on wagons and it has cost \$1.40 a ton. All live stock that was well housed is in excellent condition, but that portion which usually goes through the winter with scanty shelter has suffered considerably. Young cattle wintering in sheds have grown a big coat of hair and look somewhat rough, but where they have received a sufficient amount of roughage they are in reasonably good condition. The winter experiments with dairy cattle have not been interfered with to any extent, and the pure-bred heifers on the official test are producing well. In the pig stock, the sows wintering in cots, although probably a trifle cold and consuming a little more food than usual, are in good condition. Feeding experiments with hogs are also giving good results. The sheep have been very comfortable in their new barn, and lambing will start early in February. In the poultry pens, a good supply of eggs has been kept up, the Barred Rocks producing better than the lighter breeds."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The weather conditions during January have been unusual for Vancouver Island, in that low temperatures and a heavy snowfall have been experienced, about twenty inches of snow now being on the ground. Not being equipped with sleighs, farmers have been unable to move grain, hay, cordwood, potatoes or other farm products to market. In consequence of the snow, but little work, other than the regular routine work of the dairy farmer and poultry-man, has been accomplished on the farms. Horticultural work throughout the district has been at a standstill, with the exception of a small quantity of produce marketed locally. The work at the Experimental Station has included the clearing of debris and fallen trees from the park; removing stones; constructing cribwork for a boat landing on the beach; cleaning and grading all seed grain to be used in experimental plots and field crops; threshing, cleaning, and grading vegetable, flower, shrub and tree seeds to be used in experimental work, and packeting surplus seeds for distribution to schools and institutes."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of January are given in the following table:—

Meteorological Record for January, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	High-est	Low-est	Mean		Possible	Actual
Ottawa, Ont.	42.0	-16.0	16.84	4.20	285	87.4
Charlottetown, P.E.I.	43.0	-10.0	18.86	3.61	281	91.6
Kentville, N.S.	51.0	-4.0	23.25	1.80	286	93.4
Nappan, N.S.	47.0	-10.0	19.17	1.30	285	108.6
Fredericton, N.B.	43.5	-15.0	15.20	2.28	283	123.7
Ste. Anne de la Pocatière, Que.	44.4	-18.2	11.42	2.42	278	82.6
Cap Rouge, Que.	44.0	-16.9	12.56	4.84	278	51.5
Lennoxville, Que.	49.0	-28.0	21.98	3.63	285	61.5
Brandon, Man.	18.2	-51.2	-13.00	2.70	268	99.4
Indian Head, Sask.	18.0	-50.0	-14.58	1.90	266	46.4
Rosthern, Sask.	15.7	-59.3	-17.90	1.00	252	70.9
Scott, Sask.	16.0	-55.4	-18.10	1.25	255	65.2
Lacombe, Alta.	28.1	-52.1	-13.50	4.00	257	89.0
Lethbridge, Alta.	31.8	-41.5	-8.90	1.09	269	98.7
Invermere, B.C.	40.0	-34.0	-9.58	0.45	266	99.0
Agassiz, B.C.	42.0	-2.0	21.44	2.89	271	72.1
Sidney, Vancouver I., B.C.	48.0	13.5	27.50	2.51	273	65.9

Ottawa, February 11, 1916.

J. H. GRISDALE,
Director, Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (February 1) that January generally proved mild and open, and enabled good progress to be made in cultivating the ground, much of the arrears caused by the wet December being thus overtaken, while some more wheat was put in. In Wales and the northwest, however, the weather was more stormy, and work was greatly hindered. The early sown wheat is looking very well everywhere; while the late sown, although still weaker and more backward than the first sowings, has greatly benefited by the mild weather, and is generally much more satisfactory than a month ago. Other autumn-sown crops are also healthy and satisfactory generally, though some are still backward.

Ireland.—The Irish Agricultural Department estimates (Jan. 18) the total flax crop in 1915 as 1,546,267 stones of 14 lb. from 53,143 acres, as compared with 1,300,128 stones from 49,253 acres in 1914. The average production of fibre is 29.1 stones per acre, as compared with 26.4 stones in 1914; it was 2.6 stones below the average of 31.7 stones for the ten years 1905-14. Last year's high rate of prices has been considerably exceeded. Owing to the effects of the war difficulties are being experienced in obtaining flax seed for the crop of 1916. The Journal of the Department for January 1916 states the measures that are being taken to overcome this difficulty, and mentions that several thousand bags of seed reputed to be from 1915 Canadian fibre flax grown in Ontario have been imported into Ireland by firms of high standing. Seed from other parts of the Dominion, where linseed for crushing purposes is grown, would not, it is stated, suit the requirements of Irish growers. The Department also reports that turnips in Ireland yielded 5,091,034 long tons from 265,122 acres, or 19.2 tons per acre, as compared with 4,433,491 tons from 276,872

acres, or 16 tons per acre in 1914. Mangolds gave 1,806,849 tons from 82,728 acres, or 21·8 tons per acre, as compared with 1,562,074 tons from 81,570 acres, or 19·2 tons per acre in 1914.

France.—The French Department of Agriculture published in the Journal Officiel of January 21 its report on the areas sown to winter cereals and their condition on January 1. The report shows that the area sown to winter wheat is 12,440,576 acres, which is less by 1,173,754 acres than that reported as sown to winter wheat for 1915. This great diminution points to a serious deficit in the production of the coming season. The area sown to meslin is reported as 236,920 acres, to rye 2,275,784 acres, to winter barley 246,439 acres and to winter oats 1,692,627 acres. The total decrease in areas sown to winter cereals is 1,828,584 acres, which is nearly 10 p.c. less than the area sown for the season of 1915. The condition of these crops on January 1 was reported as 69 for wheat, 73 for meslin, 68 for rye and 71 for winter barley and oats. The scale of numerical expression is as follows: 100 very good; 80 to 99 good; 60 to 79 fairly good; 50 to 59 fair.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The following information is taken from the Bulletin of Agricultural and Commercial Statistics for December, 1915, and January, 1916, as published by the International Institute of Agriculture.

Crops in Southern Hemisphere.—The condition of wheat, barley, oats and maize in New Zealand on December 1, 1915, was reported as average, or equal to 100 on the Institute's system of crop reporting. In some districts there had been an excess of rain; in others it had been too dry. Insect pests were prevalent. The accompanying table shows the production of wheat, barley, rye, oats, maize and flax in countries of the southern hemisphere.

Area and Yield of Cereal Crops in Southern Hemisphere, 1914-1915 and 1915-1916.

Crops and Countries	1914-1915	1915-1916	Per cent of 1914-1915	1914-1915	1915-1916	Per cent of 1914-1915	1914-1915	1915-1916
	000 acres	000 acres	p.c.	000 bush.	000 bush.	p.c.	bush. per acre	bush. per acre
Wheat—								
Argentina.....	15,471	16,420	106·1	168,470	184,159	109·3	10·85	11·15
Chili.....	—	—	—	22,792	—	—	—	—
Australia.....	11,804	11,500	97·4	24,439	143,002	575·6	2·08	12·49
New Zealand.....	230	256	111·5	—	—	—	—	—
Rye—								
Argentina.....	—	212	—	1,811	—	—	—	—
Barley—								
New Zealand.....	18	23	125·4	—	—	—	—	—
Oats—								
Argentina.....	2,869	2,565	89·4	53,884	71,002	131·8	—	—
New Zealand.....	288	214	74·4	—	—	—	—	—
Corn—								
New Zealand.....	5½	6	109·6	—	—	—	—	—
Flaxseed—								
Argentina.....	4,258	4,001	94·0	44,309	40,274	90·9	10·36	10·04

Crops in Northern Hemisphere.—In Italy wheat was sown under good conditions, and germination is proceeding regularly and uniformly. In India the rainfall has been fair to good in the Madras Presidency, except in the east and southern parts where it was heavy, light to fair in Mysore and parts of Hyderabad, light in Assam, Bengal, and Bihar and Orissa. Elsewhere there has been practically no rain. The conditions of unirrigated crops is, however, poor in the Punjab and Northwest Frontier Province. More rain is wanted in parts of Gaya and Muzaffarpur in Bihar and Orissa, in the Muttra and Agra districts in the United Provinces, in the southeast of the Punjab, in parts of Gwalior and Central India and in parts of six districts in Madras. In Egypt the weather has been favourable and the water supply ample, but scarcity of rain has somewhat affected the plants in Behaira. Sowing of wheat is still going on in some of the basin lands, but elsewhere sowing of both wheat and barley is at an end. Early crops were given the first watering and top dressing with chemical; *kufri* and farmyard manures are also being applied. Both crops are so far practically free from pests, are growing well, and look healthy. The condition, according to the Institute's scale, was in Lower Egypt 100 on January 1, 1916, compared with 105 on January 1, 1915, and in Upper Egypt 101 for both years. Barley in Lower Egypt was 100, as against 103 in 1915 and in Upper Egypt it was 101 in both years. Harvesting of maize is practically finished, and very little is still standing in the fields. The crop has turned out excellently almost everywhere, and there is no doubt that it is one of the most successful maize crops on record. The condition of the maize crop on January 1, 1916, according to the Institute's system of reporting, was equal to 110 in Lower Egypt and 106 in Upper Egypt, against 109 and 104 respectively on December 1, 1915, and 108 and 102 on January 1, 1915. In England and Wales the area sown to winter wheat is 7, to winter rye 5 and winter barley 5 per cent more than for the season of 1915.

POINTERS ON PRACTICAL AGRICULTURE.

COMMUNICATED BY CROP-REPORTING CORRESPONDANTS.

Drainage of Wet Lands.—The summer season of 1915 has been a remarkably wet one, and low lying lands have failed largely through lack of thorough drainage. Quite a number of farmers are making preparation to remedy this defect. Some are taking advantage of the generous assistance provided by the Ontario Agricultural College to secure information as to depths, levels, etc., and we know of no cheaper or better way of securing this information. Doubtless much of the so called underdrained land of the long ago would have been much better to-day if this plan of assistance had been in operation then. The fact remains, however, that money cannot be invested more profitably than in underdraining if properly done, and this plan of assistance is certainly very valuable. GEORGE WRIGHT, Elora, Ont.

Grain Screenings.—In the summer of 1915 the Seed Branch of the Department of Agriculture issued a pamphlet on Grain Screenings

by Mr. John R. Dymond, B.A., with Results of Feeding Experiments by Mr. E. S. Archibald, B.A., B.S.A., and Mr. F. C. Elford. In this pamphlet it was stated that the dockage set on the wheat, oats, barley and flax received at the terminal elevators at Fort William and Port Arthur for the year ended August 31, 1913, amounted to over 100,000 tons. The transport charges on this material from the western grain fields to the lake front were estimated at \$650,000. Most of the screenings from the terminal elevators have been exported to the United States, where they have been reeleaned and used in various forms for the feeding of live stock. It was further shown that feeding stuffs manufactured from screenings not properly reeleaned sometimes contain thousands of vital noxious weed seeds per lb. It is especially desirable to screen out the finer black seeds by means of a $\frac{1}{16}$ inch perforated zinc screen. These small black seeds are not only useless as feed, but are expensive as adulterants and their admixture in any considerable quantity makes the feed unpalatable for all kind of stock. Such material should never be fed, as it is liable to introduce weeds entailing the loss of thousands of dollars. The conclusion is that more attention to the cleaning of grain as it is threshed will save the cost of transporting the screenings to the terminal elevators and will leave the grower in possession of much valuable feed, which if he does not need for his own use will find ready sale among live-stock men.

In connection with this subject the following communication has been received from our Crop Reporting Correspondent, Mr. F. J. Bonner, of Ladstock, Saskatchewan: "I read your pamphlet on Grain Screenings and particulars of dockage for weed seeds. One hundred thousand tons seems an immense weight to be hauled to the terminal elevators at a loss, but so long as the farmers go on cultivating more land than they can attend to properly the same thing will continue, especially while prices keep high. There is a very large quantity of weed seeds in the grain this year, as the newspapers were urging the farmers to put in all the crops they possibly could, and the hurry of threshing this year with all the grain almost in the stook has prevented it being well cleaned by the machines, especially when damp, as the weed seeds will not blow out. The enormous amount of seeds you mention in some samples leaves one wondering how there is any good seed left. Many farmers carelessly sow grain uncleared, or only just run it once through an old useless fanner; if they would take the trouble to clean the grain and above all plough the land properly and bury the weed plants, the 100,000 tons you mention would soon dwindle, and in no other way can this be done. On small areas, cattle turned on the stubble will clean off a great quantity of weeds, but in large areas out in the West none are kept."

INSPECTION AND SHIPMENTS OF GRAIN.

According to the Weekly Bulletin of the Department of Trade and Commerce (February 8, 1915, and January 17, 1916) the number of cars and total quantities in bushels of grain inspected at Winnipeg and other points in the western division for the four months ended

December 31, 1915, compared with the corresponding periods of 1913 and 1914, were as follows:—

Grain	Four months ended December 31, 1913		Four months ended December 31, 1914		Four months ended December 31, 1915	
	cars	bushels	cars	bushels	cars	bushels
Wheat.....	100,652	113,233,500	61,349	69,017,625	156,449	187,738,800
Oats.....	22,303	34,490,850	10,114	19,216,600	21,341	43,749,050
Barley.....	8,732	11,351,600	2,472	3,213,600	5,276	7,122,600
Flaxseed.....	8,522	8,948,100	2,146	2,199,650	1,423	1,636,450
Rye.....	52	52,000	90	90,000	76	76,000
Speltz.....	—	—	—	—	1	1,000
Screenings.....	132	132,000	83	83,000	107	107,000
Total grain.....	140,393	168,208,050	76,254	93,820,475	184,673	240,430,900

The shipments of grain from Fort William and Port Arthur for the four months ended December 31, 1915, were in bushels as follows, the figures within brackets being those of the corresponding period of 1914: Wheat, 140,989,805 (49,312,580), oats, 22,278,121 (9,626,842) barley, 4,199,721 (1,779,167), flax, 1,761,267 (3,629,624). Total, 169,228,914 (64,348,114).

OCEAN FREIGHT RATES FOR WHEAT, ETC.

Wheat has been shipped from Canada to the old country from early days in the history of colonisation. In 1849 the quantity of wheat the produce of the province of Canada exported to Great Britain was 16,698 minots¹ of the value of £3,962 (\$19,282). After Confederation, in 1868, the total wheat exports from the Dominion were 2,284,702 bushels, of which 717,604 bushels went to the United Kingdom. During the next 20 years, 1868 to 1887, the total exports of wheat from Canada in any year never reached seven million bushels, and the exports of wheat to Great Britain only once exceeded five million bushels, viz., 5,048,084 bushels in 1887. According to the late Dr. George Johnson's "Alphabet of First Things in Canada," wheat was first exported from Manitoba to Europe in October 1877; but it was not until completion of the Canadian Pacific Railway that western grown wheat began to be annually exported. The first train of wheat, consisting of 16 cars, from Manitoba to Montreal left Portage La Prairie in December, 1885, and the Canadian Pacific line was formally opened for traffic in the following year. From 1886 to the close of the century the exports of wheat from Canada, though annually increasing, never reached 20 million bushels, the largest quantity being 18,963,107 bushels in 1898 when 18,091,962 bushels went to the Mother Country. In 1902 the total wheat exports jumped to 26,-

¹The French "Minot" = 1.073 imperial bushel.

117,530 bushels, and this quantity, with occasional recessions, has constantly increased until it reached 120,426,579 bushels in 1914 after the excellent harvest of 1913, the quantity exported to the United Kingdom being 108,574,397 bushels.

RECENT INCREASE IN FREIGHT RATES.

One of the effects of the war has been a great advance in the cost of ocean freightage. This has not been due to any appreciable extent to the risk of hostile destruction, because the allied navies and especially the British Navy have been able to secure and retain practically an absolute control over the maritime highways. The increased cost of freightage has been rather due to the general shortage of vessels through internment and especially the commandeering for purposes of military transport of vessels that would otherwise be employed in the shipping trade.

ANNUAL AVERAGE RATES FOR WHEAT OR GRAIN.

In view of the present conditions efforts have been made to collect for the purposes of statistical record the rates ruling for the trans-Atlantic carriage of grain, and especially of wheat, for as long a series of years as possible; and the accompanying tables are constructed from data kindly furnished by the Shipping Federation of Canada and the Canadian Pacific Railway Co. (rates from Montreal) and the New York Produce Exchange and Mr. G. J. S. Broomhall of the Liverpool "Corn Trade News" (rates from New York).

Table I shows the annual average steamship rates for heavy grain from Montreal to Liverpool during the navigation seasons 1861 to 1915. Table II gives the annual average steamship freights for wheat from New York to Liverpool for the years 1879 to 1915. Table III shows the average ocean rates on wheat from Montreal to Liverpool by months during the St. Lawrence Navigation Season from May to November, 1903 to 1915. Table IV shows the rates from New York to Liverpool by weeks for the seven years 1909 to 1915. In each case the rates are expressed per bushel and per quarter in both Canadian and English currency.

NOTES ON THE TABLES.

It should be noted that all general cargo vessels require a quantity of grain for deadweight purposes to give sufficient stability and to make them safe and comfortable on the eastbound voyage. Failing grain, the ship would require to purchase and load ballast for their lower holds. Hence it is that grain is sometimes carried by the liners at merely nominal freight rates, very often nothing more or less than cost of handling. One peculiarity in the case of grain carried by the regular lines is that it has no fixed or steady rate of ocean freight even approximate. On the contrary it may fluctuate from time to time and even from day to day according to the number of ships at the various ocean ports and to the market conditions governing the prices of grain at port of delivery. The rates given are for grain carried principally by

the regular lines in parcels. It may be noted that the ocean transient tonnage market quotations are as a rule in excess of those received by the regular lines.

Without attempting to estimate the influence of important events upon the course of freight rates as exhibited in the tables, it may be recalled that the American Civil War lasted from 1861 to 1865. In 1873 a financial crisis occurred in the United States and was followed by commercial depression until 1879. In 1891 another financial depression in the United States set in and lasted until after the war against Spain in 1898. The South African War lasted from 1899 to 1902; and the Balkan Wars took place in 1912-13. The years 1901 to 1913, during which there was an extraordinary annual influx of immigrants into Canada, were marked by great commercial and industrial activity checked only by the temporary financial stringency of 1907. The present war broke out from July 31 to August 4, 1914.

The freight rates given herein may be correlated with the prices of English grain for a long series of years, as published in the Census and Statistics Monthly of March, 1915 (Vol. 8, No. 79, pp. 89-91).

I. Annual Average Steamship Freight Rates for Heavy Grain from Montreal to Liverpool for the Navigation Seasons 1861 to 1915.

(Data furnished by the Shipping Federation of Canada, Montreal.)

Season	Per quarter of 480 lb.		Per bushel of 60 lb.		Season	Per quarter of 480 lb.		Per bushel of 60 lb.	
	s. d.	\$ c.	s. d.	cents		s. d.	\$ c.	s. d.	cents
1861 ¹	7 10	1-906	11 $\frac{3}{4}$	23.8	1889.....	2 8 $\frac{1}{2}$	0-655	4	8.2
1862.....	10 4	2-514	1 3 $\frac{1}{2}$	31.4	1890.....	1 8 $\frac{1}{2}$	0-416	2 $\frac{9}{16}$	5.2
1863.....	6 10	1-663	10 $\frac{1}{2}$	20.8	1891.....	2 0 $\frac{1}{2}$	0-492	3	6.2
1864.....	5 10	1-419	8 $\frac{3}{4}$	17.7	1892.....	1 9	0-426	2 $\frac{1}{2}$	5.3
1865.....	4 10	1-176	7 $\frac{1}{2}$	14.7	1893.....	1 8	0-406	2 $\frac{1}{2}$	5.1
1866.....	5 10 $\frac{1}{2}$	1-429	8 $\frac{13}{16}$	17.9	1894.....	1 3 $\frac{1}{2}$	0-317	2	4.0
1867.....	7 5	1-805	11 $\frac{1}{2}$	22.6	1895.....	1 9 $\frac{1}{2}$	0-436	2 $\frac{1}{2}$	5.4
1868.....	5 8 $\frac{1}{2}$	1-389	8 $\frac{9}{16}$	17.4	1896.....	1 11 $\frac{1}{2}$	0-471	2 $\frac{1}{2}$	5.0
1869.....	6 5 $\frac{1}{2}$	1-571	9 $\frac{1}{4}$	19.6	1897.....	2 1 $\frac{1}{2}$	0-522	3 $\frac{1}{2}$	6.5
1870.....	5 6	1-338	8 $\frac{1}{4}$	16.7	1898.....	2 4 $\frac{1}{2}$	0-583	3 $\frac{1}{4}$	7.3
1871.....	7 1 $\frac{1}{2}$	1-734	10 $\frac{1}{2}$	21.7	1899.....	1 8 $\frac{1}{2}$	0-416	2 $\frac{1}{4}$	5.2
1872.....	6 6 $\frac{1}{2}$	1-592	9 $\frac{1}{2}$	19.9	1900.....	2 6	0-608	3 $\frac{1}{2}$	7.6
1873.....	9 7	2-332	1 2 $\frac{1}{2}$	29.2	1901.....	1 1 $\frac{1}{2}$	0-274	1 $\frac{1}{2}$	3.4
1874.....	5 10 $\frac{1}{2}$	1-429	8 $\frac{1}{2}$	17.9	1902.....	1 3	0-304	1 $\frac{1}{2}$	3.8
1875.....	6 0	1-460	9	18.3	1903.....	1 1 $\frac{1}{2}$	0-274	1 $\frac{1}{2}$	3.4
1876.....	5 5	1-318	8 $\frac{1}{2}$	16.5	1904.....	7 $\frac{1}{2}$	0-152	0 $\frac{1}{2}$	1.9
1877.....	5 8 $\frac{1}{2}$	1-389	8 $\frac{1}{2}$	17.4	1905.....	1 5 $\frac{1}{2}$	0-360	2 $\frac{1}{2}$	4.5
1878.....	5 2 $\frac{1}{2}$	1-272	7 $\frac{1}{2}$	15.9	1906.....	1 9	0-426	2 $\frac{1}{2}$	5.3
1879.....	5 0 $\frac{1}{2}$	1-227	7 $\frac{9}{16}$	15.3	1907.....	1 5 $\frac{1}{2}$	0-350	2 $\frac{1}{2}$	4.4
1880.....	4 7 $\frac{1}{2}$	1-130	8	14.1	1908.....	1 9 $\frac{1}{2}$	0-441	2 $\frac{1}{2}$	5.5
1881.....	2 10 $\frac{1}{2}$	0-699	4 $\frac{5}{16}$	8.7	1909.....	1 4 $\frac{1}{2}$	0-334	2 $\frac{1}{2}$	4.3
1882.....	2 8 $\frac{1}{2}$	0-665	4 $\frac{1}{2}$	8.2	1910.....	1 3	0-304	2 $\frac{1}{2}$	3.8
1883.....	3 0 $\frac{1}{2}$	0-796	4 $\frac{1}{2}$	9.9	1911.....	1 4 $\frac{1}{2}$	0-339	2 $\frac{1}{2}$	4.2
1884.....	2 5 $\frac{1}{2}$	0-596	3 $\frac{1}{2}$	7.5	1912.....	2 6 $\frac{1}{2}$	0-618	3 $\frac{1}{2}$	7.7
1885.....	2 2 $\frac{1}{2}$	0-553	3 $\frac{1}{2}$	6.7	1913.....	2 7 $\frac{1}{2}$	0-639	3 $\frac{1}{2}$	8.0
1886.....	2 3 $\frac{1}{2}$	0-556	3 $\frac{1}{2}$	7.0	1914.....	2 3 $\frac{1}{2}$	0-563	3 $\frac{1}{2}$	7.0
1887.....	1 0	0-426	2 $\frac{1}{2}$	5.3	1915.....	8 8 $\frac{1}{2}$	2-119	1 1 $\frac{1}{4}$	26.4
1888.....	1 9 $\frac{1}{2}$	0-436	2 $\frac{1}{2}$	5.4					

¹Sailing vessels.

II. Annual Average Steamship Freight Rates for Wheat from New York to Liverpool, 1879 to 1915.

(Data from the Annual Statistical Reports of the New York Produce Exchange.)

Season	Per quarter of 480 lb.		Per bushel of 60 lb.		Season	Per quarter of 480 lb.		Per bushel of 60 lb.	
	s. d.	\$ c.	s. d.	cents		s. d.	\$ c.	s. d.	cents
1879.....	4 1½	·09	6 ¾	12·4	1898....	2 3½	·55	3 ¾	6·8
1880.....	3 10½	·93	5 ½	11·6	1899....	1 7½	·39	2 ¾	4·8
1881.....	2 9	·66	4 ½	8·3	1900....	2 3	·54	3 ¾	6·8
1882.....	2 7½	·63	3 ¾	7·8	1901....	10	·20	1 ½	2·5
1883.....	3 3½	·79	4 ½	9·8	1902....	11½	·23	1 ¾	2·8
1884.....	2 4	·56	3 ¾	7·0	1903....	11½	·23	1 ¾	2·8
1885.....	2 1½	·51	3 ¾	6·4	1904....	9	·18	1 ½	2·3
1886.....	2 2½	·53	3 ¾	6·6	1905....	1 1	·26	1 ¾	3·3
1887.....	1 8	·40	2 ½	5·0	1906....	11½	·23	1 ¾	2·8
1888.....	1 9	·42	2 ½	5·3	1907....	1 2	·28	1 ¾	3·5
1889.....	2 7½	·63	3 ¾	7·8	1909....	1 0½	·25	1 ¾	3·1
1890.....	1 7½	·39	2 ½	4·8	1908....	1 1	·24	1 ¾	3·3
1891.....	2 1	·50	3 ¾	6·3	1910....	1 0	·26	1 ½	3·0
1892.....	1 9	·42	2 ½	5·3	1911....	1 4	·32	2	4·6
1893.....	1 7	·38	2 ½	4·8	1912....	2 5½	·59	3 ½	7·4
1894.....	1 3½	·31	1 ½	3·8	1913....	1 10½	·45	2 ½	5·6
1895.....	1 8½	·41	2 ½	5·1	1914....	2 6	·60	3 ½	7·5
1896.....	1 11½	·47	2 ½	5·8	1915....	8 9½	2·10	1 ½	26·3
1897.....	2 0½	·49	3 ¾	6·1					

III. Average Steamship Freight Rates for Wheat from Montreal to Liverpool by months during the St. Lawrence Navigation Seasons, 1903 to 1915.

(Data furnished by the Canadian Pacific Railway Company.)

Season	Per quarter of 480 lb.		Per bushel of 60 lb.		Season	Per quarter of 480 lb.		Per bushel of 60 lb.	
1903	s. d.	\$ c.	s. d.	cents	1906	s. d.	\$ c.	s. d.	cents
May.....	1 0	·243	1½	3·0	May.....	1 3	·304	1½	3·8
June.....	1 0	·243	1½	3·0	June.....	1 3	·304	1½	3·8
July.....	1 0	·243	1½	3·0	July.....	11½	·238	1½	3·0
Aug.....	1 0	·243	1½	3·0	Aug.....	1 0½	·258	1¾	3·2
Sept.....	1 0	·243	1½	3·0	Sept.....	1 5½	·350	2¾	4·4
Oct.....	1 0½	·258	1½	3·2	Oct.....	1 8½	·435	2½	5·4
Nov.....	1 0½	·258	1½	3·2	Nov.....	1 3	·304	1½	3·8
1904					1907				
May.....	6	·122	1½	1·5	May.....	1 3	·304	1½	3·8
June.....	5½	·106	1½	1·3	June.....	1 3	·304	1½	3·8
July.....	6	·122	1½	1·5	July.....	1 3	·304	1½	3·8
Aug.....	6	·122	1½	1·5	Aug.....	1 4½	·334	2¾	4·3
Sept.....	6	·122	1½	1·5	Sept.....	1 7½	·395	2¾	4·8
Oct.....	6	·122	1½	1·5	Oct.....	1 7½	·395	2¾	4·8
Nov.....	7½	·152	1½	1·9	Nov.....	1 4½	·334	2¾	4·3
1905					1908				
May.....	9	·183	1½	2·3	May.....	1 4½	·334	2¾	4·3
June.....	9	·183	1½	2·3	June.....	1 0	·243	1½	3·0
July.....	9	·183	1½	2·3	July.....	1 0	·243	1½	3·0
Aug.....	11½	·228	1½	2·9	Aug.....	1 1½	·274	1½	3·4
Sept.....	1 2½	·289	1½	3·6	Sept.....	1 3½	·319	2	3·9
Oct.....	1 9	·426	2½	5·3	Oct.....	1 6	·365	2½	4·6
Nov.....	2 2½	·532	3½	6·7	Nov.....	1 4½	·334	2¾	4·3

III. Average Steamship Freight Rates for Wheat from Montreal to Liverpool by months during the St. Lawrence Navigation Seasons, 1903-1915.—con.

Season	Per quarter of 480 lb.		Per bushel of 60 lb.		Season	Per quarter of 480 lb.		Per bushel of 60 lb.				
1909	s.	d.	\$	c.	s.	d.	cents	s.	d.	cents		
May.....	1	1½	·274	1½	3-4	Sept.....	2	1½	·517	3½	6-5	
June.....	1	1½	·274	1½	3-4	Oct.....	2	10½	·699	4½	8-7	
July.....	1	1½	·274	1½	3-4	Nov.....	3	0	·730	4½	9-1	
Aug.....	1	0	·243	1½	3-0	1913						
Sept.....	1	7½	·395	2½	4-8	May.....	3	0	·730	4½	9-1	
Oct.....	1	4½	·334	2½	4-3	June.....	3	0	·730	4½	9-1	
Nov.....	1	6½	·380	2½	4-8	July.....	2	10½	·699	4½	8-7	
1910						Aug.....	2	6	·608	3½	7-6	
May.....	1	0½	·258	1½	3-2	Sept.....	2	10½	·699	4½	7-6	
June.....	1	0½	·258	1½	3-2	Oct.....	2	9	·609	4½	8-3	
July.....	1	9½	·198	1½	2-5	Nov.....	2	7½	·639	3½	8-0	
Aug.....	1	9	·183	1½	2-3	1914						
Sept.....	1	0½	·258	1½	3-2	May.....	1	6	·365	2½	4-6	
Oct.....	1	2½	·289	1½	3-6	June.....	1	6	·365	2½	4-6	
Nov.....	1	4½	·334	2½	4-3	July.....	1	6	·365	2½	4-6	
1911						Aug.....	1	6	·365	2½	4-6	
May.....	1	3	·304	1½	3-8	Sept.....	2	0	·487	3	6-3	
June.....	1	3	·304	1½	3-8	Oct.....	2	3	·548	3½	6-9	
July.....	1	3	·304	1½	3-8	Nov.....	2	6	·608	3½	7-6	
Aug.....	1	3½	·319	2	3-9	1915						
Sept.....	1	4½	·334	2½	4-3	May.....	6	0	1-460	9	18-3	
Oct.....	1	9½	·441	2½	5-5	June.....	7	0	1-703	10½	21-3	
Nov.....	2	0	·487	3	6-3	July.....	7	0	1-703	10½	21-3	
1912						Aug.....	8	0	1-947	1	0	24-3
May.....	2	6	·608	3½	7-6	Sept.....	8	0	1-947	1	0	24-3
June.....	2	6	·608	3½	7-6	Oct.....	9	6	2-312	1	2½	28-9
July.....	2	6	·608	3½	7-6	Nov.....	13	0	3-163	1	7½	39-5
Aug.....	2	7½	·639	3½	8-0							

IV. Steamship Freight Rates for Wheat from New York to Liverpool during each week, 1909-1915.

(Data furnished by Mr. G. J. S. BROOMHALL, F.S.S., Editor, Liverpool "Corn Trade News" and by the New York Produce Exchange).

Monday	Per quarter		Per bushel		Monday	Per quarter		Per bushel			
1909	s.	d.	\$	c.	s.	d.	\$	c.	s.	d.	cents
Jan. 4	1	0½	0-252	1½	3 15	Jan. 3	1	4½	0-329	2½	4 11
" 11	1	0½	0-252	1½	3 15	" 10	1	4½	0-329	2½	4 11
" 18	1	2½	0-290	1½	3 63	" 17	1	4½	0-329	2½	4 11
" 25	1	2½	0-290	1½	3 63	" 24	1	4½	0-329	2½	4 11
Feb. 1	1	0½	0-252	1½	3 15	" 31	10½	0-205	1½	2 56	
to											
Oct. 4	1	4½	0-329	2½	4 11	Feb. 7	10½	0-205	1½	2 56	
Oct. 11	1	4½	0-329	2½	4 11	" 14	10½	0-205	1½	2 56	
" 18	1	4½	0-329	2½	4 11	" 21	8½	0-166	1½	2 08	
" 25	1	4½	0-329	2½	4 11	" 28	8½	0-166	1½	2 08	
Nov. 1	1	6½	0-372	2½	4 65	Mar. 7	10½	0-205	1½	2 56	
" 8	1	6½	0-372	2½	4 65	" 14	10½	0-205	1½	2 56	
" 15	1	8½	0-410	2½	5 13	" 21	10½	0-205	1½	2 56	
" 22	1	8½	0-410	2½	5 13	" 28	10½	0-205	1½	2 56	
" 29	1	8½	0-410	2½	5 13	April 4	10½	0-205	1½	2 56	
Dec. 6	1	7½	0-394	2½	4 92	" 11	1	0½	0-257	1½	3 21
" 13	1	4½	0-329	2½	4 11	" 18	1	0½	0-257	1½	3 21
" 20	1	4½	0-329	2½	4 11	" 25	10½	0-205	1½	2 56	
" 27	1	4½	0-329	2½	4 11	May 2	10½	0-205	1½	2 56	
Average..	1	1½	0-270	1½	3 37	" 9	10½	0-205	1½	2 56	

**IV. Steamship Freight Rates for Wheat from New York to Liverpool during
each week, 1909-1915—con.**

Monday				Monday			
Per quarter		Per bushel		Per quarter		Per bushel	
s.	d.	\$ c.	s. d. cents	s. d.	\$ c.	s. d.	cents
1910							
May	16	1 0 $\frac{1}{2}$ $\frac{7}{16}$	0-257	1 3 21			
"	23	1 0 $\frac{1}{2}$ $\frac{7}{16}$	0-257	1 3 21			
"	30	1 0 $\frac{1}{2}$	0-205	1 3 21			
June	6	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	13	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	20	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	27	1 0 $\frac{1}{2}$	0-205	1 3 21			
July	4	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	11	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	18	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	25	1 0 $\frac{1}{2}$	0-205	1 3 21			
Aug.	1	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	8	1 0 $\frac{1}{2}$	0-205	1 3 21			
"	15	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	22	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	29	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
Sept.	5	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	12	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	19	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	26	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
Oct.	3	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	10	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	17	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	24	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	31	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
Nov.	7	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	14	2 2 $\frac{3}{8}$	0-295	1 9 $\frac{1}{16}$			
"	21	2 2 $\frac{3}{8}$	0-295	1 9 $\frac{1}{16}$			
"	28	2 2 $\frac{3}{8}$	0-295	1 9 $\frac{1}{16}$			
Dec.	5	1 0 $\frac{1}{2}$ $\frac{1}{16}$	0-257	1 3 21			
"	12	1 6 $\frac{3}{8}$	0-372	2 3 $\frac{1}{16}$			
"	19	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
"	26	1 4 $\frac{1}{16}$	0-334	2 1 $\frac{1}{16}$			
Average..	1	0 $\frac{1}{16}$	0-254	1 $\frac{1}{2}$			
1911							
Jan.	2	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	9	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	16	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	23	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	30	1 6 $\frac{3}{8}$	0-372	2 3 $\frac{1}{16}$			
Feb.	6	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	13	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	20	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	27	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
Mar.	6	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	13	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	20	1 2 $\frac{3}{8}$	0-290	2 3 $\frac{1}{16}$			
"	27	1 2 $\frac{3}{8}$	0-290	2 3 $\frac{1}{16}$			
April	3	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	10	1 0 $\frac{1}{2}$	0-212	1 3 15			
"	17	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	24	1 0 $\frac{1}{2}$	0-252	1 3 15			
May	1	1 11 $\frac{1}{16}$	0-230	1 11 $\frac{1}{16}$			
"	8	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	15	1 11 $\frac{1}{16}$	0-230	1 11 $\frac{1}{16}$			
"	22	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	29	1 0 $\frac{1}{2}$	0-252	1 3 15			
June	5	1 0 $\frac{1}{2}$	0-252	1 3 15			
1911							
June	12	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	19	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	26	1 0 $\frac{1}{2}$	0-205	1 3 15			
July	3	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	10	1 0 $\frac{1}{2}$	0-252	1 3 15			
"	17	1 2 $\frac{1}{4}$	0-290	2 3 63			
"	24	1 2 $\frac{1}{4}$	0-290	2 3 63			
"	31	1 2 $\frac{1}{4}$	0-290	2 3 63			
Aug.	7	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	14	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	21	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	28	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
Sept.	4	1 8 $\frac{1}{2}$	0-410	2 1 $\frac{1}{16}$			
"	11	1 7 $\frac{7}{16}$	0-394	2 1 $\frac{1}{16}$			
"	18	1 7 $\frac{7}{16}$	0-394	2 1 $\frac{1}{16}$			
"	25	1 6 $\frac{1}{16}$	0-372	2 1 $\frac{1}{16}$			
Oct.	2	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	9	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	16	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	23	1 2 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	30	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
Nov.	6	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	13	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	20	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	27	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
Dec.	4	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	11	2 4 $\frac{9}{16}$	0-569	3 1 $\frac{1}{16}$			
"	18	2 4 $\frac{9}{16}$	0-569	3 1 $\frac{1}{16}$			
"	25	2 2 $\frac{3}{8}$	0-531	3 1 $\frac{1}{16}$			
Average..	1	4 $\frac{1}{16}$	0-326	2 2 $\frac{1}{16}$			
1912							
Jan.	1	2 2 $\frac{1}{16}$	0-531	3 1 $\frac{1}{16}$			
"	8	2 2 $\frac{1}{16}$	0-531	3 1 $\frac{1}{16}$			
"	15	2 4 $\frac{9}{16}$	0-569	3 1 $\frac{1}{16}$			
"	22	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	29	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
Feb.	5	2 8 $\frac{1}{16}$	0-650	4 1 $\frac{1}{16}$			
"	12	2 8 $\frac{1}{16}$	0-650	4 1 $\frac{1}{16}$			
"	19	2 4 $\frac{9}{16}$	0-569	3 1 $\frac{1}{16}$			
"	26	2 8 $\frac{1}{16}$	0-650	4 1 $\frac{1}{16}$			
Mar.	4	2 7 $\frac{7}{16}$	0-607	3 3 $\frac{1}{16}$			
"	11	2 6 $\frac{7}{16}$	0-607	3 3 $\frac{1}{16}$			
"	18	2 6 $\frac{7}{16}$	0-607	3 3 $\frac{1}{16}$			
"	25	2 8 $\frac{1}{16}$	0-650	4 1 $\frac{1}{16}$			
Apr.	1	2 8 $\frac{1}{16}$	0-650	4 1 $\frac{1}{16}$			
"	8	2 6 $\frac{7}{16}$	0-607	3 3 $\frac{1}{16}$			
"	15	2 6 $\frac{7}{16}$	0-607	3 3 $\frac{1}{16}$			
"	22	2 4 $\frac{9}{16}$	0-569	3 1 $\frac{1}{16}$			
"	29	2 2 $\frac{1}{16}$	0-531	3 1 $\frac{1}{16}$			
May	6	2 0 $\frac{1}{16}$	0-492	3 1 $\frac{1}{16}$			
"	13	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	20	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	27	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
June	4	1 10 $\frac{1}{16}$	0-453	2 1 $\frac{1}{16}$			
"	11	1 4 $\frac{9}{16}$	0-329	2 1 $\frac{1}{16}$			
"	18	1 8 $\frac{1}{2}$	0-410	2 1 $\frac{1}{16}$			
"	25	1 8 $\frac{1}{2}$	0-410	2 1 $\frac{1}{16}$			
July	1	1 8 $\frac{1}{2}$	0-410	2 1 $\frac{1}{16}$			

IV. Steamship Freight Rates for Wheat from New York to Liverpool during each week, 1909-1915—con.

Monday				Monday					
Per quarter			Per bushel		Per quarter			Per bushel	
	s. d.	\$ c.	s. d.	cents		s. d.	\$ c.	s. d.	cents
1912					1913				
July 8	1 8½	0.410	2½	5 13	Aug. 11	1 6½	0.372	2½	4 65
" 15	1 8½	0.410	2½	5 13	" 18	1 11½	0.470	2½	5 88
" 22	1 4½	0.329	2½	4 11	" 25	1 8½	0.410	2½	5 13
" 29	1 4½	0.329	2½	4 11	Sept. 1	1 6½	0.365	2½	4 56
Aug. 5	1 4½	0.329	2½	4 11	" 8	1 6½	0.365	2½	4 56
" 12	2 0½	0.492	3½	6 15	" 15	1 4½	0.324	2	4 05
" 19	2 0½	0.492	3½	6 15	" 22	1 6½	0.365	2½	4 56
" 26	2 8½	0.650	4½	8 13	" 29	1 6½	0.385	2½	4 81
Sept. 2	2 8½	0.650	4½	8 13	Oct. 6	1 11½	0.466	2½	5 82
" 9	3 0½	0.731	4½	9 14	" 13	1 11½	0.446	2½	5 57
" 16	3 4½	0.809	5½	10 11	" 20	1 11½	0.446	2½	5 57
" 23	2 4½	0.809	5½	10 11	" 27	1 6½	0.365	2½	4 56
" 30	3 6½	0.851	5½	10 64	Nov. 3	1 8½	0.405	2½	5 06
Oct. 7	3 2½	0.770	4½	9 63	" 10	1 8½	0.405	2½	5 06
" 14	3 7	0.860	5½	10 75	" 17	1 8½	0.405	2½	5 06
" 21	3 6½	0.851	5½	10 64	" 24	1 4½	0.324	2	4 05
" 28	3 8½	0.890	5½	11 12	Dec. 1	1 4½	0.324	2	4 05
Nov. 4	3 8½	0.890	5½	11 12	" 8	1 4½	0.324	2	4 05
" 11	3 8½	0.890	5½	11 12	" 15	1 4½	0.324	2	4 05
" 18	3 6½	0.851	5½	10 64	" 22	1 4½	0.324	2	4 05
" 25	3 4½	0.809	5½	10 11	" 29	1 4½	0.324	2	4 05
Dec. 2	3 4½	0.809	5½	10 11	Average..	1 10½	0.443	2½	5 54
" 9	3 2½	0.770	4½	9 63	1914				
" 16	3 0½	0.731	4½	9 14	Jan. 5	1 8	0.400	2½	5 00
" 23	3 0½	0.731	4½	9 14	" 12	1 8	0.400	2½	5 00
Average..	2 6½	0.603	3½	7 54	" 19	1 4	0.320	2	4 00
1913					" 26	1 4	0.320	2	4 00
Jan. 6	2 3½	0.554	3½	6 93	Feb. 2	1 4	0.320	2	4 00
" 13	2 3½	0.554	3½	6 93	" 9	1 4	0.320	2	4 00
" 20	2 3½	0.554	3½	6 93	" 16	1 3	0.300	1½	3 75
" 27	2 8½	0.650	4½	8 13	" 23	1 3	0.300	1½	3 75
Feb. 3	2 0½	0.492	3½	6 15	Mar. 2	1 0	0.240	1½	3 00
" 10	2 0½	0.492	3½	6 15	" 9	1 0	0.240	1½	3 00
" 17	1 10½	0.453	2½	5 66	" 16	11	0.220	1½	2 75
" 24	2 1½	0.505	3½	6 31	" 23	11	0.220	1½	2 75
Mar. 3	2 3½	0.548	3½	6 85	" 30	1 0	0.240	1½	3 00
" 10	2 0½	0.492	3½	6 15	April 6	1 3	0.300	1½	3 75
" 17	2 0½	0.492	3½	6 15	" 13	1 3	0.300	1½	3 75
" 24	2 0½	0.492	3½	6 15	" 20	1 3	0.300	1½	3 75
" 31	1 10½	0.453	2½	5 66	" 27	1 0	0.240	1½	3 00
April 7	2 0½	0.492	5½	6 15	May 4	1 0	0.240	1½	3 00
" 14	2 0½	0.492	3½	6 15	" 11	1 0	0.240	1½	3 00
" 21	2 0½	0.492	3½	6 15	" 18	1 0	0.240	1½	3 00
" 28	2 4½	0.569	3½	7 11	" 25	1 0	0.240	1½	3 00
May 5	2 4½	0.569	3½	7 11	June 1	1 0	0.240	1½	3 00
" 12	2 4½	0.569	3½	7 11	" 8	1 3	0.300	1½	3 75
" 19	2 4½	0.569	3½	7 11	" 15	1 0	0.240	1½	3 00
" 26	2 2½	0.531	3½	6 64	" 22	1 4	0.320	2	4 50
June 2	2 2½	0.531	3½	6 64	" 29	1 8	0.400	2½	5 00
" 9	2 0½	0.492	3½	6 15	July 6	1 8	0.400	2½	5 00
" 16	1 10½	0.453	2½	5 66	" 13	1 8	0.400	2½	5 00
" 23	1 6½	0.372	2½	4 65	" 20	1 8	0.400	2½	5 00
" 30	1 6½	0.372	2½	4 65	" 27	1 10	0.440	2½	5 50
July 7	1 6½	0.372	2½	4 65	Aug. 3				
" 14	1 6½	0.372	2½	4 65	to				
" 21	1 6½	0.372	2½	4 65	Sept. 14				
" 28	1 6½	0.372	2½	4 65	" 21	2 0	0.480	3	6 00
Aug. 4	1 6½	0.372	2½	4 65	" 28				
					Oct. 5	2 10	0.640	4	8 00

IV. Steamship Freight Rates for Wheat from New York to Liverpool during each week, 1909-1915—concluded.

Monday			Per quarter		Per bushel		Monday			Per quarter		Per bushel	
1914	s.	d.	\$ c.	s.	d.	cents	1915	s.	d.	\$ c.	s.	d.	cents
Oct.	12	2 10	0.640	4		8 00	May	17	7 8	1.840	11½		23 00
"	19	2 10	0.640	4		8 00	"	24	8 1½	1.944	1 0		24 30
"	26	2 10	0.640	4		8 00	"	31	8 1½	1.944	1 0		24 30
Nov.	2	2 10	0.680	4½		8 50	June	7	8 1½	1.944	1 0		24 30
"	9	3 6	0.840	5½		10 50	"	14	8 1½	1.944	1 0		24 30
"	16	4 4	1.040	6½		13 00	"	21	8 1½	1.944	1 0		24 30
"	23	4 4	1.040	6½		13 00	"	28	7 0	1.680	10½		21 00
"	30	4 4	1.040	6½		13 00	July	5	7 0	1.680	10½		21 00
Dec.	7	4 8	1.120	7		14 50	"	12	6 0	1.440	9		18 00
"	14	4 10	1.160	7½		14 50	"	19	7 0	1.680	10½		21 00
"	21	5 4	1.280	8		16 00	"	26	7 4	1.760	11		22 00
"	28	6 9	1.620	9		18 00	Aug.	2	7 4	1.760	11		22 00
Average..	2	0 7 10	0.494	3 1 13		6 17	"	9	6 8	1.600	10		20 00
							"	16	6 8	1.600	10		20 00
							"	23	6 8	1.600	10		20 00
							"	30	7 0	1.680	10½		21 00
1915							Sept.	6	8 1½	1.944	1 0		24 30
Jan.	4	6 0	1.440	9		18 00	"	13	8 9½	2.112	1 1		26 40
"	11	6 0	1.440	9		18 00	"	20	9 5½	2.272	1 2		28 40
"	18	6 8	1.600	10		20 00	"	27	10 1½	2.432	1 3		30 40
Feb.	1	6 8	1.600	10		20 00	Oct.	4	13 6½	3.248	1 8		40 60
"	8	7 0	1.680	10½		21 00	"	11	13 6½	3.248	1 8		40 60
"	15	7 4	1.760	11		22 00	"	18	13 6½	3.248	1 8		40 60
"	22	8 1½	1.944	1 0		24 30	"	25	13 6½	3.248	1 8		40 60
Mar.	1	8 1½	1.944	1 0		24 30	Nov.	1	13 6½	3.248	1 8		40 60
"	8	8 1½	1.944	1 0		24 30	"	8	13 6½	3.248	1 8		40 60
"	15	8 1½	1.944	1 0		24 30	"	15	14 2½	3.408	1 9		42 60
"	22	8 1½	1.944	1 0		24 30	"	22	13 6½	3.248	1 8		40 60
"	29	8 1½	1.944	1 0		24 30	"	29	12 10	3.080	1 7		38 50
April	5	8 1½	1.944	1 0		24 30	Dec.	6	12 10	3.080	1 7		38 50
"	12	8 1½	1.944	1 0		24 30	"	13	12 10	3.080	1 7		38 50
"	19	7 8	1.840	11½		23 00	"	20	12 10	3.080	1 7		38 50
"	26	7 8	1.840	11½		23 00	"	27	13 6½	3.248	1 8		40 60
May	3	7 8	1.840	11½		23 00	Average..	9	0 1 13	2.164	1 1½		27 05
"	10	7 8	1.840	11½		23 00							

NEW STATISTICAL PUBLICATIONS.

Cost of Living Inquiry.—On December 20, 1913, at the instance of the Prime Minister, an Order in Council was passed constituting a Board of Inquiry to investigate the increase in the cost of living in Canada and the causes which have occasioned or contributed to it. The Board was constituted of Mr. John McDougald, C.M.G., Commissioner of Customs (Chairman), Mr. C. C. James, C.M.G., Agricultural Commissioner, Mr. R. H. Coats, F.S.S., Chief Statistician of the Department of Labour, and Mr. J. U. Vincent, Assistant Deputy Minister of Inland Revenue. Mr. Thomas J. Lynton, of the Department of Customs, acted as secretary. The Report of the Board, bearing date of August 1, 1914, has now been published. It consists of two bulky octavo volumes, the first containing 955 and the second 1,106 pages, with also the Synopsis of an Exhibit laid

before the Board by the Statistical Branch of the Department of Labour and described as a "Statistical Examination of Economic Causes of the Rise in Prices and the Cost of Living in Canada, 1900-1914." This occupies 82 pages.

Volume I gives the Report of the Board, which is signed by all the members except Mr. Coats. The "Conclusion," forming chapter xxvi of the report, enumerates a number of contributory causes of the advance of prices and the increase in the cost of living. These include (1) the increase in the gold supply; (2) the enormous expenditure on railways and public works and investments in non-productive lines incident to the development of a young country; (3) manifold forms of extravagance and wastage, public and private, individual and social; (4) the withdrawal of population from the land and its concentration in towns and cities. The Board look for improvement through land settlement, greater attention to mixed farming, increased production, standardisation and improvement of quality in farm products and co-operation in distribution.

Volume II is a Supplementary Report by Mr. Coats, prepared as an Exhibit of the Statistical Branch of the Department of Labour. It consists of an Introduction; Part I, "Facts"; Part II, "Causes"; and Part III "Summary", dealing with the rise in the cost of living and its economic causes. "The great rise in prices that has taken place in Canada," states the report, "is found to centre largely in the new distribution problem which has been created by the lessening of local food supply during an era of heavy expenditure on capital account," and "the remedial lines which this inquiry indicates are the encouragement of food production and the removal of every possible economic weight in the distribution process."

Both volumes will be found to contain an immense amount of statistical material bearing upon the subject of the inquiry, which should prove invaluable to present and future students of economic conditions.

Bulletin of the International Statistical Institute.—Tome XX of this Bulletin, printed at Vienna in 1915 and published in two parts at The Hague, contains the reports and proceedings of the 14th Session of the International Statistical Institute, which was held at Vienna from September 9 to 13, 1913. The preface states that the issue of the Bulletin was delayed first by a strike of compositors in Vienna in the fall of 1913 and next by the outbreak of the war, which called to the colours two editors successively, one of whom (Dr. Richard Sorer) was killed in action. Reference is also made to the death on June 10, 1914, of Dr. Robert Meyer, president of the Organisation Committee of the 14th Session and Vice-President of the Institute. The work of the Session having already been described in the *Census and Statistics Monthly* of November, 1913 (Vol. 6, No. 64, pp. 271-273), the contents of the Bulletin need not now be further particularised. Mention should be made, however, of a Supplement to Tome XX, which consists of an Index to the contents of the twenty volumes of the Bulletin published since the foundation of the Institute in 1885.

The Supplement is divided into a Chronological Table showing the contents by volumes; an alphabetical index of the subject matter and an alphabetical list of authors' names. Such an Index was badly needed, and will be indispensable as a key to render more easily accessible the numerous reports published.

Statistical Year Book of Quebec, 1915.—This, the second Year Book of the province of Quebec, is brought out by M. G. E. Marquis, who succeeded M. Henri Bunle, of Paris, as head of the Quebec Statistical Bureau. In the letter of transmittal, M. Marquis gives due credit to his predecessor who, it will be remembered, was appointed on the recommendation of M. March, Chief of the General Statistical Service of France, to organise the new Statistical Bureau of Quebec and who in this capacity issued the first edition of the Year Book for 1914.¹ But the present edition embraces a variety of new features which, added to the old ones retained, constitute the Quebec Statistical Year Book an admirable work of reference for all matters connected with the province. Amongst these new features attention may be drawn to the following: (1) Colonisation in New France under French domination (1608-1760); (2) the political judicial, municipal, educational and ecclesiastical organisation of the province of Quebec; (3) notes on the principal laws of public interest promulgated in the province of Quebec in 1915; (4) the origin of private ownership in the province of Quebec; (5) the St. Vincent de Paul Society; and (6) the forest industries. A statistical summary of progress in the province of Quebec covering the census years 1871 to 1911 and the year 1914, is also a useful addition. The work consists of 675 large octavo pages.

Report on the Census of 1911.—Vol. V of the Report on the Fifth Census of Canada includes the subjects of forestry, fishery, fur and mineral production. It consists of an introduction of 50 pages with 51 tables, followed by 26 general tables. The forestry statistics do not relate to the whole of the forest products of Canada, but are limited to the products of the forest cut on farms. Of these the total value in 1910 was \$20,087,657. The value of all fish taken in 1910 amounted to \$29,965,433, as against \$19,768,449 in 1900, an increase in the ten years of \$10,196,984, or about 52.6 per cent. The value of furs and skins of wild animals killed in 1910 was \$1,927,550, as compared with \$899,645 in 1900. The total value of the mineral production of Canada in 1910 was returned as \$122,004,932, as compared with \$47,956,862, an increase of \$74,048,070, or 154.4 per cent. Vol. VI of the Report on the Census of 1911, dealing with the occupations of the people, is now passing through the press.

THE WEATHER DURING JANUARY.

The Dominion Meteorological Service reports that a line drawn north and south through the middle of Lake Superior is very nearly the dividing line between mean temperatures above normal in the east, and below normal in the west. From Manitoba westward the

¹See Census and Statistics Monthly for November, 1914 (Vol. 7, No. 75, pp. 296-297).

negative departures increased rapidly from 3° at Winnipeg to 24° at Medicine Hat, and nearly 30° in the upper mainland of British Columbia, and thence lessened again to 10° near the coast. These negative departures in British Columbia and Alberta are the largest on record. The largest positive departures ranging between 6 and 9 occurred in southern and eastern Ontario, whence they diminished eastward to the Maritime provinces, where the temperature was very nearly normal. Precipitation was below the normal in British Columbia and in the Maritime provinces, while in the western provinces and nearly all parts of Ontario and Quebec it was considerably in excess. The greatest positive departures were in northern Ontario and in the vicinity of Winnipeg, where there were some unusually heavy snowfalls. The largest negative departure was in Cape Breton, where the total fall was only about one-third of the average for January. The snowfall has been excessive in British Columbia, especially near the coast, where the ground had an unusually deep covering on the 31st, which has since been greatly augmented. An unusually large amount of snow also covered the Prairie provinces, the depth ranging from about seven inches in the vicinity of Calgary to over two feet in many parts of eastern Saskatchewan and Manitoba. The frequent strong winds caused considerable drifting, and the roads and trails in many places became heavy and rather difficult to travel. In Ontario the snow was from two to four feet over the Thunder Bay, Rainy River and Algoma districts, and in the Upper Ottawa Valley it was from eighteen to twenty-four inches, while in the peninsula and the counties contiguous to Lake Ontario the ground was entirely bare. In southwestern Quebec, there was very little snow at the close of the month, but in the counties to the northward of the Ottawa River and farther east in the province it was quite deep, amounting to two feet or over. In the northern interior counties of New Brunswick the snow was also quite deep, and Prince Edward Island was covered to a depth of six or seven inches, while in Nova Scotia the ground was bare in many places and traces remained in others.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the Official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

(For Tables I to V, see pages 76 to 78).

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	Jan. 1		Jan. 8		Jan. 15		Jan. 22		Jan. 29	
	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.
Wheat—										
No. 1 Nor.	1 13½	-1 15½	1 13	-1 16	1 15½	-1 20½	1 21½	-1 27	1 26½	-1 29½
No. 2 Nor.	1 10½	-1 13	1 10½	-1 13½	1 12½	-1 17½	1 19½	-1 24½	1 23½	-1 27½
No. 3 Nor.	1 05½	-1 08½	1 05½	-1 09½	1 09½	-1 14½	1 16½	-1 22½	1 21½	-1 25½
No. 4.	1 02½	-1 04½	1 02	-1 06½	1 05½	-1 10½	1 12	-1 17½	1 17½	-1 21½
No. 5.	0 93½	-0 95½	0 93	-0 98	0 97½	-1 02½	1 05	-1 10½	1 10½	-1 14½
No. 6.	0 83½	-0 85½	0 83	-0 88	0 87½	-0 92½	0 95	-1 03½	1 04½	-1 08½
Feed	0 73½	-0 75½	0 73	-0 78	0 77½	-0 82½	0 85	-0 96½	0 97½	-1 01½
Oats—										
No. 2 C.W.	0 39	-0 40	0 39½	-0 41½	0 41½	-0 44½	0 45½	-0 46½	0 46½	-0 47½
No. 3 C.W.	0 36	-0 37	0 36½	-0 38½	0 38½	-0 41½	0 42½	-0 44½	0 43½	-0 44½
No. 1 Feed Ex.	0 36	-0 37	0 36½	-0 38½	0 38½	-0 41½	0 42½	-0 44½	0 43½	-0 44½
No. 1 Feed.	0 35	-0 35½	0 35	-0 37½	0 37½	-0 40½	0 41½	-0 43½	0 42½	-0 43½
No. 2 Feed.	0 34	-0 34½	0 34	-0 36½	0 36½	-0 39½	0 40½	-0 42½	0 41½	-0 42½
Barley—										
No. 2 C.W.	-	-	0 61	-0 63	0 61½	-0 64	0 64½	-0 69½	0 67	-0 69½
No. 4 C.W.	-	-	0 56	-0 58	0 56½	-0 59	0 59	-0 65	0 62	-0 65
Rejected	0 49	-	0 48	-0 49	0 49	-0 52	0 54	-0 55	0 53½	-0 55
Feed	0 49	-	0 48	-0 49	0 49	-0 52	0 52	-0 55	0 53	-0 55
Flax—										
No. 1 N.W.C.	1 89	-1 93	1 92½	-2 03	2 04	-2 17	2 12½	-2 19½	2 10½	-2 17
No. 2 C.W.	1 86	-1 90	1 89½	-2 00	2 04	-2 14	2 09½	-2 16½	2 07½	-2 14

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1915-1916.

Grade and Market	October		November		December		January	
	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.
Wheat, Red Winter, No. 2—								
St. Louis.	1 09	-1 29	1 11	-1 25	1 15	-1 29	1 22	-1 43
Chicago.	1 08	-1 29½	1 10½	-1 14½	1 17	-1 28½	1 21½	-1 39
Corn, No. 2 Mixed—								
St. Louis.	0 58½	-0 66	0 60	-0 65	0 65	-0 75½	0 70	-0 77
New York (f.o.b. afloat).	0 59½	-0 67	0 74	-0 79½	0 79½	-0 83½	0 72½	-0 79½
Corn, No. 2—								
Chicago.	0 50½	-0 67	0 61½	-0 68½	0 69½	-0 75	-	-
Oats, No. 2—								
St. Louis.	0 34	-0 37	0 35	-0 37½	0 39	-0 44½	0 42½	-0 52
Chicago.	0 35½	-0 39½	0 37½	-0 41½	0 40½	-0 44	0 43	-0 51
Rye, No. 2—								
Chicago.	0 95	-1 07	0 94	-1 03	0 94½	-0 98½	0 97	-1 04½

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description.	January 3		January 10		January 17		January 24		January 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian best hard.....	1 95½	— 1 96½	1 98½	— 1 99½	—	—	2 09½	— 2 12½	2 15½	— 2 18½
" No. 1 new.....	1 92½	— 1 93½	1 95½	— 1 96½	1 99½	— 1 97½	2 06½	— 2 09½	2 12½	— 2 15½
" No. 2 ".....	1 90	— 1 90½	1 91½	— 1 93½	1 96½	— 1 97½	2 03½	— 2 06½	2 09½	— 2 12½
" No. 3 ".....	1 87	— 1 87½	—	—	1 93½	— 1 94½	2 00½	— 2 03½	2 06½	— 2 09½
" No. 4 ".....	1 84	— 1 84½	—	—	1 90½	— 1 91½	—	—	—	—
American best winter.....	1 88½	— 1 91½	1 91½	— 1 94½	1 97½	— 1 98½	1 97½	— 2 00½	2 03½	— 2 06½
" poor winter.....	1 77	— 1 79½	1 77	— 1 79½	1 77	— 1 79½	1 77	— 1 88½	1 79½	— 1 82½
Durum.....	1 88½	— 1 91½	1 91½	— 1 94½	1 91½	— 1 97½	1 97½	— 2 00½	2 03½	— 2 06½
Californian.....	1 89½	— 1 92½	1 89½	— 1 92½	1 89½	— 1 92½	1 98½	— 2 02	2 06	— 2 09½
Indian.....	1 88½	— 1 94½	1 92½	— 1 97½	1 93	— 1 98½	2 03½	— 2 09½	2 06½	— 2 15½
Oats (Per bush.)—										
Canadian.....	—	—	—	—	0 89½	— 0 91½	0 90	— 0 91	0 92½	— 0 94½
American.....	0 86	— 0 86½	0 88	— 0 88½	0 89½	— 0 90	0 89½	— 0 89½	0 92½	— 0 92½
Buenos Ayres.....	0 85½	— 0 86½	0 89½	— 0 90½	0 91½	— 0 92½	0 93	— 0 94½	0 89	— 0 91½
Bahia Blanca.....	0 88½	— 0 89½	0 92½	— 0 92½	0 92½	— 0 94	0 94½	— 0 96	0 89½	— 0 90½
Flour (per 280 lb.)—										
Canadian good.....	11 66	— 11 91	11 91	— 12 15	11 91	— 12 15	11 91	— 12 15	12 15	— 12 41
" common.....	10 94	— 11 18	11 18	— 11 42	11 18	— 11 42	11 18	— 11 42	11 42	— 11 66
American good spring.....	12 03	— 12 15	12 27	— 12 41	12 27	— 12 41	12 27	— 12 41	12 53	— 12 65
" common spring.....	—	—	—	—	—	—	11 18	— 11 42	11 66	— 11 91
" good winter.....	11 42	— 11 66	11 66	— 11 91	11 66	— 11 91	11 66	— 11 91	11 91	— 12 15
" common winter.....	10 45	— 10 94	10 69	— 11 18	10 69	— 11 18	10 21	— 10 94	10 94	— 11 42
Californian.....	12 15	— 12 27	— 12 41	113 62	13 11	— 13 38	12 65	— 13 14	12 89	— 13 01

LIVERPOOL

Description	January 4		January 11		January 18		January 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1 new.....	1 92½	— 1 94½	1 96½	— 1 97½	2 04½	— 2 05½	2 11½	—
" No. 2 new.....	1 90½	— 1 92½	1 94½	— 1 95½	2 03½	—	—	—
" No. 2 old.....	—	—	—	—	—	—	—	—
" No. 3 new.....	1 87	— 1 88½	1 92½	—	1 98	— 2 00½	2 06	— 2 06½
Man. No. 4.....	1 83½	— 1 85	1 86½	— 1 86½	1 90½	— 1 19	—	8
" oats.....	1 88½	— 1 89½	1 94½	—	—	—	—	—
Nor. Duluth No. 1.....	—	—	1 92½	— 1 93½	2 00½	— 2 00½	2 07½	—
Durum.....	—	—	1 85	— 1 85½	—	—	—	—
No. 2 hard winter Gulf, new.....	1 97½	— 1 80	1 81½	— 1 82½	1 88½	— 1 89½	1 94½	— 1 94½
Choice hard winter.....	1 91½	— 1 92½	1 93½	— 1 96	1 02½	— 2 03½	2 06½	— 2 08
Oats (per bush.)—								
Chilian white.....	0 87½	— 0 88½	0 91½	— 0 92½	0 91½	— 0 95	0 91½	— 0 93½
" black.....	0 85	— 0 86	0 86	— 0 86	0 88½	— 0 90	0 89½	— 0 90½
" grey.....	0 84½	— 0 85	0 88½	— 0 90	0 89½	— 0 90½	0 89½	— 0 90½
" tawny.....	—	—	—	—	0 89½	— 0 90½	0 89½	— 0 90½
Canadian West No. 2.....	—	—	0 91½	—	0 91½	—	—	—
Clipped American.....	0 82½	— 0 84½	0 87½	— 0 88½	0 88½	— 0 89½	0 88½	— 0 89½
Flour (per 280 lb.)—								
Canada spring patents.....	11 18	— 11 42	11 18	— 11 42	11 54	— 11 78	11 78	— 12 03
America.....	11 42	— 11 66	11 42	— 11 66	11 91	— 12 15	12 03	— 12 27
" soft winter patents new.....	11 30	— 11 54	11 30	— 11 54	11 66	— 11 91	11 91	— 12 15
Kansas patents.....	11 18	— 11 42	11 18	— 11 42	11 66	— 11 78	11 78	— 12 03
Oatmeal (per 280 lb.)—								
Canadian rolled oats.....	7 74	— 9 86	9 86	— 9 97	9 86	— 9 97	10 21	— 10 33
" middle cut.....	9 49	— 9 61	9 61	— 9 74	9 61	— 9 74	9 86	— 9 97
" fine cut.....	9 49	— 9 61	9 61	— 9 74	9 61	— 9 74	9 86	— 9 97
" pinhead.....	9 49	— 9 61	9 61	— 9 74	9 61	— 9 74	9 86	— 9 97

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
1916.	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
January 1.....	54 9	1 67	47 5	1 38	30 10	0 82
" 8.....	55 8	1 69	47 8	1 39	31 5	0 83
" 15.....	56 7	1 72	48 6	1 42	31 11	0 85
" 22.....	57 2	1 74	49 6	1 45	32 6	0 86
" 29.....	58 0	1 76	51 0	1 49	32 11	0 87
Average.....	56 5	1 72	48 10	1 43	31 11	0 85

V. Average Prices of Imported Meat at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.).

Description and Market	January 5		January 12		January 19		January 26	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	14 70	12 71	15 21	-	16 73	14 70	-	-
Liverpool.....	15 21	-	-	-	-	-	-	-
Manchester.....	15 21	-	-	-	-	-	-	-
Edinburgh.....	15 70	12 92	15 45	13 45	15 70	13 45	15 45	12 92
Argentine chilled—								
Birmingham.....	19 01	13 43	18 76	12 93	17 23	12 93	-	-
Leeds.....	19 09	12 71	-	-	-	-	14 70	11 15
Liverpool.....	19 77	-	-	14 19	18 76	13 69	15 21	12 15
London.....	19 09	14 19	18 76	13 18	17 23	13 18	15 72	12 15
Manchester.....	19 77	-	-	14 19	18 76	13 69	15 21	12 15
Edinburgh.....	19 30	15 20	19 80	13 70	19 30	13 45	14 75	12 92
Australian frozen—								
Birmingham.....	13 18	11 66	14 19	11 15	13 69	-	14 19	-
Liverpool.....	14 19	11 66	14 70	13 18	15 21	12 71	14 70	13 18
Manchester.....	14 19	11 66	14 70	13 18	15 21	12 71	14 70	13 18
Glasgow.....	14 20	12 20	14 20	12 20	14 70	-	-	13 20

GREEN BACON (per cwt. of 100 lb.).

Description and Market	January 5		January 12		January 19		January 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol.....	19 77—18 69	19 78—18 69	20 00—18 91	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91
Liverpool.....	19 77—19 13	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91	19 78—18 91
London.....	20 22—19 13	20 22—19 13	20 22—19 13	20 22—19 13	20 22—19 13	20 22—19 13	20 22—19 13	20 22—19 13
Glasgow.....	20 22	-	20 00—19 78	20 00—19 78	20 00—19 78	20 22—19 78	20 22—19 78	20 22—19 78
Canadian Cumberland cut—								
Liverpool.....	18 91—18 24	18 69—18 02	17 16—16 73	16 95—16 08	16 95—16 08	16 95—16 08	16 95—16 08	16 95—16 08
Glasgow.....	-	-	-	-	18 69—18 24	17 81	-	-
Danish sides—								
Bristol.....	21 88—20 88	21 88—20 88	22 54—21 22	22 54—21 22	22 54—21 22	22 54—21 22	22 54—21 22	22 54—21 22
Liverpool.....	22 10—21 22	22 54—21 88	22 54—21 88	22 54—21 88	22 54—21 88	22 54—21 88	22 54—21 88	22 54—21 88
London.....	22 76—21 66	22 76—21 66	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32
Glasgow.....	22 10	-	22 10	-	22 10	-	22 10—21 88	22 10—21 88

CENSUS AND STATISTICS MONTHLY

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

WORLD'S STATISTICS OF FARM LIVE STOCK.

The accompanying tables present data respecting the numbers of farm live stock in the principal countries of the world, as derived from the publications of the International Institute of Agriculture, and especially the Institute's International Year Book of Agricultural Statistics, 1913 and 1914, which was issued in 1915. The descriptions of live stock included are horses, asses and mules, cattle and buffaloes, sheep, goats and swine.

NATURE OF STATISTICS AVAILABLE.

One of the objects sought to be realised by the International Institute of Agriculture is greater statistical uniformity amongst the adhering countries. The need for this is at least as apparent in regard to live stock as it is in other branches of agricultural production. At present the countries of the world differ in their methods of recording numbers, some depending solely upon periodical censuses of live stock, others solely upon annual enumerations and others again partly upon periodical censuses and partly upon annual estimates which may be based upon census data. Differences of classification are also great. In some few countries no classification at all is attempted, only the total numbers of each description being recorded. In other countries the classification is of detailed character according to age; and in others again the classification is chiefly according to reproductive capacity. In consequence of these differences the plan adopted for the purposes of the Institute's Year Book has been to give for each country the available statistics or estimates according to that country's own classification for comparative periods not exceeding ten years. The total figures for each description are then brought together by countries in a decennial comparison of census data or of estimates nearest to the years 1905 and 1914, respectively. Comparisons are also made by countries between the number of animals per 1,000 inhabitants (Table II) and per 1,000 hectares (reduced in this article to acres) of productive area (Table III).

ABSOLUTE AND RELATIVE COMPARISONS.

The following statement, constructed from Table I, shows the numbers of farm live stock in the countries included in the Year Book, which are for horses and cattle 36, for asses and mules 25, for sheep 34, for goats 29 and for swine 32.

Description	Countries	Date nearest 1905	Date nearest 1914	Increase	
		No.	No.	No.	p.c.
Horses.....	36	80,413,396	92,365,249	11,951,853	14·9
Asses and mules.....	25	10,296,087	12,539,158	2,243,071	21·8
Cattle.....	36	335,991,457	398,381,361	62,389,904	18·6
Sheep.....	34	484,050,498	519,765,335	35,714,837	7·4
Goats.....	29	59,459,270	70,641,859	11,182,589	18·8
Swine.....	32	128,877,979	138,493,343	9,615,364	7·5

In the year nearest to 1914, horses number 92,365,249, asses and mules 12,539,158, cattle 398,381,361, sheep 519,765,335, goats 70,641,859 and swine 138,493,343. In each case these figures represent substantial increases as compared with the previous census period of 1905; but the rates of increase vary considerably. For horses, the ratio of increase is nearly 15 per cent; for asses and mules it is nearly 22 per cent; for cattle and goats it is 18·6 and 18·8 per cent, respectively, and for sheep and swine it is only about 7·5 per cent. For horses, all countries have increased their stock during the last ten years, excepting Great Britain, Egypt, Mauritius, Luxemburg, Serbia, Bulgaria, European Russia, Chili and Uruguay. The largest horse countries in the world are the Russian Empire (30,437,871), the United States (23,015,902) and Argentina (9,427,000).

Asses and mules have increased in all countries, except New Zealand, France, Tunis, Switzerland, Serbia, Bulgaria, Cuba, Costa Rica, Chili and Uruguay. The United States have the largest number (4,602,340), Spain and Italy coming next with 1,758,330 and 1,238,060, respectively.

Cattle have increased in all countries, with the exception of Egypt, Austria, Bulgaria, France, Luxemburg, Russia in Europe, Serbia, Switzerland, the United States and Chili. The largest numbers of cattle are in India (137,065,799), the United States (63,682,648), the Russian Empire (41,356,310), Argentina (29,120,000) and Germany (20,182,021). Argentina shows an increase as between 1895 and 1912 of 7,414,474 and the United States a decrease of 5,653,184 as between 1900 and 1910.

Sheep have decreased in 18 countries and increased in 16 countries. The net increase in sheep is due to development in Argentina, South Africa and Australasia. In the United States the numbers of sheep declined by 8,896,266 as between 1900 and 1910; and in Canada the census returns of 1911 showed a decrease of 334,937 as compared with 1901. The largest sheep-raising countries in the world are, in the order given, as follows: Australia (85,057,402), Argentina (83,546,000), the Russian Empire (57,255,196), United States (52,838,748), South Africa (35,710,843), India (31,233,065), the United Kingdom (27,886,095), Uruguay (26,286,296), New Zealand (24,798,763) and Spain (15,829,954).

Goats have increased in all but ten countries, the chief decline being in Belgium, France, Algiers, Switzerland and Chili. By far the largest number of goats is in India (30,672,585), South Africa coming next (11,520,744).

The numbers of swine have declined in seven countries, viz., Australia, France, Russia in Europe, Serbia, the United States, Chili and Costa Rica. The largest numbers of swine are in the United States (59,473,636), Germany (21,923,707) and the Russian Empire (12,859,619).

NUMBERS OF LIVE STOCK IN THE BRITISH EMPIRE.

In the tables, the British Dominions have been grouped together, and the following statement shows for the date nearest 1914 the total number of the different descriptions of live stock in the Empire, with the proportions they constitute of the world's aggregate:

Description	No.	Per cent of world's total	Description	No.	Per cent of world's total
Horses.....	10,013,160	10.8	Sheep.....	206,862,834	39.8
Asses and mules...	2,471,112	19.7	Goats.....	42,444,497	60.0
Cattle.....	175,704,039	44.4	Swine.....	6,178,336	4.4

These figures do not exhaust the live stock enumeration of the British Empire, as Newfoundland, the West Indies and other of the Crown Colonies are not included.

CLASSIFICATION OF CATTLE.

In Table IV are given for a number of countries and for two comparative periods a numerical classification of cattle into dairy cows and "other cattle". The figures represent either census data or annual statistics. There is not always a clear distinction between dairy cows and other cows; but the table provides a rough means of distinguishing between dairying and beef-producing countries and also indicates the relative progress made in each branch during the two periods compared. Speaking generally, beef production predominates in Great Britain, Australia, the United States, Canada and Argentina, whilst dairying predominates in France, Denmark, Holland and Belgium. In Germany and Austria-Hungary a fairly even balance is maintained between the two branches.

Ten countries give returns of the number of buffaloes, as shown in Table V. In these ten countries the total number of buffaloes is 23,719,702; out of this number not less than 19,969,997 are in India.

Oxen are employed for draught purposes in many countries, but in only a few are they separately distinguished, viz., Belgium

29,497 (1913); Holland 1,891 (1904); Austria 768,537 (1910); Bulgaria 678,187 (1905); Algeria 306,787 (1907). In Serbia the numbers of cattle employed for draught purposes, viz., 566,115 (1910) include bulls (16,690), milch cows (64,935) and calves (33,326).

CONCLUSION.

In the decennial period reviewed there has been in most European countries a substantial increase in all descriptions of farm live stock. On the other hand it is significant that in the United States there has been a decided falling off in the numbers of cattle, sheep and swine. Table I shows that cattle in the United States were less in 1910 as compared with 1900 by 5,653,184, sheep by 8,896,266 and swine by 5,212,519. This diminution has had its effect in raising the prices of meat; and when the United States tariff was abolished in 1913 Canada was largely drawn upon for replenishment of reduced stocks. Since the last United States Census of 1910 there has been shown some tendency towards recovery, and for cattle and swine the estimated numbers at January 1, 1916, show a decided increase over those of the same date in 1915.

One of the inevitable effects of the great war has been and will be a reduction in the numbers of live stock in the belligerent countries of the European continent; so that there is every probability of high prices being maintained. The price of wool having also risen to a higher figure than for many years past will tend to make sheep-raising a more remunerative industry than it has been. Altogether, the present statistical situation in regard to live stock, especially animals used for food, points to the maintenance of high prices, and efforts on the part of Canadian farmers and stock-owners to increase the numbers of farm animals would seem to be entirely justified by the prospects which this branch of the agricultural industry holds out.

Census and Statistics Office,
Ottawa, April 8, 1916.

ERNEST H. GODFREY,
Editor.

I. Numbers of Farm Live Stock by Principal Countries of the World, 1905 and 1914.

NOTE—C=Census; E=Estimate.

Countries	Date nearest 1905		Date nearest 1914		Increase(+) or decrease(-)
	Actual date	No.	Actual date	No.	
Horses—					
Great Britain.....	1905 E	1,572,433	1914 E	1,296,188	- 276,245
Ireland.....	1905 E	608,994	1914 E	619,345	+ 10,351
Canada.....	1901 C	1,577,493	1911 C	2,595,912	+ 1,018,419
India.....	1904-05 E	1,370,055	1913-14 E	1,812,710	+ 442,655
Egypt.....	1907 E	54,666	1913 E	47,911	- 6,755
Mauritius.....	1904-05 E	728	1913-14 E	413	- 315
South Africa.....	1904 C	449,539	1911 C	714,414	+ 264,875
Australia.....	1905 E	1,674,790	1913 E	2,521,983	+ 847,193
New Zealand.....	1904-05 E	314,322	1913-14 E	404,284	+ 89,962
Total.....	- -	7,623,020	- -	10,013,160	+ 2,390,140

I. Numbers of Farm Live Stock by Principal Countries of the World, 1905 and 1914—con.

NOTE—C = Census; E = Estimate.

Countries	Date nearest 1905		Date nearest 1914		Increase(+) or decrease(—)
	Actual date	No.	Actual date	No.	
Austria.....	1900 C	1,716,488	1910 C	1,802,848	+ 86,360
Hungary.....	1905 E	1,795,128	1913 E	2,005,019	+ 209,891
Belgium.....	1895 C	271,527	1910 C	317,080	+ 45,553
Bulgaria.....	1905 C	538,271	1910 C	477,733	— 60,538
Denmark.....	1903 C	486,935	1914 C	568,240	+ 81,305
France.....	1905 E	3,169,224	1914 E	3,230,700	+ 61,476
Algiers.....	1905 E	221,140	1912 E	221,178	+ 38
Tunis.....	1905 E	33,739	1913 E	37,416	+ 3,677
Germany.....	1900 C	4,195,361	1912 C	4,523,059	+ 327,698
Italy.....	1876 C	657,544	1908 C	955,878	+ 298,334
Luxemburg.....	1904 C	19,449	1910 C	18,625	— 824
Netherlands.....	1904 E	295,277	1913 C	334,445	+ 39,168
Norway.....	1907 C	163,780	1910 E	167,714	+ 3,934
Portugal.....	1870 C	87,476	1906 C	87,765	+ 289
Russia in Europe.....	1905 E	24,323,294	1912 E	23,860,178	— 463,116
" Asia.....	1905 E	4,788,490	1912 E	6,577,093	+ 1,789,203
Serbia.....	1905 C	174,363	1910 C	152,523	— 21,840
Spain.....	1907 E	451,005	1912 E	525,853	+ 74,848
Sweden.....	1905 E	554,939	1913 E	596,136	+ 41,137
Switzerland.....	1906 E	135,372	1911 E	144,128	+ 8,756
Japan.....	1905 E	1,367,615	1913 E	1,582,125	+ 214,510
United States.....	1900 C	21,203,901	1910 C	23,015,902	+ 1,812,001
Argentina.....	1895 C	4,445,859	1912 E	9,427,000	+ 4,981,141
Chili.....	1906 E	746,150	1912-13 E	553,869	— 192,281
Costa Rica.....	1905 C	51,887	1914 C	52,095	+ 208
Cuba.....	1906 E	334,694	1912 E	560,580	+ 225,886
Uruguay.....	1900 C	561,408	1908 C	556,307	— 5,101
Total.....	—	80,413,395	—	92,365,249	+ 11,951,853
Asses and mules—					
Ireland.....	1905 E	274,290	1914 E	275,429	+ 1,139
India.....	1902-05 E	1,360,471	1912-14 E	1,764,442	+ 403,971
Mauritius.....	1904-05 E	143	1913-14 E	196	+ 53
South Africa.....	1904 C	276,664	1911 C	430,641	+ 153,977
New Zealand.....	1904-05 E	448	1910-11 E	404	— 44
Total.....	—	1,912,016	—	2,471,112	+ 559,096
Austria.....	1900 C	66,647	1910 C	73,408	+ 6,761
Hungary.....	1906 E	14,936	1913 E	17,062	+ 2,126
Belgium.....	1895 C	6,915	1910 C	10,549	+ 3,634
Bulgaria.....	1905 C	136,027	1910 C	130,398	— 5,629
France.....	1905 E	564,046	1913 E	552,960	— 11,086
Algiers.....	1905 E	451,757	1912 E	462,615	+ 10,858
Tunis.....	1905 E	199,575	1913 E	117,987	— 81,588
Germany.....	1900 C	7,848	1912 C	13,147	+ 5,299
Italy.....	1876 C	968,114	1908 C	1,238,060	+ 269,946
Luxemburg.....	1904 C	22	1910 C	29	+ 7
Portugal.....	1870 C	188,640	1906 C	201,736	+ 13,096
Serbia.....	1905 C	1,986	1910 C	1,622	— 364
Spain.....	1907 E	1,584,423	1912 E	1,758,330	+ 173,907
Switzerland.....	1906 E	4,832	1911 E	4,717	— 115
United States.....	1900 C	3,548,535	1910 C	4,602,340	+ 1,053,805
Argentina.....	1895 C	483,369	1908 C	750,125	+ 266,756
Chili.....	1906 E	83,092	1912-13 E	64,796	— 18,296
Costa Rica.....	1905 C	3,087	1914 C	2,576	— 511
Cuba.....	1906 E	47,228	1912 E	43,490	— 3,738
Uruguay.....	1900 C	22,992	1908 C	22,099	— 893
Totals.....	—	10,298,087	—	12,539,158	+ 2,241,071

I. Numbers of Farm Live Stock by Principal Countries of the World, 1905 and 1914—con.

NOTE.—C=Census; E=Estimate.

Countries	Date nearest 1905		Date nearest 1914		Increase(+) or decrease(-)
	Actual date	No.	Actual date	No.	
Cattle—					
Great Britain.....	1905	E 6,987,020	1914	E 7,092,918	+ 105,898
Ireland.....	1905	E 4,645,215	1914	E 5,051,645	+ 406,430
Canada.....	1901	C 5,576,451	1911	C 6,533,436	+ 956,985
India.....	1902-05	E 85,289,297	1912-14	E 137,065,799	+51,776,502
Egypt.....	1905	E 655,156	1913	E 637,098	- 18,058
Mauritius.....	1904-05	E 6,722	1913-14	E 22,141	+ 15,419
South Africa.....	1904	C 3,500,453	1911	C 5,796,949	+ 2,296,496
Australia.....	1905	E 8,528,331	1913	E 11,483,882	+ 2,955,551
New Zealand.....	1904-05	E 1,736,850	1910-11	E 2,020,171	+ 283,321
Totals.....	-	- 116,925,495	-	- 175,704,639	+ 58,778,544
Austria.....	1900	C 9,511,170	1910	C 9,160,009	- 351,161
Hungary.....	1905	E 5,371,520	1913	E 6,045,184	+ 673,664
Belgium.....	1895	C 1,420,978	1910	C 1,879,754	+ 458,776
Bulgaria.....	1905	C 1,695,533	1910	C 1,603,182	- 92,351
Denmark.....	1903	C 1,840,466	1914	C 2,462,862	+ 622,396
France.....	1905	E 14,315,552	1914	E 13,120,649	- 1,194,903
Algiers.....	1905	E 1,067,404	1912	E 1,106,801	+ 39,397
Tunis.....	1905	E 176,883	1913	E 217,304	+ 40,421
Germany.....	1900	C 18,939,692	1912	C 20,182,021	+ 1,242,329
Italy.....	1881	C 4,772,162	1908	C 6,198,861	+ 1,426,699
Luxemburg.....	1904	C 94,707	1910	C 94,183	- 524
Netherlands.....	1904	E 1,690,463	1913	C 2,096,599	+ 406,136
Norway.....	1907	C 1,088,635	1910	E 1,133,613	+ 44,978
Portugal.....	1870	C 624,577	1906	C 703,198	+ 78,621
Russia in Europe.....	1905	E 39,453,556	1912	E 34,547,348	- 4,906,208
“ Asia.....	1905	E 5,590,248	-	- 6,808,962	+ 1,218,714
Serbia.....	1905	E 962,503	1912	E 957,105	- 5,398
Spain.....	1907	E 2,212,013	1912	E 2,561,894	+ 349,881
Sweden.....	1905	E 2,549,928	1913	E 2,720,741	+ 170,813
Switzerland.....	1906	E 1,498,144	1911	E 1,443,483	- 54,661
Japan.....	1905	E 1,167,610	1913	E 1,388,708	+ 221,098
United States.....	1900	C 69,335,832	1910	C 63,782,648	- 5,653,184
Argentina.....	1895	C 21,705,526	1912	E 29,120,000	+ 7,414,474
Chili.....	1906	E 2,674,666	1912-13	E 2,083,997	- 590,669
Costa Rica.....	1905	C 308,160	1914	C 336,061	+ 27,901
Cuba.....	1906	E 2,170,606	1912	E 2,829,553	+ 658,947
Uruguay.....	1900	C 6,827,428	1900	R 8,192,602	+ 1,365,174
Totals.....	-	- 335,991,457	-	- 398,381,361	+ 62,389,904
Sheep—					
Great Britain.....	1905	E 25,257,196	1914	E 24,285,514	- 971,682
Ireland.....	1905	E 3,749,352	1914	E 3,600,581	- 148,771
Canada.....	1901	C 2,510,239	1914	C 2,175,302	- 334,937
India.....	1902-05	E 23,879,454	1912-14	E 31,233,065	+ 7,353,611
Mauritius.....	1904-05	E 765	1913-14	E 1,364	+ 599
South Africa.....	1904	C 16,322,503	1913	E 35,710,843	+19,388,340
Australia.....	1905	E 74,540,916	1913	E 85,057,402	+10,516,486
New Zealand.....	1904-05	E 19,130,875	1913-14	E 24,798,763	+ 5,667,888
Totals.....	-	- 165,391,300	-	- 206,862,834	+ 41,471,534

1. Numbers of Farm Live Stock by Principal Countries of the World, 1905 and 1914—con.

NOTE—C=Census; E=Estimate.

Countries	Date nearest 1905		Date nearest 1914		Increase(+) or decrease(-)
	Actual date	No.	Actual date	No.	
Austria.....	1900	C 9,692,501	1910	C 5,803,445	- 3,889,056
Hungary.....	1905	E 6,589,063	1913	E 6,559,858	- 29,205
Belgium.....	1895	C 235,722	1910	C 185,373	- 50,349
Bulgaria.....	1905	C 8,130,997	1910	C 8,632,388	+ 501,391
Denmark.....	1903	C 876,830	1914	C 514,918	- 361,912
France.....	1905	E 17,783,209	1914	E 14,559,586	- 3,223,623
Algiers.....	1905	E 9,062,636	1912	E 8,338,023	- 724,613
Tunis.....	1905	E 890,284	1913	E 728,540	- 161,744
Germany.....	1900	C 9,692,501	1912	C 5,803,445	- 3,889,056
Italy.....	1881	C 8,596,108	1908	C 11,162,926	+ 2,566,818
Luxemburg.....	1904	C 8,789	1910	C 5,580	- 3,209
Netherlands.....	1904	E 606,785	1913	C 842,018	+ 235,233
Norway.....	1907	C 1,391,168	1910	E 1,398,383	+ 7,215
Portugal.....	1870	C 2,977,456	1906	C 3,072,988	+ 95,532
Russia in Europe.....	1905	E 53,437,512	1912	E 42,735,567	- 10,701,945
“ Asia.....	1905	E 11,260,151	1912	E 14,519,629	+ 3,259,478
Serbia.....	1905	C 3,160,166	1910	C 3,818,997	+ 658,831
Spain.....	1907	E 13,727,695	1912	E 15,829,954	+ 2,102,259
Sweden.....	1905	E 1,074,386	1913	E 988,163	- 86,223
Switzerland.....	1906	E 209,997	1911	E 161,414	- 48,583
Japan.....	1905	E 3,590	1913	E 2,946	- 644
United States.....	1900	C 61,735,014	1910	C 52,838,748	- 8,896,266
Argentina.....	1895	C 74,379,562	1912	E 83,546,000	+ 9,166,438
Chili.....	1906	E 4,528,109	1912-13	E 4,567,194	+ 39,085
Costa Rica.....	1905	C 250	1914	C 122	- 128
Uruguay.....	1900	C 18,608,717	1908	C 20,286,296	+ 7,677,579
Totals.....	-	- 481,050,498	-	- 519,765,335	+ 38,714,837
Goats—					
Great Britain and Ireland.....	1905	E 284,069	1914	E 242,243	- 41,826
India.....	1902-05	E 24,802,852	1912-14	E 30,672,585	+ 5,869,733
Mauritius.....	1904-05	E 5,223	1913-14	E 8,925	+ 3,702
South Africa.....	1904	C 9,770,545	1913	E 11,520,744	+ 1,750,199
Totals.....	-	- 34,862,689	-	- 42,441,497	+ 7,581,808
Austria.....	1900	C 1,019,664	1910	C 1,256,778	+ 237,114
Hungary.....	1906	E 230,811	1911	C 268,752	+ 37,941
Belgium.....	1895	C 241,045	1910	C 217,823	- 23,222
Bulgaria.....	1905	C 1,384,116	1910	C 1,459,344	+ 75,228
Denmark.....	1903	C 38,984	1914	C 40,670	+ 1,686
France.....	1905	E 1,476,957	1913	E 1,453,230	- 23,727
Algiers.....	1905	E 4,030,208	1912	E 3,772,424	- 257,784
Tunis.....	1905	E 466,786	1913	E 505,417	+ 38,631
Germany.....	1900	C 3,266,997	1912	C 3,410,396	+ 143,399
Italy.....	1881	C 2,016,307	1908	C 2,714,878	+ 698,571
Luxemburg.....	1904	C 11,854	1910	C 10,315	- 1,539
Netherlands.....	1904	E 165,497	1913	C 232,478	+ 66,981
Norway.....	1907	C 295,777	1910	E 287,086	- 8,691
Portugal.....	1870	C 936,869	1906	C 1,034,218	+ 97,349
Serbia.....	1905	C 510,063	1910	C 630,579	+ 120,516
Spain.....	1907	E 2,807,963	1912	E 3,116,226	+ 308,263

I. Numbers of Farm Live Stock by Principal Countries of the World, 1905 and 1914—con.

NOTE—C=Census; E=Estimate.

Countries	Date nearest 1905		Date nearest 1914		Increase(+) or decrease(—)
	Actual date	No.	Actual date	No.	
Sweden.....	1905	E 66,560	1913	E 71,054	+ 4,494
Switzerland.....	1906	E 362,117	1911	E 341,296	— 20,821
Japan.....	1905	E 72,121	1913	E 89,488	+ 17,367
United States.....	1900	C 1,948,952	1910	C 3,029,795	+ 1,080,843
Argentina.....	1895	C 2,748,860	1908	C 3,945,986	+ 1,197,126
Chili.....	1906	E 476,739	1912-13	E 288,056	— 188,683
Costa Rica.....	1905	C 906	1914	C 522	— 384
Uruguay.....	1900	C 20,428	1908	C 19,951	— 477
Totals.....	—	— 59,459,270	—	— 70,641,859	+ 11,182,589
Swine—					
Great Britain.....	1905	E 2,424,919	1914	E 2,634,249	+ 209,330
Ireland.....	1905	E 1,164,316	1914	E 1,305,638	+ 141,322
Mauritius.....	1904-05	E 3,831	1913-14	E 7,590	+ 3,759
South Africa.....	1904	E 679,084	1913	E 1,081,600	+ 402,516
Australia.....	1905	E 1,014,977	1913	E 800,505	— 214,472
New Zealand.....	1904-05	E 225,320	1910-11	E 348,754	+ 123,434
Totals.....	—	— 5,512,447	—	— 6,178,336	+ 665,889
Austria.....	1900	C 4,682,654	1910	C 6,432,080	+ 1,749,426
Hungary.....	1905	E 4,256,755	1913	E 6,824,657	+ 2,567,902
Belgium.....	1895	C 1,163,133	1910	C 1,494,297	+ 331,164
Bulgaria.....	1905	C 405,333	1910	C 527,407	+ 62,074
Denmark.....	1903	C 1,456,699	1914	C 2,491,661	+ 1,034,962
France.....	1905	E 7,558,779	1914	E 6,113,184	— 1,445,595
Algiers.....	1905	E 91,267	1912	E 113,751	+ 22,484
Tunis.....	1905	E 17,349	1913	E 17,399	+ 50
Germany.....	1900	C 16,807,014	1912	C 21,923,707	+ 5,116,693
Italy.....	1876	C 1,163,916	1908	C 2,507,798	+ 1,343,882
Luxemburg.....	1904	C 124,039	1910	C 128,035	+ 3,996
Netherlands.....	1904	E 861,840	1913	C 1,350,204	+ 488,364
Norway.....	1907	C 307,308	1910	E 333,709	+ 26,401
Portugal.....	1870	C 971,080	1906	C 1,110,957	+ 139,877
Russia in Europe.....	1905	E 12,275,731	1912	E 11,944,568	— 331,163
" Asia.....	1905	E 764,766	1912	E 915,051	+ 150,285
Serbia.....	1905	C 908,108	1910	C 865,769	— 42,339
Spain.....	1907	E 2,031,132	1912	E 2,571,359	+ 540,227
Sweden.....	1905	E 829,888	1913	E 967,684	+ 137,796
Switzerland.....	1906	E 548,970	1911	E 570,226	+ 21,256
Japan.....	1905	E 228,204	1913	E 309,995	+ 81,791
United States.....	1900	C 64,686,155	1910	C 59,473,636	— 5,212,519
Argentina.....	1895	C 652,766	1911	E 2,900,000	+ 2,247,234
Chili.....	1906	E 338,993	1912-13	E 184,222	— 154,771
Costa Rica.....	1905	C 79,730	1914	C 63,552	— 16,178
Uruguay.....	1900	C 93,923	1908	C 180,099	+ 86,176
Totals.....	—	— 128,877,979	—	— 138,493,343	+ 9,615,364

II. Numbers of Farm Live Stock per 1,000 Inhabitants, by Principal Countries of the World, 1905 and 1914.

Countries	1905	1914	Increase (+) or decrease (-)	Countries	1905	1914	Increase (+) or decrease (-)
Horses—				Cattle—con.			
Great Britain.....	41	31	-10	Australia.....	2,115	2,426	+311
Ireland.....	138	142	+4	New Zealand.....	1,767	1,862	+95
Canada.....	294	360	+66	Totals.....	322	446	+124
India.....	5	6	+1	Austria.....	364	321	-43
Egypt.....	5	4	-1	Belgium.....	222	253	+31
Mauritius.....	2	1	-1	Bulgaria.....	420	370	-50
South Africa.....	87	120	+33	Denmark.....	731	893	+162
Australia.....	415	533	+118	France.....	365	330	-35
New Zealand.....	356	394	+38	Algiers.....	207	199	-8
Totals.....	21	25	+4	Tunis.....	-	113	-
Austria.....	66	63	-3	Germany.....	336	305	-31
Belgium.....	42	43	+1	Italy.....	169	184	+15
Bulgaria.....	133	110	-23	Luxemburg.....	384	362	-22
Denmark.....	193	206	+13	Netherlands.....	307	343	+36
France.....	81	81	-	Norway.....	473	469	-4
Algiers.....	43	40	+3	Russia in Europe.....	317	241	-76
Tunis.....	-	19	-	" Asia.....	658	564	-94
Germany.....	74	68	-6	Serbia.....	358	329	-29
Italy.....	24	28	+4	Sweden.....	482	483	+1
Luxemburg.....	79	72	-7	Switzerland.....	429	382	-47
Netherlands.....	54	55	+1	Japan.....	24	26	+2
Norway.....	71	69	-2	United States.....	912	692	-220
Russia in Europe.....	195	167	-28	Argentina.....	5,488	3,767	-1,721
" Asia.....	503	544	+41	Chili.....	822	595	-227
Serbia.....	65	52	-13	Costa Rica.....	922	818	-104
Sweden.....	105	106	+1	Uruguay.....	7,456	7,857	+401
Switzerland.....	39	38	-1				
Japan.....	29	30	+1	Sheep—			
United States.....	279	250	-29	Great Britain.....	655	578	-77
Argentina.....	1,124	1,219	+95	Ireland.....	852	823	-29
Chili.....	229	158	-71	Canada.....	467	302	-165
Costa Rica.....	155	127	-28	India.....	82	99	+17
Cuba.....	213	274	+61	Mauritius.....	2	4	+2
Uruguay.....	613	534	-79	South Africa.....	3,154	5,978	+2,824
				Australia.....	18,483	17,970	-513
Asses and mules—				New Zealand.....	19,463	22,863	+3,400
Ireland.....	62	63	+1	Totals.....	470	542	+72
India.....	5	6	+1	Austria.....	100	85	-15
Mauritius.....	-	1	-	Belgium.....	37	25	-12
South Africa.....	53	72	+19	Bulgaria.....	2,015	1,994	-21
Totals.....	6	8	+2	Denmark.....	348	187	-161
Austria.....	3	3	-	France.....	453	367	-86
Belgium.....	1	1	-	Algiers.....	1,757	1,499	-258
Bulgaria.....	34	30	-4	Tunis.....	-	378	-
France.....	14	14	-	Germany.....	172	88	-84
Algiers.....	88	83	-5	Italy.....	304	332	+28
Italy.....	35	37	+2	Luxemburg.....	36	21	-15
Serbia.....	1	1	-	Netherlands.....	110	138	+28
Switzerland.....	1	1	-	Norway.....	604	579	-25
				Russia in Europe.....	429	299	-130
Cattle—				" Asia.....	1,325	1,202	+123
Great Britain.....	181	169	-12	Serbia.....	1,176	1,312	+136
Ireland.....	1,056	1,155	+99	Sweden.....	203	175	-28
Canada.....	1,038	907	-131	Switzerland.....	60	43	-17
India.....	291	436	+145	United States.....	812	575	-237
Egypt.....	58	52	-6	Argentina.....	18,807	10,806	-8,001
Mauritius.....	18	58	+40	Chili.....	1,391	1,303	-88
South Africa.....	676	970	+294	Costa Rica.....	1	0	-1
				Uruguay.....	20,323	25,210	+4,887

II. Number of Farm Live Stock per 1,000 Inhabitants, by Principal Countries of the World, 1905 and 1914—con.

Countries	1905	1914	Increase (+) or decrease (-)	Countries	1905	1914	Increase (+) or decrease (-)
Goats—				Swine—			
Great Britain and				Great Britain.....	63	63	-
Ireland.....	65	55	-10	Ireland.....	265	298	+33
India.....	108	126	+18	Mauritius.....	10	20	+10
Mauritius.....	14	23	+9	South Africa.....	131	181	+50
South Africa.....	1,888	1,929	+41	Australia.....	252	169	-83
Totals.....	125	143	+18	New Zealand.....	229	322	+93
Austria.....	39	44	+5	Totals.....	103	105	+2
Belgium.....	38	29	-9	Austria.....	179	225	+46
Bulgaria.....	343	337	-6	Belgium.....	181	201	+20
Denmark.....	15	15	-	Bulgaria.....	115	122	+7
France.....	38	37	-1	Denmark.....	578	904	+326
Algiers.....	781	678	-103	France.....	193	154	-39
Tunis.....	-	262	-	Algiers.....	18	20	+2
Germany.....	58	52	-6	Tunis.....	-	9	-
Italy.....	71	81	+10	Germany.....	298	332	+34
Luxemburg.....	48	40	-8	Italy.....	41	75	+34
Netherlands.....	30	38	+8	Luxemburg.....	503	493	-10
Norway.....	128	119	-9	Netherlands.....	156	221	+65
Serbia.....	190	217	+27	Norway.....	133	138	+5
Sweden.....	13	13	-	Russia in Europe.....	99	83	-16
Switzerland.....	104	90	-14	“ Asia.....	90	76	-14
Japan.....	2	2	-	Serbia.....	338	297	-41
United States.....	26	33	+7	Sweden.....	157	172	+15
Argentina.....	695	609	-86	Switzerland.....	157	151	-6
Chili.....	146	82	-64	Japan.....	5	6	+1
Costa Rica.....	3	1	-2	United States.....	851	647	-204
Uruguay.....	22	19	-3	Argentina.....	165	375	+210
				Chili.....	104	53	-51
				Costa Rica.....	239	155	-84
				Uruguay.....	103	173	+70

III. Numbers of Farm Live Stock by Principal Countries of the World, per 1,000 acres of Productive Land, 1914.

Countries	Date for Area	Date for Live Stock	Number per 1,000 acres			
			Horses	Cattle	Sheep	Swine
Great Britain.....	1911	1914	27	149	509	55
Ireland.....	1911	1914	33	269	192	70
Canada.....	1911	1911	23	59	20	33
India.....	1910-11	1913-14	4	27	50	-
Egypt.....	1912	1913	10	116	-	-
South Africa.....	1909-10	1911	200	1,624	8,589	303
Australia.....	1910-11	1913	21	96	709	6
New Zealand.....	1910	1911-14	7	35	433	6
Total.....	-	-	12	198	240	2
Austria.....	1911	1910	26	131	35	92
Hungary.....	1910	1913	26	78	85	88
Belgium.....	1910	1910	50	294	29	234
Bulgaria.....	1910	1910	25	85	455	28

III. Numbers of Farm Live Stock by Principal Countries of the World, per 1,000 acres of Productive Land, 1914—con.

Countries	Date for Area	Date for Live Stock	Number of Head per 1,000 acres			
			Horses	Cattle	Sheep	Swine
Denmark.....	1907	1914	63	271	57	274
France.....	1910	1913-14	26	106	118	49
Algiers.....	1910	1912	4	22	164	2
Tunis.....	—	1913	1-6	10	33	0-8
Germany.....	1900	1912	36	160	46	174
Italy.....	1911	1908	15	95	171	38
Luxemburg.....	1911	1910	30	153	10	208
Netherlands.....	1911	1913	46	289	116	186
Norway.....	1907	1910	7	49	61	15
Portugal.....	1912	1906	5	41	178	64
Russia in Europe.....	1911	1912	34	49	61	17
Russia in Asia.....	1911	1912	13	19	44	2
Serbia.....	1897	1910	24	153	611	138
Spain.....	1908-11	1912	5	23	140	23
Sweden.....	1911	1913	10	41	15	15
Switzerland.....	1905	1911	19	189	21	75
Japan.....	1911	1913	21	19	0	4
United States.....	1910	1910	26	72	60	68
Argentina.....	1909-10	1908-11-12	17	54	155	5
Chili.....	1910-11	1912-13	36	138	301	12
Costa Rica.....	1909-10	1914	17	109	0	21
Cuba.....	1899	1912	64	32	—	—
Uruguay.....	1908	1908	14	200	643	4

IV. Classification of Cattle in Countries and Years named.

Countries	Year	Cows or dairy cows	Other cattle	Total
Great Britain.....	1905	2,707,392	4,279,628	6,987,020
	1914	1,861,089	5,231,829	7,092,918
Ireland.....	1905	1,487,064	3,158,151	4,645,215
	1914	1,638,929	3,412,716	5,051,645
Canada.....	1901	2,408,677	3,167,774	5,576,451
	1911	2,594,179	3,939,257	6,533,436
Australia.....	1907	1,891,351	8,272,133	10,163,484
	1913	2,068,195	9,415,687	11,483,882
Holland.....	1903	971,126	689,250	1,660,376
	1913	1,109,679	986,920	2,096,599
Germany.....	1900	—	—	18,939,692
	1907	10,222,792	10,407,752	20,630,544
Austria.....	1900	4,749,152	4,762,018	9,511,170
	1910	4,901,886	4,258,123	9,160,009
Hungary.....	1895	—	—	5,696,905
	1911	2,537,313	3,490,919	6,028,232

IV. Classification of Cattle in Countries and Years named—con.

Country	Year	Cows or dairy cows	Other cattle	Total
New Zealand.....	1904-05	498,241	1,238,609	1,736,850
	1910-11	633,733	1,386,438	2,020,171
France.....	1905	7,515,564	6,799,988	14,315,552
	1913	7,807,560	6,999,820	14,807,380
Belgium.....	1903	853,323	866,827	1,720,150
	1913	936,800	912,684	1,849,484
Denmark.....	1903	1,089,073	751,393	1,840,466
	1914	1,310,268	943,714	2,253,982

V. Number of Buffaloes by Countries.

Countries	Year	No.	Countries	Year	No.
Austria.....	1910	769	Formosa.....	1913	289,100
Hungary.....	1911	155,192	India.....	1912-13-14	19,969,997
Bulgaria.....	1910	414,826	Italy.....	1908	19,366
Dutch East Indies.....	1905	2,186,993	Rumania.....	1900	43,475
Egypt.....	1913	632,725	Serbia.....	1910	7,250
			Total.....		23,719,702

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during February has been unusually stormy, especially in the last two weeks of the month, which period has been characterised by heavy snowfalls, high winds and low temperatures. The thermometer rose to 41, the highest, on the 1st, and during the month dropped to -19.4, compared with extremes of 40 and -10.5 a year ago. The mean temperature is 11.60 as against 19.36 for the corresponding month of last year. The precipitation amounts to 4.25 inches, made up of 42.5 inches of snow, distributed over fifteen different days; while for February, 1915, it aggregated 2.21 inches, divided between thirteen days and being comprised of 15.25 inches of snow and 0.69 of an inch of rain. The bright sunshine averages 3.94 hours a day, compared with 3.54 hours a day for the same time a year ago.

The new cereal and apicultural buildings were occupied during the course of the month, the work on these two structures being now almost completed.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first week of February was very mild, with a few falls of snow but little rain. The second week was colder, the thermometer falling to zero on Saturday. The first part of the third week was very cold, the thermometer registering 16 below zero, but the weather being calm and bright, the cold did not penetrate into the buildings. The last of the month has been as mild as the first week. The precipitation has been light, there being less than one inch of rainfall and only a trifle over fourteen inches of snow. The winter roads, including those on the ice, have been excellent, and much hauling has been done. The series of Agricultural Short Courses mentioned in the January report were continued and met with most encouraging success. The first of a series of five Seed Fairs was held at Murray River. The quality of the grain showed a considerable improvement over former Fairs, and a considerable quantity of good seed of the best varieties of wheat, oats and barley will be available for the spring of 1916. The winter ice-breaking boats have continued to make regular trips throughout February."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The first week in February was fairly moderate, but nearly all the rest of the month has been cold, the temperature registering -1 on the 14th, -19 on the 15th, -8 on the 16th, -1 on the 20th, -4 on the 21st and -7 on the 22nd. The mean minimum temperature is 12.58 and the mean maximum 24.96, giving an average mean of 18.77 degrees, as compared with average means of 25.6 in 1915 and 14.19 in 1914. Frequent falls of snow throughout the month have resulted in fairly good sleighing, and farmers have had an opportunity to get out their wood. There was quite a thaw on the 26th and 27th, causing a considerable freshet; the rain during this period was 1.14 inch, and the snow melted rapidly. This was followed by cold with snow. The sunshine for the month totals 60.3 hours, as compared with 99.6 and 118.7 hours, respectively, for the same month in 1915 and 1914. There has not been much drifting snow; no bad snowstorms have occurred."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "The first few days of February were very unsettled. On the 3rd, quite a heavy snowstorm was experienced, accompanied by a strong gale, which drifted the snow somewhat. The second week, for the most part, was fine, and snow lay on the ground throughout. On the 13th, snow fell practically all day and drifted considerably. On the night of the 14th the thermometer dropped to -24 degrees, and cold weather prevailed until the 17th, when it became much milder. The 19th was very moderate, with showers in the afternoon. While this period was typical of winter weather, a little more snow would have been much appreciated and have greatly facilitated lumbering operations. Snow fell heavily on the 22nd and also on the afternoon of the 23rd, at which time 6 inches of snow were recorded. The 25th and 26th were mild, with frequent showers, taking off the greater portion of the snow, and necessitating the use of carriages on the roads."

On the 27th, another heavy snowstorm was experienced. The total precipitation, 2.96 inches, is made up of 26 inches of snow and 0.36 of an inch of rain; while for the same month of the previous year only 1.01 inch of rain and 3 inches of snow were recorded. It is also interesting to note that the total sunshine for this month, as compared with the corresponding period of the previous year, is practically the same, there being only 0.20 of an hour difference; but that the mean temperature for this year is 7.10 degrees lower than last year. The steers in the feeding experimental tests are making very satisfactory gains. Row No. 2, which is receiving 50 per cent more roots and meal than Row No. 1, made an average daily gain for the month of 3.17 lb.; while Row No. 1 gained only 2.73 lb. The average weight per steer is 1,290 lb. and 1,229 lb., respectively. Twenty-four cows,—a great many of them two and three-year-old heifers—have now freshened and are making an average daily milk flow of 25.64 lb.

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "February has been seasonable, the mean temperature being 12.9, against an average of 16 for the past forty-one years. The hours of sunshine aggregate 114, against a forty-year average for the month of 130. There have been no bad storms. The snowfall totals 25.8 inches, but there was enough mild weather to keep the snow down pretty flat, and, at the end of the month, there are many bare areas where the wind had blown away some of what fell. The roads have been good throughout the month, and lumbermen have been able to work to good advantage. On account of the thaws, there is a good deal of ice over the fields, which may cause considerable winter-killing. Live stock are generally doing well; while the hens are laying better than in previous years."

Ste. Anne De La Pocatière, Que.—Joseph Begin, Superintendent, reports: "February has been cold and characterised by strong winds, especially from the northwest. The lowest temperature recorded is -23.2, with a mean of 9, being 7 degrees below the average mean temperatures for the corresponding period of the last three years. The mercury dropped below zero on fourteen days during the month, and solid ice extends two miles farther than usual on the St. Lawrence shore. The precipitation aggregates 2.63 inches, consisting of snow, most of which has all drifted from the level fields to the bushes, yards, and low-lying roads, and as a result the roads have been bad and the railway service delayed. Work at the Station has consisted principally in the caring for live stock, preparing seed grain and hauling fuel and manure. All classes of live stock are doing well. Some sixty-five samples of grain and other seeds from the Station, as well as some illustrations of germination results on well selected and cleaned common seed grains, seem to have greatly interested the many farmers attending the Winter Seed Fairs at Isle Verte and Montmagny."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "February has been brighter but not so cold as the average for the

same month for the past four years. The mean temperature is 10.4 degrees, the precipitation 3 inches, and the number of hours of sunshine 88.9, whilst the average figure for 1912, 1913, 1914 and 1915 are 7.6 degrees, 2.9 inches and 81.4 hours, respectively. The temperature dropped to -26.8, whilst the lowest for the same month since 1912 was -30.7, recorded in 1914. Work at the Station has consisted in the care of live stock and poultry, preparation of grain for sale and also of vegetable and flower seeds for distribution (over 5,000 packets having been sent out), installation of a brooding system for chicks, and remodelling the old piggery into a modern sheep barn. A two-year-old stallion, a yearling, two weanling fillies, and two bulls have wintered outside, with only single-boarded sheds for shelter. Not one of them even shivered during the storms which were a feature of the last part of the month. The exhibit from the Station at the Quebec Seed Fair created a large demand for wheat, peas, oats and barley, and everything is now sold which can be spared."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "February has been exceptionally cold throughout, with sharp winds prevailing. The thermometer registered below zero on sixteen different days during the month, the minimum temperature recorded being -35 and the maximum 46, compared with -19 and 44 in 1915. The precipitation amounts to 2.43 inches, compared with 2.12 inches last year. The bright sunshine totals 83 hours. The lambs under the feeding experiment have been disposed of at the record price of 12 cents per lb. on the Montreal market; they averaged 100 lb. each when sold and have been fed at a very good profit. In response to an invitation sent out to the Eastern Townships farmers to spend a day at the Station, to be known as Farmers' Day, upwards of seven hundred of the best agriculturists of the surrounding districts visited the Farm on the 17th, which was very gratifying to the Superintendent and staff. The vegetable and flower seeds which ripened on the farm, and which are being distributed, were got into shape; up to the present time over 300 applications have been received, all applicants agreeing to test out this seed beside commercial seed."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "During the first ten days of February there was a continuation of the bitterly cold weather of January; but since that time there has been a spell of very pleasant winter weather, with plenty of sunshine and moderate temperatures. On the Experimental Farm, the care of live stock and preparation of seed have been the chief lines of work. Owing to the failure of wells, a man and team have had to be kept constantly drawing water from the river. Live stock are doing well, and fattening steers are making good gains."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "Changeable weather has been experienced during February. Up to the 13th, it was extremely cold. From the 14th to the 25th, there was a mild spell, which took away considerable snow, and broke up the roads to some extent. The last four days of the month have been cold. Snow fell on five days, the total for the month being

six inches. The favourable weather has allowed the railroads to resume traffic on the branch lines, and consequently the fuel shortage has been relieved. The work on the Experimental Farm has included cleaning seed grain, drawing straw and manure, and caring for the live stock and poultry. The steers in the outside feeding experiments have made satisfactory gains during the month."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "February for the most part has been mild, but the roads have been almost impassable for heavy loads owing to the depth of snow. The eighteen steers purchased in November for experimental feeding are gaining nearly two pounds per day on a ration of oat and barley chop and prairie hay, fed in the open. The range-bred ewes bought in November are doing remarkably well, being fed on whole grain and prairie hay."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "February has been a month of extremes in temperature. From the 1st to the 12th, the thermometer registered above zero on only two days; from the 14th to the 22nd, warm spring-like weather prevailed; while the last few days have been cold and stormy. Although half the snow disappeared during the warm spell, sleighs are still in use. Live stock at the Station have made satisfactory gains. The horses in the winter feeding experiment have increased in weight, at an average cost of approximately $6\frac{3}{4}$ cents per head for each day's feed. The hundred ewes purchased in the autumn have wintered in a straw shed, and up to the present no difficulties have been experienced. The buffalo crosses, known as cattalo, have withstood the cold weather splendidly, and are coming through the winter in good condition. They are proving quite an attraction, visitors calling daily to inspect the herd."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "While January was the coldest month on record, conditions during February have run to almost the opposite extreme, the mean temperature for the month being higher than for four years past. The more moderate weather has been welcomed over this entire section of the province, because it has relieved the situation in regard to feed, which would have been acute had the extreme cold continued. Stock cattle in so far as reports indicate their condition, are now wintering satisfactorily in all parts of the district, and it is likely that the supply of feed will be sufficient to cover the period from now until pasture is available. The cattle which have been on the feeding trial involving a comparison of rough fodders, have been sold. The whole group has shown a very satisfactory profit, the hundred head averaging 1,275 pounds each; while, as individual groups, those fed prairie hay, and prairie hay and oat straw (which later resolved itself practically into a prairie hay test also, as the straw was not eaten), taken together, show the highest average gain for prairie hay when valued at \$5 per ton, as compared with green sheaves valued at \$10 per ton. These prices are used because they represent approximately what has been the market value of these two fodders during the past season."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The low temperature of January continued until February 13, when a "Chinook" began and the weather for the balance of the month has been very mild. There were about fourteen inches of snow on the ground and this disappeared in four days, in fact, melted so rapidly that much of the moisture was lost in the run-off. Until the mild spell came, live stock in the range districts were suffering severely owing to the depth of snow where they were on winter pasture, although in most localities straw piles were available; but, even where the stock had access to these, the suffering was intense, because the sloughs and lakes were frozen up so badly that there was a general lack of water; in some cases farmers were forced to drive their cattle from three to five miles to an available supply. With the change in weather, the stock situation improved very materially, for water at once became available and there is no lack of feed. At the Station, the feeding experiments with lambs and steers are progressing satisfactorily, while the usual amount of work is being done in the way of cleaning seed grain."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The excessively cold weather experienced in January continued during the first week of February. Since then it has moderated and now, at the end of the month, only about an inch of snow remains on the level. The alternate thawing and freezing has rendered the feed on the range very difficult of access for the range cattle; and travel, which is most difficult owing to the ice on the trails, is now about equally divided on the flats between sleighs and wheels. In spite of the low temperatures during January and February, excellent returns in eggs have been got from poultry in the district under good management. At the Experimental Station, the water system has been entirely cut off by the cold weather, and all water for domestic and farm purposes has had to be hauled from a distance. Rhubarb roots and seakale crowns placed in moss in the cellar have yielded a plentiful supply of fresh vegetables."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The cold weather of January continued for a large portion of the month and the effects have been serious. Lower temperatures have been recorded, but the duration of the cold has been the greatest on record. Considerable damage has been done by the frost to harvested root crops, fruit trees, and ornamental trees and shrubs. The live stock on the Farm has kept in good condition, although the consumption of roughage has been considerably greater than in an average year, and this is particularly true as regards young cattle and sheep, but where a reasonable quantity of food has been provided, they are in reasonably good condition. In the trials here of shed versus barn wintering of young stock, there has been little difference in the gains made. A great deal of work has been entailed in digging up frozen pipes and in repairing buildings after the storms. The hens have been producing exceptionally well, and the price of the best quality of eggs has kept up fairly well during the month. The hogs

remained in excellent condition, and the cots proved sufficient for comfortable housing during this cold winter. Spring litters will be coming early in March. One litter which came during the closing days of the month consisted of fourteen pigs, averaging over $2\frac{1}{2}$ pounds each."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The weather during February has been such as to prevent to a large extent work on the land. A small amount of ploughing has been done during the last days of the month. Farmers have been largely occupied with the teaming of wood and manure. A small quantity of hay and straw has been moved from the country to the city. There has been considerable movement in seed grains and potatoes, both of which are bringing high prices. The production of poultry and dairy products has been normal, with prices ranging from good to very high. Locally grown and stored orchard fruits are practically off the market at the close of the month. The work at this Experimental Station has included the removal of field stone, the building of a brooder house, the planting of a nut orchard, and of shrubs and trees, the repair of flood damage, and the removal of debris from the park area. The live stock through the district is in fair condition. Spring lambs have been born strong and are thriving. Grade and pure-bred cows are being offered for sale, the prices ranging from \$100 to \$125 per head. Farm labour is not so plentiful as during the corresponding period in 1915."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of February are given in the following table:—

Meteorological Record for February, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	Highest	Lowest	Mean		Possible	Actual
Ottawa, Ont.	41.0	-19.4	11.6	4.25	303	114.4
Charlottetown, P.E.I.	45.0	-16.0	17.1	2.80	300	117.4
Kentville, N.S.	49.0	-19.0	18.8	4.16	303	66.3
Nappan, N.S.	48.0	-24.0	16.5	2.96	303	94.6
Fredericton, N.B.	47.0	-22.0	12.9	3.10	301	114.0
Ste. Anne de la Pocatière, Que.	37.2	-23.2	9.0	2.63	296	112.6
Cap Rouge, Que.	36.0	-26.8	10.4	3.00	298	88.2
Lennoxville, Que.	46.0	-35.0	11.6	2.43	303	83.0
Brandon, Man.	41.0	-33.0	1.6	0.40	294	143.7
Indian Head, Sask.	40.0	-31.0	3.1	0.60	293	111.2
Rosthern, Sask.	42.2	-35.2	2.5	0.08	285	163.3
Scott, Sask.	49.0	-32.8	4.9	0.50	287	154.4
Lacombe, Alberta.	62.7	-29.1	16.9	1.38	289	131.6
Lethbridge, Alberta.	65.8	-27.5	18.5	0.86	294	129.2
Invermere, B.C.	48.0	-25.0	17.5	1.22	293	97.8
Agassiz, B.C.	62.0	15.0	35.9	4.93	295	106.2
Sidney, Vancouver I., B.C.	58.0	15.0	37.0	5.49	297	100.5

Ottawa, March 15, 1916.

J. H. GRISDALT,
Director, Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (March 1) that, owing to the unfavourable character of February, wheat shows but little advance during the month. As on 1st February, the earlier sown is generally satisfactory, but that got in late, or on the heavier and wetter soils, is generally rather poor and backward. Winter oats and beans are looking well, though the beans are often backward. About a third of the wheat requires, or at least would derive benefit from, a top-dressing during the spring. The month having been very unsettled, but little spring work has been done. During the first half some progress was made with the preparation of the land, and some spring wheat was sown in many parts of the country. But during the second fortnight the bad weather, accompanied by very heavy snow in the midlands and south, stopped all work. Practically no other spring grain was got in anywhere, and field work is upon the whole rather backward. Vegetation was, however, generally very forward, and the snowy weather has given it a not unwelcome check, particularly in fruit-growing districts. Seeds are nearly everywhere healthy and vigorous, promising very good crops, though here and there the recent weather has caused some damage. Labour is everywhere very scarce, and getting scarcer. Not very much was required during February, as comparatively little work could be done, but many fears are expressed that there will not be enough help in the busy sowing season.

New South Wales.—The Government Statistician reports (January 13) that a production of wheat exceeding 62 million bushels is anticipated for the harvest of 1915-16. The total area sown to wheat was 5,166,400 acres, as compared with 4,158,000 acres in 1914-15. Of the total for 1915-16, 897,000 acres are estimated as cut for hay and 94,400 acres as fed off or used for green food. This leaves the area reserved for grain as 4,175,000 acres, as compared with 2,179,000 acres in 1914-15. The respective yields of grain per acre are 14·9 bushels (1915-16) and 4·7 bushels (1914-15). The total anticipated yield is by far the largest crop ever grown in New South Wales, the 1913-14 season of approximately 38 million bushels yielding the previous highest production.

South Australia.—The Government Statistician estimates (February 8) that the yield of wheat in South Australia for the season of 1915-16 will be 29,572,000 bushels from 2,547,768 acres, an average of 11·61 bushels per acre. At the date of the report the exact area cut for hay was not ascertained, and it was considered possible that a smaller area than that allowed for would be so cut, in which case the aggregate wheat yield might exceed 30 million bushels.

France.—The Journal Officiel of February 17 records the condition of autumn-sown cereals on February 1. For wheat the condition is given as ranging from 60 in Corsica to 75 in the region of the south, the average for all ten regions being 70. By departments there are 30 receiving between 81 and 99 points and 53 are

between 61 and 80. For other cereals the average points for all France are as follows: meslin, rye and winter oats 72, winter barley 73. The scale of the numerical expression of condition is 81 to 99 good; 61 to 80 fairly good; 50 to 60 fair.

Russia.—Broomhall's Corn Trade News of March 14 refers to a sharp decrease in the acreage under winter crops, the loss being reckoned to average 20 p.c. Fairly satisfactory reports with regard to snow protection during the winter have been published, and the condition of the growing crops is described as favourable.

United States.—The Crop-Reporting Board of the U. S. Department of Agriculture estimated (March 8) that the amount of grain in farmers' hands on March 1, 1916, compared with the three previous years were approximately in thousands of bushels as follows:

Grain in Farmers' Hands in United States on March 1, 1913-16.

Grain	In farmers' hands March 1, 1916	Per cent of 1915 crop	In farmers' hands March 1, 1915	Per cent of 1914 crop	In farmers' hands March 1 1914	Per cent of 1913 crop	In farmers' hands March 1 1913	Per cent of 1912 crop
	000 bush.	p.c.	000 bush.	p.c.	000 bush.	p.c.	000 bush.	p.c.
Wheat.....	241,717	23.9	152,903	17.2	151,809	19.9	156,483	21.4
Corn.....	1,138,773	37.3	910,894	34.1	866,392	35.4	1,289,655	41.3
Oats.....	596,600	38.7	379,369	33.2	419,476	37.4	604,216	42.6
Barley.....	60,511	25.5	42,889	22.0	44,126	24.8	62,283	27.8

The proportion of the 1915 crop of corn which is merchantable is about 71.3 p.c. (equivalent to 2,178,943,000 bushels), against 84.5 p.c. (2,259,755,000 bushels) of the 1914 crop and 80.1 p.c. (1,961,058,000 bushels) of the 1913 crop.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The Bulletin of Agricultural and Commercial Statistics for February, 1916, gives the following as the areas sown to winter cereals in the northern hemisphere for the season of 1915-16:—

Areas sown to Winter Cereals for Harvest of 1916.

Countries	Wheat		Rye		Barley		Oats	
	acres	p.c. of 1915	acres	p.c. of 1915	acres	p.c. of 1915	acres	p.c. of 1915
Denmark...	164,300	100.0	521,100	100.0	643,600	100.0	1,023,800	100.0
Spain.....	9,846,800	106.0	1,725,200	95.0	4,216,100	121.0	1,070,400	117.0
France.....	12,440,500	91.4	2,275,700	88.6	246,440	66.6	1,692,600	88.4
Switzerland	112,500	107.0	58,900	105.0	4,200	103.0	-	-
Canada.....	1,100,800	85.1	-	-	-	-	-	-
United States.....	37,256,500	88.7	3,058,000	97.0	-	-	-	-
India.....	28,243,600	95.0	-	-	-	-	-	-

Harvest of Argentina, 1915-16.—A cablegram received on March 20 by the Commissioner of the International Institute of Agriculture stated that a revised estimate gives the production of wheat in Argentina as 172,654,000 bushels, compared with 184,160,000 bushels reported last month and 168,470,000 bushels the final estimate for last year. The production of oats in Argentina is 70,853,000 bushels, compared with 53,884,000 bushels last year and of linseed 39,266,000 bushels against 44,310,000 bushels last year. A further cablegram received on April 10 gives the production of corn in Argentina as 161,136,000 bushels against 338,238,000 bushels last year.

Other Data.—The same cablegram stated that the production of wheat in Uruguay is estimated at 12,890,000 bushels compared with 8,000,000 bushels last year. The total production of rough rice in Spain, Italy, United States, India, Japan and Egypt is 62,495,000 long tons, an increase of 17 p.c. over last year's crop in the same countries. The area sown to winter wheat in Rumania is 4,862,000 acres, an increase of 1.2 p.c. over last year. The condition of winter cereals in Spain, Italy, Luxemburg, India and Tunis is good. The total production of corn in 1915 in Spain, Italy, Hungary, Rumania, Russia, Switzerland, Canada, United States, Japan and Argentina is cabled (April 10) as 3,727,260,000 bushels, or 106 per cent of the same countries in 1914.

SEED SUPPLIES FROM SPECIAL GRADES.

By GEORGE H. CLARK, Seed Commissioner, Department of Agriculture, Ottawa.

Special grades for seed of Red Fife and Marquis wheats, white oats and six-rowed barley were established last autumn, and are provided through the co-operation of the grain inspectors of the Department of Trade and Commerce with the seed inspectors of the Department of Agriculture. A section of each of the Government interior terminal elevators at Saskatoon, Moosejaw and Calgary is set apart for handling these special seed grades, which are given on car lots of grain that may be cleaned to the required standards of purity, quality and freedom from noxious weed seeds. These seed grades are supplied to farmers and dealers at an advance in price over commercial grades just sufficient to meet the extra dockage required and the cost of cleaning, storing and sacking when the latter is desired by purchasers.

The following statement gives the names and addresses of the shippers from whom these special grades of seed grain may be purchased, and the net quantity in bushels of seed grain which they have stored to March 18th, 1916:—

Name	Address	Wheat		Oats	Barley
		Marquis	Red Fife	White	6-rowed
		bush.	bush.	bush.	bush.
Central Grain Co.	Winnipeg.	1,476	—	—	—
Grain Growers' Grain Co.	"	8,724	—	4,447	—
North Star Grain Co.	"	1,061	—	—	—
W. S. McLaughlin.	"	1,411	—	—	—
Smith Murphy.	"	1,092	—	—	—
State Elevator.	"	1,073	—	—	—
Sask. Co-operative Elev. Co.	"	14,144	1,132	3,484	—
Alberta Pacific Grain Co.	" & Calgary	32,213	1,403	20,040	—
Jas. Richardson.	"	4,338	—	—	—
D. Morrison.	"	3,143	—	—	—
Central Grain Co.	"	1,476	1,049	—	—
Canada Elevator Co.	"	1,451	—	—	—
Spencer Grain Co.	"	1,156	1,515	9,277	—
Imperial Elevator Co.	"	—	—	1,901	—
National Grain Co.	"	1,512	—	1,942	—
Federal Grain Co.	"	1,129	—	1,777	1,533
R. B. McLean.	"	1,134	—	1,767	—
M. G. Goodfellow.	"	1,504	—	—	—
Quaker Oats Co.	"	2,397	—	—	—
Pioneer Grain Co.	"	5,602	—	—	—
Goose Lake Lumber Co.	"	—	1,106	—	—
Reliance Grain Co.	" & Calgary	1,477	1,062	932	—
Randal, Gee & Mitchel.	"	1,036	—	2,199	—
J. Carruthers.	"	—	—	1,567	—
Cumming's Grain Co.	Calgary	2,734	—	4,149	—
Alberta Farmers' Co-op. Co.	"	12,487	—	—	—
Randell Grain Co.	"	1,132	—	—	—
Home Grain Co.	"	1,550	—	2,688	—
Alberta Farmers' Grain Co.	"	2,540	—	926	—
Thompson & Earle.	"	1,389	—	—	—
Simpson & Hepworth.	"	—	1,057	—	—
McLennan Bros.	"	—	—	1,093	—
Merchants Bank.	Mortlach, Man.	1,441	—	—	—
Thomson & Sons.	Winnipeg.	1,142	—	—	—
Marengo Farming Co.	Marengo, Sask.	—	—	5,713	—
Mrs. Shortt.	Gadsby, Alberta.	2,734	—	—	—
Morris Grain Co.	Winnipeg.	1,107	—	—	—
Carl Christensen.	Hussar, Alberta.	—	—	4,349	—
Sask. Western Elev. Co.	Winnipeg.	2,907	—	—	—
Beaver Elev. Co.	"	—	—	1,922	—
Valley View Farm Co.	Saltcoats, Sask.	—	—	—	1,589
Totals.		119,712	8,414	70,773	3,122

There is thus quite a substantial supply of Marquis wheat of excellent quality to meet the demand for good clean seed. The quantities of Red Fife wheat and six-rowed barley are very small. Great difficulty was experienced in getting an abundant supply of seed oats owing to the presence of wild oats and barley as impurities.

POINTERS ON PRACTICAL AGRICULTURE.

COMMUNICATED BY CROP-REPORTING CORRESPONDENTS.

Old Country Methods of Farming.—It often seems to me that a nearer approach to Old Country methods of farming would be more profitable. For instance, a four or five course shift is generally

resorted to for the arable land, say, one-fourth fallow or turnips, two-fourths grain and one-fourth clover or green crop. The turnips or rape are mostly eaten off with sheep, except on strong land when they are pulled off and fed to cattle in the field, thus keeping up the fertility of the land. A portion of the grain is generally fed to the animals, also a good part of the clover or hay in the winter, whilst a good part is pastured by sheep in the summer time. Now if more sheep were kept, they could be run on the prairie or wild land in the summer time, and for a change on timothy or clover, and in the fall on the stubble, where they would help to clear the weeds and consolidate the land. If farmers too would keep more dairy cows of the shorthorn dairy class, which produce good beef steers as well as give a good flow of milk, and are more hardy than the fancy dairy breeds which produce no animals fit for export beef, they would have another sure source of profit, and be able to keep their land in much better order by the use of the manure, which has a chemical as well as a mechanical effect, causing the grain to be of better quality and to ripen sooner. JOSEPH SMITH, Penhold, Alberta.

Grain protected by Coal Oil.—Mr. Joseph H. Lowe has been much bothered this winter by his neighbours' and his own horses and cattle breaking into a temporary granary he has in his fields, to get at the grain. To stop this trouble he erected a barbed wire fence around the granary, but even this failed to keep the animals away, for time and time again the fence was broken through and it looked for a while that Mr. Lowe would be compelled to move his grain to other and more durable quarters as the only way to keep it out of the animals' way as a means not only to save it but possibly to save one or two horses as well. As a last resource, however, he spread coal oil on parts of the building, and also scattered a quantity of the oil on loose straw and chaff around it. This was successful, for no sooner did the horses approach the granary and get a whiff of the oil-saturated straw than they turned and walked away as if the idea of stealing grain would be the last one to enter their heads. Mr. Lowe says they never go any nearer now than the outer edge of the straw, and never stay very long even there. Consequently he can now sleep soundly at nights in the satisfaction of having solved a very vexatious problem that previously had given him weeks of worry. W. L. BURY, Wycollar, Sask.

Quack Grass.—This can be destroyed by summer fallowing. Use the disk harrows to cut the sods up fine like a garden bed. This had better be done early in spring just as soon as the ground is dry enough to work. Then continue to disk every week all summer, and in August do not fail to cultivate freely. WM. ROBINSON, Poplar, East Algoma, Ont.

WEATHER OF THE YEAR 1915.

Weather of the year 1915 at Representative Stations, compared with Normal Annual Averages for the period 1888 to 1907.

Station	Degrees of temperature, F.						Hours of sunshine	
	mean winter	mean summer	lowest in year	highest in year	mean annual	normal annual (1888-1907)	1915	normal annual (1888-1907)
British Columbia—								
Victoria.....	43.5	59.9	27	88	50.8	50.3	1,964	1,822
Vancouver.....	41.9	63.6	23	89	51.4	49.1	1,644	1,815
Kamloops.....	33.7	67.8	- 2	95	49.4	47.7	1,996	1,868
Alberta—								
Calgary.....	25.3	59.4	-24	88	41.8	37.4	-	-
Edmonton.....	18.9	59.3	-24	87	39.2	36.7	2,205	-
Saskatchewan—								
Battleford.....	13.8	62.8	-38	95	38.6	34.4	2,236	2,101
Prince Albert.....	10.4	58.6	-42	86	34.8	32.1	-	-
Qu'Appelle.....	14.8	59.1	-42	95	37.6	34.5	2,203	-
Manitoba—								
Minneapolis.....	11.5	58.8	-41	90	36.1	34.1	-	-
Winnipeg.....	12.4	62.0	-37	93	38.5	34.9	2,001	2,178
Ontario—								
Port Arthur.....	18.6	58.4	-34	89	39.0	35.7	-	-
White River.....	10.0	54.4	-56	86	33.7	32.3	-	-
Parry Sound.....	20.9	63.1	-22	87	42.8	41.3	-	-
Southampton.....	23.4	61.1	- 2	87	43.5	43.8	-	-
Toronto.....	26.8	65.6	- 1	87	46.8	45.5	2,090	2,048
Kingston.....	25.0	64.8	-24	85	45.4	43.7	2,056	1,989
Stonecliff.....	17.3	62.7	-35	90	41.0	38.5	-	-
Ottawa.....	20.6	64.7	-24	88	43.6	43.0	2,126	1,874
Quebec—								
Montreal.....	22.2	67.2	-13	90	44.9	42.3	2,043	1,805
Quebec.....	19.7	64.2	-22	87	41.5	38.7	1,713	1,762
Sherbrooke.....	21.2	64.1	-31	88	42.8	-	1,758	-
Father Point.....	19.4	56.1	-20	85	37.4	35.1	-	-
New Brunswick—								
Chatham.....	22.7	63.0	-24	88	42.1	40.3	-	-
Fredericton.....	23.5	62.7	-29	86	42.8	40.5	1,729	1,978
St. John.....	26.8	59.2	-10	80	42.9	41.6	-	-
Nova Scotia—								
Yarmouth.....	30.5	59.0	2	77	44.4	40.2	-	-
Halifax.....	29.0	61.3	-11	87	45.0	44.3	-	-
Sydney.....	28.6	58.6	- 9	83	43.5	42.4	-	-
Prince Edward Island—								
Charlottetown.....	25.7	61.2	-13	82	42.8	40.2	1,499	1,896

Precipitation in inches.

Station	1915			Normal (1888-1907)		
	rain	snow	total	rain	snow	total
British Columbia—						
Victoria.....	21.71	0.2	21.73	31.41	11.6	32.57
Vancouver.....	49.63	3.0	49.93	57.88	23.2	60.20
Kamloops.....	9.81	23.9	12.20	8.00	26.2	10.62
Alberta—						
Calgary.....	16.31	15.4	17.85	11.70	46.0	16.30
Edmonton.....	16.09	52.5	18.64	14.18	40.2	18.20

Precipitation in inches—con.

Station	1917			Normal (1888-1907)		
	rain	snow	total	rain	snow	total
Saskatchewan—						
Battleford.....	8.07	6.2	8.69	11.05	27.4	13.79
Prince Albert.....	9.17	24.5	11.62	11.62	49.8	16.60
Qu'Appelle.....	14.68	39.9	18.67	13.44	54.0	18.84
Manitoba—						
Minnedosa.....	12.74	28.2	15.56	12.79	45.7	17.36
Winnipeg.....	12.66	43.1	16.97	15.62	51.9	20.81
Ontario—						
Port Arthur.....	22.82	26.1	25.43	19.01	44.5	23.46
White River.....	19.94	63.1	26.25	17.36	93.5	26.71
Parry Sound.....	23.47	69.5	30.42	29.38	115.6	40.94
Southampton.....	22.89	102.4	33.13	21.64	116.0	33.24
Toronto.....	28.33	64.1	34.74	25.28	61.0	31.38
Kingston.....	22.95	29.8	25.93	24.01	74.8	31.49
Stonceliff.....	16.44	51.8	21.62	21.69	82.6	29.95
Ottawa.....	26.84	74.9	34.33	24.70	87.0	33.40
Quebec—						
Montreal.....	22.65	65.8	29.23	29.37	122.7	41.64
Quebec.....	25.36	74.2	32.78	27.17	132.9	40.46
Sherbrooke.....	29.97	48.8	34.85	—	—	—
Father Point.....	25.01	88.8	33.89	23.21	109.6	34.17
New Brunswick—						
Chatham.....	39.02	97.9	48.81	27.65	119.9	39.64
Fredericton.....	36.70	48.1	41.51	33.73	104.6	44.19
St. John.....	41.93	44.6	46.39	36.68	84.3	45.11
Nova Scotia—						
Yarmouth.....	34.30	29.7	37.27	42.46	84.2	50.88
Halifax.....	56.76	61.0	62.86	49.43	76.7	57.10
Sydney.....	38.88	71.5	46.03	41.10	92.8	50.38
Prince Edward Island—						
Charlottetown.....	31.60	68.7	38.47	29.97	101.8	40.15

THE WEATHER DURING FEBRUARY.

The Dominion Meteorological Office reports that the mean temperature of the month was considerably above the normal over the greater portion of the prairie provinces, while in British Columbia and from Lake Superior eastward it was from normal to 4° below. The largest positive departures, amounting to about 6°, occurred in Alberta and northern Saskatchewan, while negative departures of 3° to 4° occurred in many parts of Ontario and Nova Scotia. The precipitation was very generally in excess of the average in British Columbia and Alberta, and also in a district between the Georgian Bay and the Ottawa Valley, while in other parts of the Dominion it was either average or a little below. In Ontario, as in the western provinces, it was wholly in the form of snow. Although there was an unusually heavy snowfall on the coast of British Columbia during the early part of the month, by the 29th the snow had practically disappeared and only traces remained. At the close of the month, except in southern Alberta where the ground was bare, the western

provinces were snow-covered to a depth varying from three inches in northern Alberta to twenty inches in some sections of Manitoba and eastern Saskatchewan. In southern and western Ontario the snow was from four to twelve inches in depth, and this increased northward to four feet and over in the Algoma district. In Quebec the depth varied from twelve inches in the southern counties to three feet or more in the northern and eastern districts. Some localities in the Maritime provinces had a covering of four to ten inches, while in others the ground was bare.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	Feb. 5		Feb. 12		Feb. 19		Feb. 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 23½	— 1 27½	1 22½	— 1 25½	1 23½	— 1 26½	1 11	— 1 22½
No. 2 Nor.....	1 21½	— 1 25½	1 20½	— 1 22½	1 21	— 1 24	1 08½	— 1 19½
No. 3 Nor.....	1 18½	— 1 22½	1 17½	— 1 20½	1 18	— 1 21½	1 06	— 1 17½
No. 4.....	1 14½	— 1 18½	1 13½	— 1 16½	1 14	— 1 17½	1 02½	— 1 13½
No. 5.....	1 07½	— 1 11½	1 06½	— 1 08½	1 07	— 1 09½	0 94½	— 1 06
No. 6.....	1 01½	— 1 05½	1 00½	— 1 02½	1 00½	— 1 03½	0 88½	— 1 00
Feed.....	0 94½	— 0 98½	0 93½	— 0 95½	0 93½	— 0 96½	0 82½	— 0 94
Oats—								
No. 2 C.W.....	0 43½	— 0 45	0 41½	— 0 43½	0 43½	— 0 44½	0 39½	— 0 42½
No. 3 C.W.....	0 41	— 0 42½	0 39½	— 0 41½	0 40½	— 0 42½	0 37½	— 0 40½
No. 1 Feed Ex.....	0 41	— 0 42½	0 39½	— 0 41½	0 40½	— 0 42½	0 37½	— 0 40½
No. 1 Feed.....	0 40	— 0 41½	0 38½	— 0 40	0 39½	— 0 40½	0 36½	— 0 39
No. 2 Feed.....	0 39	— 0 40½	0 37½	— 0 39	0 38½	— 0 39½	0 35½	— 0 38
Barley—								
No. 3 C.W.....	0 65	— 0 67	0 68	— 0 69	0 68	— 0 68½	0 62½	— 0 65
No. 4 C.W.....	0 60	— 0 62	0 63	— 0 64	0 62	— 0 63	0 57½	— 0 60
Rejected.....	0 55	— 0 56	0 56	— 0 58	0 57	— 0 57½	0 52½	— 0 55
Feed.....	0 51	— 0 56	0 56	— 0 58	0 57	— 0 57½	0 52½	— 0 55
Flax—								
No. 1 N.W.C.....	2 04½	— 2 09	2 03½	— 2 08½	2 09	— 2 10½	2 02½	— 2 08½
No. 2 C.W.....	2 01½	— 2 06	2 00½	— 2 05½	2 06	— 2 07½	1 99½	— 2 05½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1915-1916.

Grade and Market	November		December		January		February	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 11	—1 25	1 15	—1 29	1 22	—1 43	1 16	—1 42
Chicago.....	1 10½	—1 14½	1 17	—1 28½	1 21½	—1 39	1 10½	—1 35½
Corn, No. 2, Mixed—								
St. Louis.....	0 60	—0 65	0 65	—0 75½	0 70	—0 77	0 71½	—0 77
New York (f.o.b. afloat).....	0 74	—0 79½	0 79½	—0 83½	0 72½	—0 79½	0 80½	—0 89½
Corn, No. 2—								
Chicago.....	0 61½	—0 68½	0 69½	—0 75	—	—	0 71½	—0 79½
Oats, No. 2—								
St. Louis.....	0 35	—0 37½	0 39	—0 44½	0 42½	—0 52	0 40½	—0 52½
Chicago.....	0 37½	—0 41½	0 40½	—0 44	0 43	—0 51	0 41½	—0 50½
Rye, No. 2—								
Chicago.....	0 94	—1 03	0 94½	—0 98½	0 97	—1 04½	0 90	—1 03

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	Feb. 7		Feb. 14		Feb. 21		Feb. 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian best hard.....	2 12½	—2 15½	2 15½	—2 16½	2 18½	—2 19½	2 18½	—2 21½
“ No. 1 new.....	2 09½	—2 12½	2 12½	—2 13½	2 15½	—2 16½	2 16½	—2 18½
“ No. 2 “.....	2 06½	—2 09½	2 09½	—2 10½	2 12½	—2 13½	2 13½	—2 15
“ No. 3 “.....	2 03½	—2 06½	2 06½	—2 07	2 09½	—2 10	2 10½	—2 11½
American best winter.....	2 00½	—2 03½	2 03½	—2 05½	2 03½	—2 06½	2 09½	—2 12½
“ poor winter.....	1 82½	—1 85½	1 82½	—1 85½	1 82½	—1 85½	1 79½	—1 82½
Durum.....	2 00½	—2 03½	2 03½	—2 09½	2 06½	—2 09½	2 06½	—2 09½
Californian.....	2 01½	—2 07½	2 04½	—2 07½	2 04½	—2 07½	2 07½	—2 10½
Indian.....	2 07½	—2 16½	2 10½	—2 16½	2 10½	—2 16½	—	—
Oats (per bush.)—								
Canadian.....	0 88½	—0 90	0 88½	—0 90	0 90½	—0 93	0 91½	—0 94½
American.....	0 88	—0 88½	0 88	—0 88½	0 88	—0 88½	0 89½	—0 90
Buenos Aires.....	0 87	—0 87½	0 87	—0 87½	0 88½	—0 89	0 89½	—0 90½
Bahia Blanca.....	0 88½	—0 89	0 88½	—0 89	0 89½	—0 90½	0 91½	—0 92
Flour (per 280 lb.)—								
Canadian good.....	12 41	—12 65	12 27	—12 52	12 27	—12 52	12 41	—12 65
“ common.....	11 42	—11 66	11 30	—11 54	11 30	—11 54	11 42	—11 66
American spring, good.....	12 65	—12 89	12 53	—12 76	12 53	—12 76	12 65	—12 89
“ spring, common.....	11 42	—11 66	11 30	—11 54	11 30	—11 54	11 42	—11 66
“ spring, inferior.....	10 94	—11 18	10 81	—11 06	10 81	—11 06	10 94	—11 18
“ winter, good.....	11 91	—12 15	11 78	—12 03	11 78	—12 03	11 91	—12 15
“ winter, common.....	10 94	—11 42	10 81	—11 30	10 81	—11 30	10 94	—11 42
Californian.....	13 38	—13 49	13 14	—13 20	13 14	—13 20	13 25	—13 31
Australian.....	—	—	—	—	12 41	—12 53	12 53	—12 65

III. Range of Prices of Imported Grain and Flour at British Markets, 1916—con.

LIVERPOOL.

Description	Feb. 1		Feb. 8		Feb. 15		Feb. 22		Feb. 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1 new...	2 12½	— 2 13	2 13½	— 2 14½	—	—	—	—	2 14½	—
“ No. 3 new...	2 03½	— 2 04½	—	—	—	—	—	—	—	—
No. 2 hard winter Gulf, new...	1 92½	— 1 93½	1 95½	— 1 96	1 98½	— 1 99½	2 00½	— 2 02	1 84	— 1 85
Choice winter...	2 06½	— 2 07½	2 06½	— 2 10½	—	—	—	—	—	—
No. 2 red winter...	—	—	2 02	—	—	—	—	—	1 89½	—
Oats (per bush.)—										
Chilian white...	0 90	— 0 95	0 91½	— 0 95	0 91½	— 0 95	0 93½	— 0 96½	0 93½	— 0 96½
“ black...	0 86	— 0 90	0 86	— 0 87½	0 86	— 0 87½	0 86½	— 0 88	0 86	— 0 87½
“ grey...	0 88½	— 0 90	0 88	— 0 88½	0 88	— 0 89½	0 88	— 0 89½	0 89½	— 0 90½
“ tawny...	0 88½	— 0 90	0 88	— 0 88½	0 88	— 0 89½	0 88	— 0 89½	0 89½	— 0 90½
Flour (per 280 lb.)—										
Canada spring patents...	12 03	— 12 27	12 03	— 12 27	12 03	— 12 27	12 03	— 12 27	11 66	— 11 91
American spring patents	12 27	— 12 53	12 27	— 12 53	12 27	— 12 53	12 27	— 12 53	11 78	— 12 03
American soft winter patents...	12 15	— 12 41	12 15	— 12 41	12 15	— 12 41	12 15	— 12 41	11 66	— 11 91
Kansas patents...	12 03	— 12 27	12 03	— 12 27	12 03	— 12 27	12 03	— 12 27	11 66	— 11 91
Oatmeal (per 240 lb.)—										
Canadian rolled oats...	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33
“ middle cut...	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ fine cut...	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ pinhead...	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
February 5.....	53 3	1 77	52 5	1 53	32 4	0 88
“ 12.....	57 6	1 75	52 10	1 54	32 2	0 85
“ 19.....	56 11	1 73	53 6	1 56	31 9	0 84
“ 26.....	58 2	1 77	54 2	1 58	32 2	0 85
Average.....	57 9	1 76	53 3	1 55	32 1	0 86

V. Average Prices of Imported Meat and Cheese at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.).

Description and Market	Feb. 2		Feb. 9		Feb. 16		Feb. 23	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	14 70	-	14 70	-	14 70	12 15	14 70	13 18
Leeds.....	-	-	-	-	-	-	15 96	12 71
Liverpool.....	-	-	15 21	13 18	15 21	13 18	-	-
Manchester.....	-	-	15 21	13 18	15 21	13 18	-	-
Edinburgh.....	15 20	12 70	15 45	12 92	15 20	13 20	15 20	12 70
Argentine chilled—								
Birmingham.....	16 21	13 18	16 21	13 18	15 96	13 18	17 23	13 69
Leeds.....	15 72	12 93	15 72	12 71	15 96	13 69	-	-
Liverpool.....	16 21	13 69	15 21	13 18	14 70	13 18	16 73	13 69
London.....	16 21	13 69	16 21	13 18	15 72	12 71	16 48	13 43
Manchester.....	16 1	13 69	15 21	13 18	15 72	13 18	16 73	13 69
Edinburgh.....	16 70	13 20	15 45	12 92	13 70	-	-	13 95
Glasgow.....	-	13 45	-	-	-	-	16 70	14 20
Australian frozen—								
Birmingham.....	14 19	-	14 19	11 66	13 69	12 15	14 19	12 15
Liverpool.....	15 21	13 18	-	-	15 21	13 18	14 70	13 18
Manchester.....	15 21	13 18	-	-	15 21	13 18	14 70	13 18
Glasgow.....	18 80	-	-	-	14 70	12 70	15 20	13 20

GREEN BACON (per cwt. of 100 lb.).

Description and Market	Feb. 2		Feb. 9		Feb. 16		Feb. 23	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol.....	20 22—19 13	20 22—19 13	20 00—19 13	19 56—18 69				
Liverpool.....	20 22—19 13	20 22—18 91	20 00—18 69	19 56—18 24				
London.....	20 88—19 56	20 88—19 56	20 66—19 35	20 00—18 69				
Glasgow.....	20 88—20 44	20 66—20 22	20 22—19 56	19 56—				
Canadian Cumberland cut—								
Liverpool.....	16 95—15 86	16 95—15 86	17 16—15 86	17 16—15 86				
Glasgow.....	17 81	-	-	-				
Danish sides—								
Bristol.....	22 98—22 10	22 98—22 10	22 54—21 66	21 66—21 22				
Liverpool.....	22 98—22 10	22 76—22 10	22 32—21 66	21 66—21 00				
London.....	23 20—22 10	23 20—22 10	22 54—21 44	21 66—20 66				
Glasgow.....	22 32	-	22 10	-	21 88	-	21 44	-

GREEN HAMS (per cwt. of 100 lb.).

Description and Market	January 5		January 12		January 19		January 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—								
London.....	21 22—20 88	21 22—20 44	20 66—20 00	20 88—20 00				
American long cut—								
Bristol.....	20 44—20 22	19 56—18 91	19 35—18 91	19 13—18 47				
Liverpool.....	20 66—19 28	20 00—18 91	19 78—18 80	19 56—18 69				
London.....	20 22—19 56	20 00—19 13	19 56—18 69	19 56—18 69				
Glasgow.....	21 22—20 88	20 66—20 22	20 44—20 00	20 44—20 00				
American short cut—								
Bristol.....	20 66—20 22	20 00—19 13	19 56—18 69	19 56—18 69				
Liverpool.....	20 88—20 44	20 33—19 89	20 44—19 89	20 66—20 00				
London.....	20 22—19 78	19 13—18 69	19 56—18 69	19 56—18 69				
Glasgow.....	21 22—20 66	20 88—20 22	20 88—20 44	20 88—20 44				

V. Average Prices of Imported Meat and Cheese at British Markets, 1916—con.

GREEN HAM (per cwt. of 100 lb.).

Description and Market	February 2		February 9		February 16		February 23	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—								
Liverpool.....	20 66	—20 22	20 66	—20 22	20 44	—19 78	20 44	—19 56
London.....	21 00	—20 00	20 66	—20 00	20 88	—20 00	20 44	—19 56
American long cut—								
Bristol.....	18 09	—18 24	18 24	—17 38	18 24	—17 38	18 47	—17 38
Liverpool.....	19 13	—18 24	18 80	—17 81	18 69	—17 60	18 47	—17 38
London.....	19 56	—18 69	19 35	—18 24	19 13	—18 24	18 69	—17 81
Glasgow.....	19 56	—19 13	19 13	—18 69	18 69	—17 81	18 47	—17 81
American short cut—								
Bristol.....	19 56	—18 69	19 13	—18 24	19 13	—18 24	18 91	—18 02
Liverpool.....	20 55	—19 78	20 11	—19 35	19 56	—18 69	19 02	—18 02
London.....	19 13	—18 24	19 13	—18 24	19 56	—18 69	18 47	—17 60
Glasgow.....	20 00	—19 56	19 35	—19 13	18 69	—18 24	18 02	—17 81

CHEESE (per cwt. of 100 lb.).

Description and Market	January 5		January 12		January 19		January 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—								
Bristol.....	20 66	—20 00	20 88	—20 44	21 22	—20 88	21 88	—21 22
Liverpool.....	20 66	—20 00	20 88	—20 22	21 66	—20 88	21 88	—21 00
London.....	20 88	—20 44	21 22	—20 88	21 66	—21 22	22 10	—21 44
Glasgow.....	21 22	—	21 00	—20 88	22 10	—	22 10	—
New Zealand—								
London.....	20 44	—20 00	20 66	—20 22	21 22	—20 88	21 66	—21 22
Glasgow.....	21 22	—	21 00	—20 88	22 10	—	22 10	—21 88

CHEESE (per cwt. of 100 lb.).

Description and Market	February 2		February 9		February 16		February 23	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—								
Bristol.....	21 88	—21 22	22 10	—21 22	22 10	—21 22	21 88	—21 00
Liverpool.....	22 10	—21 00	22 10	—21 00	21 88	—21 00	21 88	—21 00
London.....	21 66	—21 22	21 66	—21 22	21 66	—21 22	21 66	—21 22
Glasgow.....	22 54	—22 10	22 10	—	22 10	—	21 66	—
New Zealand—								
Bristol.....	—	—	—	—	21 22	—20 88	21 22	—20 88
London.....	21 22	—20 88	21 22	—20 88	21 22	—20 88	20 88	—20 44
Glasgow.....	22 10	—21 88	21 66	—	21 66	—21 22	21 22	—20 88

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

STOCKS ON HAND AND QUALITY OF CROPS OF 1915.

Report for the month ended March 31, 1916.

The following report summarises the results of inquiries addressed by the Census and Statistics Office to its Crop-Reporting Correspondents respecting (a) the stocks of grain and other crops remaining in the hands of farmers on March 31, 1916, and (b) the proportion of the crops harvested in 1915, which proved to be of merchantable quality.

STOCKS IN FARMERS' HANDS ON MARCH 31, 1916.

Out of the total estimated yield of wheat in 1915, 23 per cent, or 86,854,000 bushels remained in farmers' hands at the end of March. This proportion compares with $12\frac{1}{2}$ per cent last year, $16\frac{1}{2}$ per cent in 1914, 22 per cent in 1913 and 27 per cent in 1912; so that this year the proportion in hand is larger than in any year since 1912, which related to the crop of 1911. Last year the proportion remaining over was the smallest on record since these inquiries were instituted in 1909. Not only however is the proportion this year a high one; but, owing to last year's excellent yields, the quantity on hand at March 31 is larger than in any previous year, 1912, (the crop of 1911) coming nearest with 62,188,000 bushels.

Of the remaining field crops the proportions and quantities estimated to be in farmers' hands at March 31 are as follows: Oats, 45 p.c. or 235,530,000 bushels; barley, 34 p.c. or 18,514,500 bushels; rye, 30 p.c. or 732,700 bushels; buckwheat, 22 p.c. or 1,747,000 bushels; corn for husking, 24 p.c. or 3,453,000 bushels; flax, 25 p.c. or 2,700,300 bushels; potatoes, 20 p.c. or 12,960,800 bushels; turnips, etc., $15\frac{1}{2}$ p.c. or 9,952,000 bushels; hay and clover, 23 p.c. or 2,524,000 tons. For oats, barley and rye the quantities on hand at the end of March are larger than in any previous year on record.

MERCHANTABLE QUALITY OF 1915 CROPS.

The returns received from crop-reporting correspondents show that of the total estimated wheat crop in 1915 of 376,303,600 bushels over 95 per cent, or 358,281,000 bushels, proved to be of merchantable quality. This proportion compares well with the previous years, being superior to last year by about 2 per cent and somewhat above the average of the past seven years. The proportions of other crops of 1915 which proved to be of merchantable quality are as follows: Oats, 92 per cent (480,208,000 bushels out of 520,103,000 bushels); barley, 88 per cent (47,082,000 bushels out of 53,331,300 bushels); rye, 88.5 per cent (2,118,500 bushels out of 2,394,100 bushels);

buckwheat, 83 per cent (6,512,000 bushels out of 7,865,900 bushels); corn for husking, 77.5 per cent (11,142,000 bushels out of 14,368,000 bushels); flaxseed, 95.5 per cent (10,144,000 bushels out of 10,628,000 bushels); potatoes, 73 per cent (45,630,000 bushels out of 62,604,000 bushels); turnips, etc., 86 per cent (55,266,000 bushels out of 64,281,000 bushels) and hay and clover, 86 per cent (9,400,000 tons out of 10,953,000 tons).

Census and Statistics Office,
Ottawa, April 19, 1916.

ERNEST H. GODFREY,
Editor.

I. Produce in Farmers' Hands on March 31, 1916 and Quantities of Merchantable Quality, 1915.

Field crops	Total production in 1915	In farmers' hands March 31, 1916		Yield of 1915 harvest merchantable	
	bush.	p.c.	bush.	p.c.	bush.
Canada—					
Wheat.....	376,303,600	23.08	86,854,000	95.22	358,281,000
Oats.....	520,103,000	45.29	235,530,000	92.33	480,208,000
Barley.....	53,331,300	34.72	18,514,500	88.28	47,082,000
Rye.....	2,394,100	30.60	732,700	88.49	2,118,500
Buckwheat.....	7,865,900	22.21	1,747,000	82.79	6,512,000
Corn for husking.....	14,368,000	24.03	3,453,000	77.55	11,142,000
Flax seed.....	10,628,000	25.41	2,700,300	95.45	10,144,000
Potatoes.....	62,604,000	20.71	12,960,800	72.89	45,630,000
Turnips, etc.....	64,281,000	15.48	9,952,000	85.98	55,266,000
Hay and clover.....	tons 10,953,000	23.04	tons 2,524,000	85.82	tons 9,400,000
P. E. Island—	bush.		bush.		bush.
Wheat.....	653,600	37.00	242,000	90.17	589,000
Oats.....	6,832,500	40.06	2,737,000	93.40	6,382,000
Barley.....	106,800	21.00	22,000	92.29	99,000
Buckwheat.....	75,400	25.00	19,000	81.15	61,000
Potatoes.....	3,558,000	24.10	857,000	62.93	2,239,000
Turnips, etc.....	3,551,000	14.28	507,000	80.00	2,841,000
Hay and clover.....	tons 351,000	29.61	tons 104,000	91.66	tons 322,000
Nova Scotia—	bush.		bush.		bush.
Wheat.....	247,000	25.69	63,000	85.76	212,000
Oats.....	3,487,700	30.62	1,068,000	88.53	3,088,000
Barley.....	128,400	23.00	30,000	85.59	110,000
Rye.....	4,500	16.33	700	78.33	3,500
Buckwheat.....	221,500	17.92	40,000	82.02	182,000
Potatoes.....	4,759,000	25.84	1,230,000	65.48	3,116,000
Turnips, etc.....	3,589,000	16.92	607,000	81.00	2,907,000
Hay and clover.....	tons 958,000	26.48	tons 254,000	89.12	tons 854,000
New Brunswick—	bush.		bush.		bush.
Wheat.....	267,000	24.22	65,000	94.18	251,000
Oats.....	5,559,600	31.88	1,772,000	91.60	5,093,000
Barley.....	48,000	21.86	10,000	91.08	44,000
Buckwheat.....	1,315,000	21.58	284,000	85.93	1,130,000
Potatoes.....	5,772,000	25.63	1,479,000	81.80	4,721,000
Turnips, etc.....	2,633,000	13.57	357,000	84.56	2,226,000
Hay and clover.....	tons 791,000	19.26	tons 152,000	91.00	tons 720,000

Field crops	Total production in 1915	In farmers' hands March 31, 1916.	Yield of 1915 harvest merchantable	
Quebec—	bush.	bush.	bush.	
Wheat.....	1,411,000	23-89	337,000	91-60
Oats.....	42,182,000	32-54	13,726,000	92-00
Barley.....	2,255,000	21-86	493,000	91-77
Rye.....	145,000	19-69	29,000	82-85
Buckwheat.....	2,568,000	20-92	537,000	84-00
Corn for husking.....	508,000	17-02	86,000	82-90
Flaxseed.....	7,000	18-04	1,300	88-04
Potatoes.....	17,510,000	27-33	4,800	80-19
Turnips, etc.....	3,144,000	14-54	457,000	87-06
	tons		tons	tons
Hay and clover.....	3,682,000	22-05	812,000	88-00
				3,240,000
Ontario—	bush.	bush.	bush.	
Wheat.....	30,252,000	26-84	8,120,000	82-30
Oats.....	122,810,000	38-87	47,730,000	85-61
Barley.....	15,369,000	29-24	4,494,000	86-75
Rye.....	1,551,000	22-86	355,000	87-44
Buckwheat.....	3,686,000	23-53	867,000	80-91
Corn for husking.....	13,860,000	24-29	3,367,000	77-35
Flaxseed.....	62,000	19-81	12,000	78-64
Potatoes.....	14,362,000	24-25	3,483,000	57-56
Turnips, etc.....	44,175,000	14-31	6,321,000	86-92
	tons		tons	tons
Hay and clover.....	4,068,000	23-08	939,000	80-85
				3,289,000
Manitoba—	bush.	bush.	bush.	
Wheat.....	96,425,000	21-44	20,674,000	95-42
Oats.....	69,471,000	40-17	32,075,000	93-40
Barley.....	17,763,000	33-23	5,903,000	82-30
Rye.....	155,000	44-17	68,000	99-29
Flaxseed.....	374,000	23-33	87,000	81-36
Potatoes.....	3,104,000	30-80	956,000	74-89
Turnips, etc.....	1,157,000	15-66	181,000	90-15
	tons		tons	tons
Hay and clover.....	307,000	28-11	86,000	90-48
				277,000
Saskatchewan—	bush.	bush.	bush.	
Wheat.....	195,168,000	20-67	40,341,000	97-88
Oats.....	157,628,600	47-63	75,079,000	96-73
Barley.....	10,570,200	40-12	4,241,000	96-12
Rye.....	75,600	33-00	25,000	98-33
Flaxseed.....	9,061,000	23-11	2,094,000	96-73
Potatoes.....	4,428,000	32-41	1,435,000	82-64
Turnips, etc.....	2,936,000	20-73	609,000	87-65
	tons		tons	tons
Hay and clover.....	94,000	28-66	27,000	95-64
				90,000
Alberta—	bush.	bush.	bush.	
Wheat.....	51,355,000	32-94	16,916,000	92-46
Oats.....	107,741,000	55-87	60,195,000	92-73
Barley.....	6,984,000	47-21	3,297,000	93-77
Rye.....	463,000	55-00	255,000	88-83
Flaxseed.....	1,124,000	45-00	506,000	90-73
Potatoes.....	5,155,000	42-36	2,134,000	80-77
Turnips, etc.....	1,356,000	34-78	472,000	82-41
	tons		tons	tons
Hay and clover.....	311,000	23-92	74,000	81-41
				253,000
British Columbia—	bush.	bush.	bush.	
Wheat.....	525,000	18-28	96,000	95-11
Oats.....	4,390,600	26-00	1,142,000	95-75
Barley.....	106,900	22-81	24,500	91-67
Potatoes.....	3,956,000	33-67	1,332,000	78-31
Turnips, etc.....	1,731,000	25-45	441,000	82-08
	tons		tons	tons
Hay and clover.....	391,000	19-43	76,000	90-92
				355,000

II. Produce in Farmers' Hands on March 31, 1913-1916.

Field crops	Per cent of total yield on hand				In Farmers' hands, March 31			
	1913	1914	1915	1916	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Canada—								
Wheat.....	22-41	16-55	12-55	23-08	50,234,000	38,353,000	20,247,000	86,854,000
Oats.....	44-22	39-92	27-42	45-29	173,178,000	161,537,000	85,843,000	235,530,000
Barley.....	35-00	29-88	20-53	34-72	17,289,000	14,440,000	7,430,000	18,514,500
Rye.....	21-96	18-69	17-04	30-60	533,000	398,000	343,700	732,700
Buckwheat.....	29-64	22-22	20-78	22-21	3,117,000	1,860,000	1,792,500	1,747,000
Corn for husking.....	23-95	25-69	21-03	24-03	4,059,000	4,308,500	2,928,000	3,453,000
Flaxseed.....	26-44	13-09	10-32	25-41	6,909,000	2,295,000	740,700	2,700,300
Potatoes.....	43-14	54-92	37-71	20-71	36,619,000	27,426,000	32,310,000	12,960,800
Turnips, etc.....	22-84	16-81	14-88	15-48	18,276,000	11,230,000	10,267,000	9,952,000
Hay and clover....	30-78	24-63	21-18	23-04	tons 3,730,000	tons 2,675,000	tons 2,173,000	tons 2,524,000

III. Produce of Merchantable Quality, 1912-1915.

Field crops	Per cent of total yield merchantable				Yield of harvest merchantable			
	1912	1913	1914	1915	1912	1913	1914	1915
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Canada—								
Wheat.....	92-15	97-02	93-50	95-22	206,563,000	224,810,000	150,973,000	358,281,000
Oats.....	90-81	94-58	91-35	92-33	355,638,000	382,754,000	285,991,000	480,208,000
Barley.....	87-02	95-58	88-46	88-28	42,986,000	46,185,000	32,022,000	47,082,000
Rye.....	86-70	90-93	90-03	88-49	2,105,000	1,936,000	1,815,800	2,118,500
Buckwheat.....	81-37	82-36	84-38	82-79	8,558,000	6,895,000	7,279,000	6,512,000
Corn for husking.....	76-31	78-84	79-71	77-55	12,934,000	13,224,000	11,100,000	11,142,000
Flaxseed.....	89-29	94-84	88-78	95-45	15,661,000	16,634,000	6,370,000	10,144,000
Potatoes.....	78-33	82-35	86-57	72-89	66,490,000	64,682,000	74,165,000	45,630,000
Turnips, etc.....	90-31	80-98	87-27	85-98	72,262,000	54,087,000	60,218,000	55,266,000
Hay and clover....	80-91	88-19	88-64	85-82	tons 9,804,000	tons 9,577,000	tons 9,094,000	tons 9,400,000

STOCKS OF WHEAT IN CANADA ON MARCH 31, 1916.

With the object of ascertaining as accurately as possible the total quantity of wheat in Canada at the end of March, 1916, schedules were issued by the Census and Statistics Office to the managers of elevator, flour mill and railway companies asking them to state the actual quantities of wheat and wheat flour on hand or in transit on the morning of Friday, March 31, 1916. The quantity of wheat in the terminal elevators at Fort William and Port Arthur and at the interior terminal elevators on March 31 was furnished by the

Board of Grain Commissioners. For the quantity of wheat estimated to be in farmers' hands on March 31 use was made of the replies to the ordinary annual schedule addressed to crop-reporting correspondents, as compiled in Table I on pages 110 and 111 of this issue. In the accompanying table the results are given of the compilation of the returns received, these being also compared with the results of the special inquiry of the same kind which was carried out last year as for the date of February 8, 1915.

Stocks of Wheat in Canada on February 8, 1915, and March 31, 1916.

Wheat in	February 8, 1915	March 31, 1916
	bushels	bushels
Terminal elevators.....	2,853,679	-
Railway elevators.....	1,213,952	-
Other elevators.....	26,776,246	-
Terminal elevators.....	-	25,528,440
Hospital elevators.....	-	534,876
Winter storage in vessels.....	-	2,447,386
Interior terminal elevators of the Dominion Government:		
Calgary.....	-	629,956
Moosejaw.....	-	2,820,523
Saskatoon.....	-	1,632,692
Interior terminal elevator of the C.P.R. at Transcona....	-	633,327
Public elevators.....	-	3,326,417
Country elevators.....	-	43,996,131
Flour mills.....	6,160,840	5,277,196
Transit by rail.....	12,571,876	23,369,809
Farmers' hands.....	29,554,000	86,854,000
Totals.....	79,130,593	197,050,753

The total number of elevators in Canada is upwards of 2,800 and the replies received represented a total of about 2,700; so that all but about 100 elevators are accounted for in the returns compiled. Schedules were also mailed to upwards of 500 flour mills in Canada, but to these the response was not so satisfactory, as not more than 250 flour mills filled up and returned the schedules. In this case, however, the replies received include all the largest flour mills, and the aggregate represented by the defaulting mills would not be large.

In the compilation of the returns the classification adopted for 1916 follows that of the periodical statements issued by the Department of Trade and Commerce, and is therefore somewhat different from the classification adopted for the special inquiry of last year. In the table both classifications are shown, and the figures are compared for the items which are the same in both years. According to the statement for this year the total quantity of wheat (including wheat flour expressed as wheat) in Canada on March 31, 1916, was 197,050,753 bushels, as compared with 79,130,593 bushels on February

8, 1915. Reducing the classification in the table to the simpler one of elevators, flour mills, in transit by rail and in farmers' hands, we get the following comparison:

Description	February 8, 1915	March 31, 1916
	bushels	bushels
Elevators.....	30,843,877	81,549,748
Flour mills.....	6,160,840	5,277,196
In transit by rail.....	12,571,876	23,369,809
In farmers' hands.....	29,554,000	86,854,000
Totals.....	79,130,593	197,050,753

If we allow one million bushels in both years for quantities not included in the returns, it may be stated that in round numbers the quantity of wheat in Canada on March 31, 1916, was about 198 million bushels, as compared with about 80 million bushels on February 8, 1915.

REPORTS FROM THE PROVINCES.

Prince Edward Island.—The winter has been a favourable one and all classes of live stock are in excellent condition. The demand for horses is light and prices are low, ranging from \$100 to \$200 according to class. Milch cows are in good demand and bring from \$30 to \$60, beef cattle 5 to 7 cents per lb. live weight, sheep \$5 to \$10, swine 10 to 14 cents per lb. dead weight. Prospects at present point to good crops this year as the heavy snows have melted slowly into the ground.

Nova Scotia.—Live stock are everywhere reported to be in healthy condition, with the exception of sheep in some few districts where they are said to be poor in flesh. The market for horses is not brisk, and prices range from \$100 up. Milch cows are in good demand at prices ranging from \$50 to \$90, and an increased interest is being shown in dairying as a result of the good prices offered for butter and cheese. Beef cattle are bringing from 7 to 8 cents per lb. dead weight, sheep from \$3 to \$8 and swine from 10 cents to 14 cents per lb. dressed.

New Brunswick.—All live stock have come through the winter in good condition. Prices for horses have been comparatively low, but are said to be on the rise again, the prices quoted ranging widely from \$75 to \$300. Milch cows are bringing good prices from \$35 to \$80. Beef cattle are selling for 9 to 10 cents per lb. dressed, sheep from \$4 to \$8 per head and swine 12 to 13 cents per lb. dressed.

Quebec.—All live stock are said to be in a healthy condition, although in many cases they are thin, owing to the scarcity and high price of hay. All classes are selling well, with the exception of horses, with which many farmers are overstocked. The price of horses varies from \$100 to \$175, milch cows \$55 to \$75, other cattle \$25 to \$45, sheep \$8 to \$15 and swine \$9 to \$15 per 100 lb.

Ontario.—The winter was a severe one but fodder was plentiful and all live stock are in good condition. Many farmers are overstocked with horses, as prices are low and little trading is being done. The prices quoted by correspondents range from \$75 to \$200. Dairy produce is selling so high that milch cows are in great demand, selling at prices ranging from \$35 for the poorer animals to \$125 for grade cows. Beef cattle sell at \$7 to \$8 per cwt. with a steady demand. Few sheep are being sold as the farmers wish to keep them till after shearing and benefit by the unusually high prices of wool. Pork is selling at 13 cents to 14½ cents per lb. dressed. Prospects in general are promising for the farmers as produce of all kinds is a good price, the only complaint being a scarcity of efficient help.

Manitoba.—In spite of the most severe winter for some years the live stock have come thorough for the most part in good condition, though perhaps thinner than usual, owing to the fact that the winter fodder was chiefly roughage, and in some districts the water supply was limited. The demand for horses is brisker and prices for young heavy stock are fair, being quoted at from \$150 to \$300. Milch cows bring from \$50 to \$100, and beef cattle 1 and 1½ years old \$25 to \$35. Sheep and swine are fewer in number than usual, sheep selling for about \$9 per head and swine at \$9.50 per cwt. live weight. The scarcity of help has assumed serious proportions, and may lead to all farming operations being conducted on a smaller scale.

Agriculture in the Swan River District, Manitoba.—Mr. C. A. Lewis of Swan River, who has rendered valuable service as Crop-reporting Correspondent since the institution of the present system in 1908, writes as follows: "I regret to resign as correspondent for the Swan River District, having enlisted for active service. I have always during my 16 years residence in this district taken a great interest in the work of crop corresponding, and am sorry to have to give it up. In looking back to the time I first arrived in this Valley I cannot but marvel at the change that 15 years have brought about in farming conditions here; we then had a few scattered settlers struggling to clear the heavily timbered and scrub farms, working for the most part with oxen; to-day the whole Valley is settled, many farmers are well to do; up to date machinery is on every farm, fine steel bridges and good roads abound, and a general appearance of prosperity meets the eye of the traveller on all sides. This country is worth fighting for, even supposing there were no other issues at stake."

Saskatchewan.—Live stock on the whole are reported as fairly healthy, though thin. Some losses occurred amongst horses, milch cows and swine owing to the severe weather and deep snow which prevented sufficient exercise, and there was also a shortage of water. Prices for horses are fair with an upward tendency, but few are changing hands. Strong young stock bring from \$150 to \$300 according to quality. Milch cows sell from \$50 to \$90 and beef cattle from \$25 to \$60. Swine are fewer in number, owing to farmers being discouraged by the low prices of last season and not many are

benefiting by the high price of pork which is selling from \$8.50 to \$9.50 per 100 lb. live weight. At the end of March a considerable depth of snow remained on the ground, and spring work is likely to be late in commencing.

Alberta.—For the most part live stock are reported to be in fair condition. Some losses occurred amongst cattle in southern Alberta, where sufficient shelter and good feed were not provided for the unusually severe winter. Horses are said to be bringing only a fair price ranging from \$100 to \$250 for good heavy stock. Milch cows are dear selling from \$60 to \$125. Beef cattle are a good price, \$7 to \$8 per cwt. live weight. Sheep which are not numerous on account of the cost of fencing are bringing about \$10. Swine are selling at higher prices than for years, prices being quoted as high as \$10 per cwt. live weight. Many reports state that potatoes in the cellars were badly frozen.

British Columbia.—All live stock suffered somewhat from the severe winter, but not many losses are reported. The price of horses is rising, but most of the horses are young, light weight animals which bring from \$100 to \$150. Milch cows bring \$75 to \$125, beef cattle \$12.50 per cwt. dressed, and swine \$12 to \$14 per cwt. dressed. Few sheep are kept.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—During March, 1916, lower temperatures and a much heavier snowfall have been recorded than for some years. The highest temperature of the month is 52, the lowest -17.2 and the mean 17.36, compared with extremes of 45.6 and 3, and a mean temperature of 25.99 for March, 1915. The precipitation totals 2.67 inches, consisting of 26.75 inches of snow, compared with a precipitation of 0.67 of an inch in the corresponding period of a year ago, when there was 2 inches of snow and 0.47 of an inch of rain. The bright sunshine averages 6.33 hours a day against 6.81 hours a day for this month last year.

On March 16th, there arrived from England the Thoroughbred stallion "Anmer" presented to the Canadian Government by His Majesty King George. This horse is being stabled at the Experimental Farm for a few days, until arrangements for the permanent disposition of the animal have been made by the Department.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first two weeks of March were seasonable, with moderate snow falls. On the morning of the 13th, the thermometer dropped to -10. Heavy snow storms occurred on the 16th and 17th, blocking trains for the first time in 1916. The weather remained fairly cold until the 23rd, when it suddenly moderated, accompanied by one of the worst storms recorded in years, three feet of snow falling in about two days and a half, completely blocking railway traffic and all country roads. The wind blew in gales from the northeast, north,

and northwest, which drove an ice barrier across Pictou harbour, holding the "Stanley" nine days in its grip and the car ferry "Prince Edward Island" almost seven days. The mild weather that accompanied the storm gradually increased until a temperature of 47 degrees above was reached on the 31st. The snow went very quickly, although no rain occurred at this Station during the month. Very successful seed Fairs have been held at Summerside, Georgetown, Charlottetown and Souris. A short Course similar to those previously reported was held at Souris. It was largely attended notwithstanding the unfavourable weather. On March 8th, an auction sale of steers and lambs was held at the Station, 19 steers being sold at prices ranging, from $7\frac{3}{4}$ cents to $8\frac{3}{4}$ cents per lb live weight, and the lambs bringing from $10\frac{1}{2}$ cents to 11 cents per lb. weighed in their pens."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The snowfall during March aggregated 40.5 inches, fairly well distributed. The temperature remained low for the greater part of the month and the snow drifted more or less during the whole period. A fall of 12 inches on the 4th drifted badly, delaying trains and making it necessary to break roads. This was followed by a mild spell on the 11th and 12th, which materially settled the snow. On the 15th and 16th 12.25 inches of snow fell without causing much inconvenience at the time, as there was little wind; but, as the weather remained cold, this, together with a fall of 9 inches on the 23rd with heavy winds, blocked the roads, and tied up traffic on the railroad for three days. Mild weather followed on the 26th, and for the balance of the month, the temperature during the day favoured the gradual melting of the snow without any freshet. The only rainfall was 0.01 of an inch, on the 26th. The thermometer dropped to two degrees below zero on the 19th, and for five days during this period it was unusually cold, registering slightly above zero. The mean temperature is 22.09 degrees, compared with 26.81 for the same month in 1915, and 30.72 in 1914. It will be seen, therefore, that the month has been considerably colder than usual. The bright sunshine aggregates 120.4 hours, as compared with 103.1 hours in 1915 and 118.2 hours in 1914."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"Typical winter weather has prevailed during March with no very decided thaw until the last three days, and the thermometer going as low as -12. There has been no rain, but the snow fall recorded totals 38 inches, a very heavy fall being experienced on the 4th, and also a severe storm from the 22nd to the 25th, the wind in the latter case causing such drifting that railroads and rural districts were almost completely tied up for the best part of three days. The winter has been most favourable for lumbering operations in the woods and in this district the cut is a large one. A great deal of hay has been shipped from this section, the prices realized being exceptionally good, averaging \$15.50 a ton, loaded on the cars. The beef market has been only fair, considering the scarcity of cattle, the average price realised being from \$7 to 7.50 per 100 lb., according

to quality, with a few sales at \$8 and \$8.10 for the best. Pork is selling for \$13 a hundred, and lambs, which are very scarce, are bringing from \$11 to \$12 for good quality.

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "March has been a very wintry month; but, excepting for the high winds, conditions have been the best possible for all kinds of business. The average mean temperature is only 19.8 against 29. last year and an average mean of 26 for the last forty-one years. The precipitation, made up entirely of snow, totals 1.88 inch, against an average of 4.2 inches for the last forty-one years. Unfortunately, before the end of the month the steady weather broke and the snow has completely gone by the 31st, leaving the fields and gardens in bad shape to withstand hot mid-day suns and freezing nights. During the month a great deal of team work has been done throughout the country and in the lumber woods, and, had the cold weather held till April 8th, work that was delayed by lack of snow in the early winter would have been pretty well caught up. Live stock is generally wintering pretty well and poultry has been doing much better than usual. Ice in the St. John River at Fredericton is wasting rapidly and the melting snow is causing a heavy rise of water."

Ste. Anne de la Pocatiere, Que.—Joseph Begin, Superintendent, reports. The weather during March has been favourable from an agricultural standpoint. It has been dry and cold all the month, the temperature averaging much lower than normal, the highest being 44.2, the lowest -10.6 and the mean 13.06. The total precipitation amounts to only 1.50 inch, made up exclusively of snow. The bright sunshine recorded during the month aggregates 212.8 hours, or 6.86 hours a day, which is much more than usual; thus, for March 1915, the average was only 4.54 hours a day. More than half the snow has gone during the last week of the month and there is no longer good sleighing. The weather being dry, the snow has melted slowly, and no harm has been done to the fields from washing due to spring floods. Besides the care of stock, the work engaging attention has included the hauling of manure to the rotation fields and the cutting of wood for fuel. All classes of live stock have wintered well and are in excellent condition."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "March has been a record breaker from a meteorological point of view: the mean temperature, 15.31° F., being the lowest since 1912; the precipitation 0.9 of an inch, the least since 1911; and the number of hours of sunshine, 212.6, the greatest since 1911. The weather kept exceptionally cold until the evening of the 23rd, but from the next morning until the end of the month there was a rise of temperature and the greater part of the snow has melted. Work at the Station has consisted in caring for live stock and poultry, cleaning and grading seed grain, looking after the roads, and in finishing the chopping down of over twenty-six acres of timber in connection with the clearing of land. The investigations regarding the cost of food for colts and heifers are being continued, with the

result pointing to the conclusion that it costs a good deal of money to rear the former until ready for work and the latter until in milk. This indicates the importance of raising only the best, and from good ancestry. Farmers around Quebec are hauling hay and straw to the city, as prices for these are very high, and this has a rather bad influence on live stock husbandry."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The first part of March was exceedingly cold. The mean temperature of the month is 15.4, compared with 22.8 in 1915; the highest temperature recorded 58 as against 48 last year; and the lowest -22 compared with 4 in 1915. Good sleighing continued until the 28th, which is quite unusual for this district, and at the station the hauling of gravel for the roads has continued considerably longer than was expected. A well attended series of agricultural conferences, organized for the Live Stock Branch under the auspices of the Lennoxville Station, was held during the latter part of March in the English and the French districts, a keen interest being manifested by all in the importance of using every possible effort to keep the food production of Canada up to its standard. The hot-bed frames and sashes were got ready, and seeds will be sown in them during the first part of April."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "The temperature during March has been about normal, but cold weather has continued rather later than usual, little snow having melted before the 27th and indications are that seeding will be late in starting. The heavy snowfall experienced during the past few months has continued, nineteen inches being recorded during the month, which brings the total for the season up to March 31st to eighty-one inches."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "March has been cold and stormy. Snow fell on ten days, aggregating 32 inches. The snowfall at this Farm for the fiscal year ending March 31st, 1916, totals 86.50 inches, which is the heaviest since the winter of 1903-04, when 92.5 inches was recorded. The present indications are for a late spring. The snow is melting very slowly, and very little of the land is yet bare. Roads have broken up and heavy traffic is difficult. A great scarcity of farm labour is being felt throughout this district. Fifty dollars per month, with board, is the prevailing wage being offered for eight months, while the men available are asking \$60 and board."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "Unusually high winds and persistent cool weather during March have caused the snow to pile up in larger drifts than for several years. The snowfall itself has been excessive for the winter and the wind has made the drifts very deep. There is more snow on the ground at the end of March this year than there has been since the spring of 1909. At the Experimental Station as well as throughout the district, a matter of much concern is the lack of farm labour. Nearly every available capable man has enlisted for overseas service, and

in spite of the fact that farmers are offering forty, fifty, and, in some cases, sixty dollars per month, men are not to be had. The sheep purchased in December have done remarkably well, despite the fact that they are range ewes and were not in very good condition at the time of their purchase. Their ration has been three-quarters of a pound of oats and barley and what hay they could eat, and they have had access to water at all times. The eighteen steers purchased in November for fattening purposes have continued to make satisfactory gains throughout the winter, the highest being in January."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "Winter weather has continued from the opening to almost the end of March, blizzards typical of the season being experienced on the 15th and on the 21st. Since the 28th a thaw has set in. The snow-fall recorded during the month totals 10.5 inches. The mean temperature is 11.3 compared with 20.5 a year ago. The work engaging attention has included putting up the hot-beds and preparing grain for sowing. The surplus seed grain grown at the Station has been disposed of."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "While there have been a number of light falls of snow during March, sleighing has at no time been possible here, though in the district one hundred miles east and north there is still considerable snow, and sleighing continued until quite recently. During the month the production of the dairy cattle has been well maintained and very satisfactory yearly records will be made by the cows entered in the Record of Performance. The first litters of spring pigs arrived during the month and are strong and vigorous. The new piggery has been completed and has been occupied for about two weeks. A very satisfactory hatch has been taken out of an incubator at the close of the month, the chicks being large and vigorous, with a relatively small percentage of cripples."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "March has been relatively mild, making it very favourable for range stock, which had a very strenuous time during the severe weather of January and the early part of February. About the middle of the month, threshing, delayed from last fall, was resumed in many cases. By the 20th, work on the land had become general in many districts in the southern part of the province, but this had been interrupted by storms during the last few days of the month. At the Station, Lot No. 1 of the lambs in the feeding test was disposed of, consisting of a double deck carload. The three lots, composed of 21 head each, of steers under test have also been disposed of. Very satisfactory gains and profits were obtained in each case. Considerable harrowing and disking has been done on the land, and some ploughing. A large quantity of manure has been hauled out on the land from the feed lots."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "Warm winds during the earlier part of March caused the snow to disappear rapidly, but the latter part of the month has been colder

and the low temperatures at night have caused the frost to come out of the ground rather slowly. The season is more backward than usual. As yet there is not sign of fresh vegetation on the hillsides. At this time last year cattle were grazing off the spring growth on the sunny slopes. At the Experimental Station, cultivation has been started. Hot-beds have been made up and early vegetable seed is already sown. Tests are being made with three types of incubator. In the apiary, seven out of ten hives have come through the winter in good condition, and the bees are now busy collecting flour from barley hop, placed on a sunny bank, this apparently acting as an acceptable substitute for pollen, which, on account of the later season, is, as yet scarce."

Agassiz, B.C—P. H. Moore, Superintendent, reports: "The weather during March has been cool and extremely wet, resulting in a very late spring following the cold winter. The meteorological records show that there has been nearly twice as much precipitation as during any other March for twenty-four years, the nearest approach to the present amount of rain for March being in 1908, when 7.64 inches was recorded as compared to 13.78 inches this month. However, the latter part of the month has been warmer, with some sunshine, and the grass is now growing, the trees are beginning to show green, and the early spring bulbs are coming into bloom. The severe winter did considerable damage and in some cases grass fields are almost bare. The land is not yet dry enough to do any planting, but considerable spring ploughing has been done. The cattle at the Experimental Farm are in very good condition, thanks particularly to the large amount of silage of good quality stored in 1915. Swine have done reasonably well, wintered in the bush, but the cost of maintenance has been a little greater than usual. Although feed throughout the country has been a trifle scarce, all stock is in reasonably good condition and young cattle are going to pasture at the close of the month."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Showery days and cool nights delayed the usual spring developments during March. Considerable garden work has been accomplished in the district during the month, especially by Chinese truckmen. On the farms ploughing became general during the last week, but no seeding of any consequence has yet been done. A considerable movement of feedstuffs, seed grain, and live stock was noted through the district. Prices for such have been high. Pruning of orchards, where followed, has been completed and extensive spraying arrangements have been made to combat the pear thrips and other orchard pests. A number of varieties of flowering bulbs, wild flowers, and native and imported shrubs bloomed during the month. All fruit trees are well laden with fruit spurs and very little winter-killing has been noted. Autumn-sown cereals have wintered well where the seeding was done early; but late seedings in some instances have been entirely killed. Clover is in good condition generally and but a few areas were injured by frost."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of March are given in the following table:—

Meteorological Record for March, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine.	
	High-est	Low-est	Mean		Pos-sible	Actual
Ottawa, Ont.	52.0	-17.2	17.36	2.67	370	196.3
Charlottetown, P.E.I.	47.0	-10.0	19.55	6.60	370	129.8
Kentville, N.S.	55.0	-2.0	22.09	4.05	370	120.4
Nappan, N.S.	54.0	-12.0	20.56	3.80	370	105.4
Fredericton, N.B.	60.0	-17.0	19.80	1.88	370	158.1
Ste. Anne de la Pocatiere, Que.	44.2	-10.6	13.06	1.50	370	212.8
Cap Rouge, Que.	45.0	-10.0	15.31	0.90	368	212.6
Lennoxville, Que.	58.0	-22.0	15.40	1.60	370	197.3
Brandon, Man.	41.0	-38.0	7.70	1.90	370	137.4
Indian Head, Sask.	40.0	-33.0	13.45	3.20	370	106.3
Rosthern, Sask.	40.8	-32.8	11.70	0.70	369	149.4
Scott, Sask.	43.2	-28.4	11.30	1.05	367	149.7
Lacombe, Alta.	59.7	-28.0	23.79	0.52	370	129.0
Lethbridge, Alta.	65.8	-16.0	31.65	0.90	370	148.3
Invermere, B.C.	58.0	1.0	32.90	0.45	369	131.7
Agassiz, B.C.	56.0	27.0	41.15	13.78	370	58.6
Sidney, Vancouver I., B.C.	56.0	26.0	41.03	4.85	370	80.6

Ottawa, April 15, 1916.

J. H. GRISDALE,
Director, Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (April 1) that the very wet and stormy weather, which was accompanied by much snow, has caused great delay in all agricultural operations. The early-sown winter wheat has generally withstood the bad conditions well, and is satisfactory, though it has made no progress during the month, and is mostly backward. Wheat on heavy land, or on land subject to flooding, has, however, suffered a good deal, while that sown late in the autumn is also not satisfactory. The area under wheat appears to be about 7 or 8 per cent less than last year. Winter oats and beans are mostly healthy and promising crops, although backward, but there are a good number of exceptions, especially in the west. Preparation of the land for the spring crops was almost at a standstill during the month, and very little grain indeed was sown, none at all being got in in most counties. Similarly, only in one or two very favoured districts have a few early potatoes been planted. Labour is everywhere very deficient, and with considerable arrears to be made up, many farmers will be hard put to it to get the work done this spring.

India.—The Government of India published (March 10) the second wheat forecast showing the acreage under wheat for the year 1915-16. The total area sown amounts to 30,227,000, acres, as against 32,230,000 acres, the final forecast for last year, a decrease

of 2,003,000 acres or 6 per cent. Failure of the winter rains in December and January seriously affected the crop, particularly on unirrigated areas. The crop has however been materially benefited by rain received in February.

France.—The French Department of Agriculture reports that the condition of winter cereals on March 1 was as follows: winter wheat, 69, rye, 71, barley, 73 and oats, 71. For wheat, rye, and oats the condition is one point below that of February 1; barley shows no change. Wet weather during February caused the condition on March 1 to be somewhat less favourable than at the beginning of the winter. On the other hand meadows, with few exceptions, show a good growth. The scale adopted is 81 to 99 good; 61 to 80 fairly good; 50 to 60 fair.

Canadian Wheats in France.—In connection with efforts which are being made to sow larger areas to wheat in France the Feuille d'Information of the French Department of Agriculture publishes (March 28 and April 4) accounts of experiments in the use of seed wheat from Manitoba. It is considered possible to sow in certain departments of France, the Haute-Marne for instance, spring wheats from Manitoba possessing robustness and early ripening habit up to a later date than the local French varieties usually sown, and thus a larger area under wheat is possible. The Manitoba wheats can, it is stated, be sown without risk up to April 15. Experiments with Manitoba wheats sown in France since 1912 have given results as good as the locally acclimatised spring wheats and better than mediocre yields from winter sown varieties. The French Government have guaranteed growers of wheat the price of 33 francs per quintal (about \$1.73 per bushel at the present exchange) for all the spring wheat they grow, and it is thought that with this encouragement the sowings this year will be relatively large.

United States.—The Crop Reporting Board of the U. S. Department of Agriculture reported (April 7) that the average condition of winter wheat on April 1 was 78.3 per cent of a normal, against 88.8 on April 1, 1915, 95.6 on April, 1914, and 87.3, the average condition for the past ten years, on April 1. There was a decrease in condition from December 1, 1915, to April 1, 1916, of 9.4 points, as compared with an average decline in the past 10 years of 3.5 points between these dates. Upon the assumption of average abandonment of acreage and average influences on the crop to harvest, the condition on April 1 forecasts a production of about 495,000,000 bushels, which compares with 655,045,000 bushels, the estimated production in 1915, and 684,990,000 in 1914. The average condition of rye on April 1 was 87.8 per cent of a normal, against 89.5 on April 1, 1915, 91.3 on April 1, 1914, and 89.9, the average condition for the past ten years, on April 1.

THE WEATHER DURING MARCH.

The Dominion Meteorological Office reports that the temperature was above the average in the southern portion of the interior of British Columbia, also for the most part well above over Alberta

and the western half of Saskatchewan. Elsewhere in the Dominion it was everywhere below the average, and in nearly all localities to a marked extent. The chief positive departures were 7 at Calgary and Medicine Hat, and the pronounced negative departures were 9 at White River, 8 at Ottawa, 7 at Southampton, Quebec, St. John, and Charlottetown, and 6 at Port Stanley, Montreal and Yarmouth. The precipitation was above the average over British Columbia, Saskatchewan, Manitoba and in Ontario, as far as the Georgian Bay District and the western portion of Lake Ontario, average or a little below in Alberta and well below the average in Eastern Ontario, Quebec, and the Maritime provinces. The chief positive departures were 8.40 inches at Vancouver; 2.70 inches at Victoria; and 1.30 inch at Minnedosa; and the most noticeable negative departures were 2.10 inches at Quebec and Father Point; 2.20 inches at Halifax; and 1.80 inch at St. John. The precipitation over the greater portion of the Dominion was largely snow, which had pretty well melted in numerous localities by the 31st.

POINTERS ON PRACTICAL AGRICULTURE.

Eradication of the Wild Oat.—Mr. C. H. Darrell, our Crop-reporting Correspondent for Birtle, Manitoba, writes as follows:—“The wild oat is our most pernicious enemy for curtailing yield. On quite a large area of land I find a good remedy is to fall plough carefully and deep, and the following summer simply to cultivate constantly and keep black without ploughing again. I grew a crop of rejected barley at 19 bushels per acre off 75 acres in 1913. I fall ploughed the 75 and in 1914 cultivated 50 as a summer fallow, cropping 25 again in barley after thorough cultivation in 1914, reaping No. 3 with a small percentage of wild oats. Dry season, yield 23. I sowed the 50 acres in 1915 to wheat and reaped 50 bushels per acre, 2,500 total, which is a record for the neighbourhood. Though such a success, this has not permanently eradicated the pest, and I hope to plough and cultivate this spring and sow to an early variety of oats.”

Warble Flies.—“I have read the paper concerning the warble Fly¹, contributed by the Department of Agriculture, and would say that a good way to destroy the warble fly and its eggs, is to wash the backs of the cattle with a medium strong solution of salt and water. Do this during the months the fly deposits the eggs on the cows backs, also occasionally through the winter and spring months. I tried this last year and this spring, and find it dries up the warble fly and its eggs, and is a simple and effective remedy.” GEORGE ATKINSON, Bishop's Mills, Ont.

¹The Economic Aspect of Warble Flies and a Contribution on the Biology of *Hypoderma bovis* (De Geer). By SEYMOUR HADWEN, D.V.Sci. Bulletin No. 16, Health of Animals Branch, Department of Agriculture, Ottawa.

PRODUCTION OF BEETROOT SUGAR IN CANADA.

As the result of special inquiries addressed to the three Sugar Beet factories of Canada, revised figures of the quantities of refined sugar manufactured from Canadian grown sugar beets during the five years 1911 to 1915 have been returned as follows:—

	lb.
1911.....	21,329,689
1912.....	26,767,287
1913.....	26,149,216
1914.....	31,314,763
1915.....	39,515,802

For 1912 a small part of the total production is estimated. One of the factories did not operate during the year 1915.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

Crops in Southern Hemisphere, 1915-16.—The Bulletin of Agricultural and Commercial Statistics for March, 1916, gives the following estimates of the area and production of cereal crops in the southern hemisphere for the year 1915-16, as compared with 1914-15:

Cereal Harvest of the Southern Hemisphere, 1915-16 compared with 1914-15.

Crops.	1914-1915 (final)	1915-1916 (preliminary)	Per cent of 1914-1915	1914-1915 (final)	1915-1916 (preliminary)	Per cent of 1914-1915	1914-1915	1915-1916
	000 acres	000 acres	p.c.	000 bush.	000 bush.	p.c.	bush. per acre	bush. per acre
Wheat—								
Argentina.....	15,471	16,420	106.1	168,470	172,651	102.5	10.85	10.56
Uruguay.....	778	—	—	3,417	11,023	322.6	4.46	—
Australia.....	11,804	11,500	97.4	24,844	143,002	575.6	2.08	12.49
New Zealand.....	230	333	145.1	6,644	7,309	110.0	27.36	22.01
Rye—								
Argentina.....	228	212	92.7	1,811	2,008	110.9	7.97	9.56
Barley—								
Argentina.....	418	431	103.0	5,144	6,430	125.0	12.27	14.87
New Zealand.....	18	30	162.4	622	—	—	33.83	—
Oats—								
Argentina.....	2,869	2,505	89.4	53,884	70,853	131.5	18.89	27.55
Uruguay.....	83	—	—	978	1,945	198.8	11.81	—
New Zealand.....	288	380	132.0	13,118	14,593	111.2	45.66	38.58
Corn—								
Argentina.....	10,386	9,931	95.6	338,238	—	—	32.50	—
New Zealand.....	51	7	132.0	284	—	—	51.78	—
Flax—								
Argentina.....	4,258	4,001	94.0	44,309	39,266	88.6	10.36	9.88

New Zealand.—The area planted to potatoes in New Zealand for the season of 1915-16 is reported as 25,830 acres, as against 21,886 acres in 1914-15 and 28,084 acres, the average of the five years 1909-10 to 1913-14. The area is 18 per cent larger than in 1914-15, but 8 per cent below the five-year average.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	March 4		March 11		March 18		March 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 05½	— 1 11½	1 08½	— 1 13½	1 06	— 1 09½	1 07½	— 1 08½
No. 2 Nor.....	1 02½	— 1 08½	1 05½	— 1 10½	1 03	— 1 06½	1 05	— 1 05½
No. 3 Nor.....	1 00½	— 1 06½	1 03½	— 1 08½	1 01	— 1 04½	1 02½	— 1 03½
No. 4.....	0 99½	— 1 03½	1 00½	— 1 05½	0 98	— 1 01½	0 99½	— 1 00½
No. 5.....	0 91½	— 0 94½	0 91½	— 0 96½	0 89	— 0 92½	0 90½	— 0 91½
No. 6.....	0 84½	— 0 87½	0 84½	— 0 89½	0 76	— 0 80½	0 76½	— 0 77½
Oats—								
No. 2 C.W.....	0 37½	— 0 39½	0 39½	— 0 40½	0 40½	— 0 42½	0 41½	— 0 42½
No. 3 C.W.....	0 35½	— 0 37½	0 37½	— 0 38½	0 38½	— 0 40½	0 39½	— 0 40½
No. 1 Feed Ex.....	0 35½	— 0 37½	0 37½	— 0 38½	0 38½	— 0 40½	0 39½	— 0 40½
No. 1 Feed.....	0 34½	— 0 35½	0 35½	— 0 36½	0 37	— 0 38½	0 37½	— 0 38½
No. 2 Feed.....	0 33½	— 0 34½	0 34½	— 0 35½	0 36½	— 0 38½	0 37½	— 0 38½
Barley—								
No. 3 C.W.....	0 60	—	0 61	—	0 59	— 0 60	0 58	— 0 59
No. 4 C.W.....	0 55	—	0 56	—	0 54	— 0 55	0 53½	— 0 54
Rejected.....	0 50	—	0 51	—	0 50	— 0 51½	0 50	— 0 51½
Feed.....	0 50	—	0 51	—	0 50	— 0 51½	0 50	— 0 51½
Flax—								
No. 1 N.W.C.....	1 99½	— 2 04	2 05	— 2 06½	2 02½	— 2 05½	1 90½	— 2 03½
No. 2 C.W.....	1 96½	— 2 01	2 02	— 2 03½	1 99½	— 2 02½	1 87½	— 2 00½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1915 and 1916.

Grade and Market.	December		January		February		March	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 15	— 1 29	1 22	— 1 43	1 16	— 1 42	1 21	— 1 22
Chicago.....	1 17	— 1 28½	1 21½	— 1 39	1 10½	— 1 35½	1 21	— 1 21½
New York (f.o.b. afloat).....	—	—	—	—	—	—	1 27½	— 1 29½
Corn, No. 2 Mixed—								
St. Louis.....	0 65	— 0 75½	0 70	— 0 77	0 71½	— 0 77	0 73	— 0 73½
New York (f.o.b. afloat).....	0 79½	— 0 83½	0 72½	— 0 79½	0 80½	— 0 89½	0 83½	— 0 84½
Corn No. 2—								
Chicago.....	0 69½	— 0 75	—	—	0 71½	— 0 79½	0 75	— 0 75½
Oats, No. 2—								
St. Louis.....	0 39	— 0 44½	0 42½	— 0 52	0 40½	— 0 52½	0 44	—
Chicago.....	0 40½	— 0 44	0 43	— 0 51	0 41½	— 0 50½	0 43½	— 0 44
Rye No. 2—								
Chicago.....	0 94½	— 0 98½	0 97	— 1 04½	0 90	— 1 03	0 95	—

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	March 6		March 13		March 20		March 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian best hard.....	2 16½	— 2 18½	2 12½	—	1 97½	— 1 98½	—	—
“ No. 1 new.....	2 13½	— 2 15½	2 09½	— 2 10½	1 94½	— 1 95½	—	—
“ No. 2 “.....	2 10½	— 2 12½	2 06½	— 2 07½	1 91½	— 1 92½	—	—
“ No. 3 “.....	2 07½	— 2 08½	2 03½	— 2 04½	1 88½	— 1 89½	—	—
American best winter.....	2 06½	— 2 09½	2 00½	— 2 03½	1 91½	— 1 94½	—	—
“ poor winter.....	1 79½	— 1 82½	1 77	— 1 82½	1 77	— 1 82½	—	—
Durum.....	2 06½	— 2 09½	2 06½	— 2 09½	1 94½	— 1 97½	—	—
Californian.....	2 07½	— 2 10½	2 07½	— 2 10½	2 01	— 2 04½	—	—
Argentine.....	2 06½	— 2 09½	2 03½	— 2 06½	2 00½	— 2 03½	—	—
Australian.....	2 10	— 2 13	2 10	— 2 13	2 07	— 2 10	—	—
Oats (per bush.)—								
Canadian good.....	0 90½	— 0 93	0 90½	— 0 93	0 90½	— 0 93	—	—
American.....	0 88	— 0 88½	0 88	— 0 88½	0 85½	— 0 88	—	—
Buenos Aires.....	0 88½	— 0 89	0 84½	— 0 85	0 81	— 0 80½	—	—
Bahia Blanca.....	0 89½	— 0 90½	0 87	— 0 87½	0 83	— 0 83½	—	—
Flour (per 280 lb.)—								
Canadian good.....	12 15	— 12 41½	11 91	— 12 15½	11 42	— 11 66	—	—
“ common.....	11 18	— 11 42	10 94	— 11 18	10 45	— 10 69	—	—
American spring good.....	12 41	— 12 65	12 15	— 12 41	11 66	— 11 91	—	—
“ spring common.....	11 18	— 11 42	10 94	— 11 18	10 45	— 10 69	—	—
“ spring inferior.....	10 69	— 10 94	10 45	— 10 69	9 97	— 10 21	—	—
“ winter good.....	11 66	— 11 91	11 42	— 11 66	10 94	— 11 18	—	—
“ winter common.....	10 69	— 11 18	—	—	—	—	—	—
Californian.....	13 01	— 13 08	13 14	— 13 62	13 14	— 13 62	—	—
Australian.....	12 27	— 12 41	11 91	— 12 15	11 66	— 11 91	—	—

LIVERPOOL.

Description.	March 7		March 14		March 21		March 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1.....	2 14½	— 2 16	—	—	2 06½	— 2 08	2 04½	—
“ No. 3 new.....	2 11½	—	2 09½	— 2 10½	—	—	1 96	— 1 96½
“ No. 4 new.....	1 98½	—	2 02	—	1 89½	— 1 92½	1 87	— 1 87½
“ No. 5 new.....	1 96	—	—	—	—	—	—	—
Durum.....	1 87	— 1 88½	2 04½	—	1 94½	—	—	—
Hard Duluth No. 1.....	—	—	2 14½	—	2 04½	—	2 04½	—
Chicago Insp. No. 1.....	—	—	2 10½	— 2 11½	2 00½	— 2 02	2 00½	—
Blue Stem.....	—	—	2 02½	— 2 03½	—	—	—	—
Hard Winter No. 2 Gulf new.....	1 89½	— 1 97½	1 82½	— 1 84½	1 68	— 1 70½	1 66½	— 1 67½
Red Winter No. 2.....	—	—	1 88½	— 1 89½	1 72½	— 1 73½	1 67½	— 1 70½
Ch. white Delhi.....	—	—	—	—	1 93½	— 1 94½	—	—
Oats (per bush.)—								
Chilian white.....	0 93½	— 0 96½	0 90	— 0 95	0 90	— 0 93½	0 90	— 0 93½
“ black.....	0 86	— 0 86½	0 86	— 0 88½	0 86	— 0 88½	0 84½	— 0 86
“ grey.....	0 88½	— 0 90	0 88½	— 0 90	0 88½	— 0 89½	0 87½	— 0 88½
“ tawny.....	0 88½	— 0 90	0 88½	— 0 90	0 88½	— 0 89½	0 87½	— 0 88½
Flour (per 280 lb.)—								
Canada spring patents.....	11 54	— 11 78	11 42	— 11 66	11 06	— 11 30	11 30	— 11 54
America spring patents.....	11 66	— 11 91	11 54	— 11 78	11 18	— 11 42	11 42	— 11 66
America soft winter patents.....	11 54	— 11 78	11 42	— 11 66	11 06	— 11 30	11 30	— 11 54
Kansas patents.....	11 54	— 11 78	11 54	— 11 78	10 94	— 11 18	11 18	— 11 42
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33
“ middle cut.....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ fine cut.....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ pinhead.....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97

IV. Average Prices of British-grown Grain, 1916.

Week ended.	Wheat		Barley.		Oats.	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
January 1.....	54 9	1 67	47 5	1 38	30 10	0 82
" 8.....	55 8	1 69	47 8	1 39	31 5	0 83
" 15.....	56 7	1 72	48 6	1 42	31 11	0 85
" 22.....	57 2	1 74	49 6	1 45	32 6	0 86
" 29.....	58 0	1 76	51 0	1 49	32 11	0 87
Average.....	56 5	1 72	48 10	1 43	31 11	0 85
February 5.....	58 3	1 77	52 5	1 53	32 4	0 88
" 12.....	57 6	1 75	52 10	1 54	32 2	0 85
" 19.....	56 11	1 73	53 6	1 56	31 9	0 84
" 26.....	58 2	1 77	54 2	1 58	32 2	0 85
Average.....	57 9	1 76	53 3	1 55	32 1	0 86
March 4.....	59 4	1 80	55 7	1 62	32 4	0 88
" 11.....	58 2	1 77	55 6	1 62	32 3	0 86
" 18.....	57 9	1 76	55 4	1 61	31 10	0 84
" 25.....	55 11	1 70	54 6	1 59	31 4	0 83
Average.....	57 10	1 76	55 3	1 61	31 11	0 85

V. Average Prices of Imported Meat at British Markets, 1916.

(FRESH MEATS per cwt. of 100 lb.).

Description and Market.	March 1		March 8		March 15		March 22		March 29	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—										
Birmingham.....	15 44	13 18	15 44	12 71	15 72	13 18	15 72	13 18	—	13 18
Leeds.....	15 72	12 71	15 21	12 71	15 21	12 71	—	—	—	—
Liverpool.....	15 21	13 18	15 21	13 18	15 21	12 71	15 21	13 18	15 21	13 18
London.....	—	—	—	—	—	—	15 72	13 18	15 72	13 18
Manchester.....	15 21	13 18	15 21	13 18	15 21	12 71	15 21	13 18	15 21	13 69
Edinburgh.....	15 45	13 20	15 45	13 45	15 70	13 70	15 20	13 70	15 70	14 20
Glasgow.....	—	13 20	15 45	13 20	—	13 20	—	—	—	—
Argentine chilled—										
Birmingham.....	17 46	14 70	16 98	14 19	17 74	14 70	17 23	14 19	17 74	14 70
Leeds.....	16 73	13 69	16 98	13 94	16 98	14 45	16 98	13 69	17 23	14 19
Liverpool.....	17 23	14 19	17 23	15 21	17 23	14 19	16 73	13 69	16 73	14 19
London.....	16 98	14 19	16 48	13 69	17 23	14 45	16 98	13 69	17 74	14 70
Manchester.....	17 23	14 19	17 23	15 21	17 23	14 19	16 73	13 69	16 73	14 19
Edinburgh.....	17 20	14 70	16 70	14 20	17 70	14 75	17 70	14 70	17 70	15 20
Australian frozen—										
Birmingham.....	14 19	12 15	13 69	12 15	14 70	12 15	14 19	12 15	14 19	12 15
Liverpool.....	15 21	13 18	15 21	13 18	14 70	13 18	15 21	13 69	14 70	13 69
Manchester.....	15 21	13 18	15 21	13 18	14 70	13 18	15 21	13 18	14 70	13 69
Glasgow.....	15 20	13 20	—	—	—	—	15 20	—	15 20	—

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
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DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended April 30, 1916.

This, the first crop report of the present season, deals with the area and condition of the fall wheat crop, the condition of hay and clover meadows at the close of the winter and the progress of spring seeding up to the end of April.

AREA AND CONDITION OF FALL WHEAT.

Owing to the heavy fall of snow during the month of March, which protected the young plants from the spring frosts, the fall wheat is reported as being in exceptionally good condition at the end of April. In Ontario, where 820,600 acres were sown, as estimated last fall, not more than 5.6 per cent is reported as winter killed, and in Alberta with 260,500 acres estimated as sown, the proportion winter killed is placed at 4.9 per cent. These proportions are lower than in any previous year, on record for these provinces. In 1914 the percentage winter killed was 19 in Ontario and 15.6 in Alberta, while last year it was 6.8 in Ontario and 6.2 in Alberta. The area winter killed this year was 45,800 acres in Ontario and 12,800 acres in Alberta, as against 71,000 acres in Ontario and 14,300 acres in Alberta last year. The area of fall wheat to be harvested this year is placed at 774,800 acres in Ontario, 247,700 acres in Alberta, 9,400 acres in Manitoba, 4,100 acres in Saskatchewan and 6,200 acres in British Columbia, being a total for the Dominion of 1,042,200 acres, as against 1,208,700 acres in 1915 and 973,300 acres in 1914. The area estimated for the 1916 harvest was surpassed only twice since 1910, in 1911 (census) when it was 1,162,157 acres and in 1915 when it was placed at 1,208,700 acres.

The general condition of the crops on April 30, which measured by the standard of 100 as representing a full crop, is 89 in Ontario, as compared with 93 last year, and 78 in Alberta as compared with 83. For Ontario the figure was only surpassed last year and in 1910. The condition for the whole of Canada on April 30 was 88, which converted into a standard of 100 as representing the average condition at the same period for the seven years 1909 to 1915 indicated a condition of 108 or an anticipated yield per acre of 8 per cent in excess of the seven years' average, provided that conditions between now and harvest time are not abnormal.

HAY AND CLOVER MEADOWS.

The proportion of hay and clover meadows winter-killed proved to be unusually small, being only 3.5 per cent for all Canada as compared with 10 per cent last year, 14 per cent in 1914 and 22 per cent in 1913. The average condition was 92 per cent of the standard or full crop as compared with 91 per cent last year, 86.7 per cent in 1914, 89.6 per cent in 1913 and 74.6 per cent in 1912.

PROGRESS OF SPRING SEEDING.

It is as yet too soon to report on the Maritime Provinces. The spring is late, and the general conditions in Quebec and Ontario are not favourable for early planting. Last year on April 30, it was estimated that 63 per cent of the planting was completed as against 27 per cent this year. Of spring wheat this year 1.8 per cent of the estimated acreage was sown in Quebec, 4.3 per cent in Ontario, and from 26 to 80 per cent in the middle west, being 26 per cent in Manitoba,

I. Area sown to Fall Wheat, 1915, and Areas Winter-Killed as estimated on April 30, 1916.

Provinces	Area Sown 1915	Area Winter-killed		Harvest Area of 1916
	acres	p.c.	acres	acres
Ontario.....	820,600	5.6	45,800	774,800
Manitoba.....	9,400	—	—	9,400
Saskatchewan.....	4,100	—	—	4,100
Alberta.....	260,500	4.9	12,800	247,700
British Columbia.....	6,200	—	—	6,200
Total.....	1,100,800	5.3	58,600	1,042,200

II. Progress of Spring Seeding, 1911-16.

Crops and Provinces	April 30, 1911	April 30, 1912	April 30, 1913	May 6, 1914	April 30, 1915	April 30, 1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Spring Wheat—						
Quebec.....	24.0	3.0	12.3	5.3	54.8	1.8
Ontario.....	51.2	12.7	22.0	24.4	73.4	4.3
Manitoba.....	71.3	50.0	56.8	56.9	93.2	25.8
Saskatchewan.....	69.9	71.5	65.0	79.3	93.8	35.8
Alberta.....	80.6	61.3	74.2	87.9	91.2	79.5
British Columbia.....	—	—	—	—	88.6	65.9
Six provinces.....	58.5	38.5	43.0	47.8	93.9	27.4
Oats—						
Quebec.....	19.4	3.8	10.7	3.7	38.4	1.1
Ontario.....	44.0	13.9	40.9	43.5	63.2	4.1
Manitoba.....	6.0	17.3	35.8	5.9	29.9	1.2
Saskatchewan.....	7.8	17.0	8.0	13.5	28.5	2.7
Alberta.....	34.0	29.5	25.2	39.2	50.0	23.5
British Columbia.....	—	—	—	—	73.0	55.7
Six provinces.....	29.3	14.4	20.5	23.1	45.2	7.6
Barley—						
Quebec.....	16.7	2.4	7.0	3.5	44.5	0.5
Ontario.....	42.6	11.8	36.0	40.9	63.0	2.5
Manitoba.....	0.6	—	0.5	0.8	8.3	0.1
Saskatchewan.....	1.2	23.3	1.4	3.4	12.8	0.6
Alberta.....	13.0	25.8	10.5	17.0	28.2	6.2
British Columbia.....	—	—	—	—	66.7	23.0
Six provinces.....	24.3	10.4	13.7	16.1	38.3	2.7
Total seeding—						
Quebec.....	21.4	5.0	12.2	5.5	40.5	2.2
Ontario.....	44.0	15.0	40.0	40.5	62.7	5.8
Manitoba.....	47.0	36.6	22.4	32.9	63.0	15.3
Saskatchewan.....	47.3	49.3	40.5	48.6	70.2	21.7
Alberta.....	66.8	51.5	43.2	51.3	67.0	46.0
British Columbia.....	—	—	—	—	76.9	57.6
Six provinces.....	43.9	28.2	34.7	26.8	63.6	17.9

III. Condition of Hay and Clover Meadows, 1911-16.

Provinces	April 30, 1911	April 30, 1912	April 30, 1913	May 6, 1914	April 30, 1915	April 30, 1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada.....	89	75	90	87	91	92
Prince Edward Island..	82	73	90	95	95	92
Nova Scotia.....	94	91	96	85	94	91
New Brunswick.....	91	82	91	93	90	94
Quebec.....	94	50	86	84	90	90
Ontario.....	86	80	88	84	91	94
Manitoba.....	85	88	93	93	89	91
Saskatchewan.....	92	88	91	94	84	89
Alberta.....	94	96	94	93	94	95
British Columbia.....	93	98	96	96	96	94

IV. Condition of Fall Wheat, 1911-16.

NOTE:—100=Standard or full crop.

Provinces	April 30, 1911	April 30, 1912	April 30, 1913	May 6, 1914	April 30, 1915	April 30, 1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Ontario.....	81	71	83	81	93	89
Alberta.....	89	77	76	87	83	78
Canada.....	82	73	82	83	91	88

36 per cent in Saskatchewan and 80 per cent in Alberta. In 1915 not more than 8 per cent of the acreage under wheat remained to be sown after May first. The quantities of oats and barley sown at this date are also relatively small.

Census and Statistics Office,
Ottawa, May 12, 1916.

E. S. MACPHAIL,
Editor (Acting).

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—At May 1 practically no work had been done on the land, most reports agreeing that seeding would not commence till about the tenth of the month. Cold northeast winds have prevailed and driven the ice shorewards, which makes the atmosphere damp and chilly, and prevents the ground from drying out. Correspondents state that it is somewhat early to make reliable reports on the condition of meadows, but indications seem to show that damage from winter-killing is not serious.

Nova Scotia.—The spring has been cold and backward with little sunshine, so that the land will not be fit for sowing grains till the middle of May. The appearance of meadows seems favourable, but as growth is just commencing, it is hard to judge just how they have stood the winter.

New Brunswick.—There has been a late spring with little sunshine, so that in many districts the frost is not yet out of the ground. In other places ploughing and harrowing has commenced, but practically no seeding has been done. Hay and clover meadows look promising, the heavy snows of last winter protecting them from frost.

Quebec.—In all parts of the province the season has been backward. In some of the northern and eastern districts, owing to lack of rain, the frost is not yet out of the ground; and in other parts cold northeast winds have retarded vegetation. Reports state that it is too early to judge the condition of the meadows, but very few appear to have been winter-killed. Little seeding has been done, except in the districts about Montreal.

Ontario.—The season is an exceptionally late one, and the weather during April has been cool and dull, so that the land has not dried out, and by the end of April no seeding had been done except on high dry lands. Some ploughing has been done, and with warm bright weather seeding should be general early in May. Hay and clover meadows suffered very slightly from winter killing on account of the heavy snow covering, and though at April 30 vegetation was not so far advanced as usual, the condition was good. Fall wheat everywhere came through the winter in good condition with a very small percentage winter killed. In western and southern Ontario fruit prospects are good, and the late seeding season has allowed farmers to do a great deal of spraying. Labour is scarce which will result either in decreased acreages or poorer cultivation and lowered yields. Cattle will go on the pastures about the middle of May.

Manitoba.—The spring has been late and cold, and the land was slow in drying out as a result of the heavy snows of the winter. By the end of April much less seeding had been completed than for several years. The late start in seeding and the scarcity of farm labour will likely result in large areas being left fallow this year as many farmers are left single handed to get in the crops. Vegetation is rather backward for the time of year, but the tracts of wild hay are in good growing condition with the sloughs full of water.

Saskatchewan.—The season has been a very backward one. The great depth of snow melted slowly and soaked into the ground, which leaves the soil with plenty of moisture, but has delayed seeding operations. Warm weather is needed, as in places the ground is very sodden. In many parts, especially on clay lands, seeding had scarcely commenced when cold frosty weather, with snows, occurred on April 27, 28 and 29, interrupting the work. Little land was under summer fallow last year, and a very small amount of fall ploughing was done so that much wheat will be sown on stubble. The shortage of labour will lead to reduced acreages under crop. Prospects for hay meadows are good, owing to the amount of moisture in the soil.

Alberta.—Conditions in Alberta are much the same as in the other northwest provinces. In consequence of the heavy snow fall of last winter, seeding operations were somewhat late in starting. The land, however, was in excellent condition except on low grounds, and good progress was being made with the seeding of wheat. Bad weather on the last few days of April interfered somewhat with operations. Very little oats or barley have been sown yet. Much of the wheat has been put in on stubble, as little fall ploughing had been done. Fall wheat came through the winter in good condition with little winter killed. Hay and clover meadows are in fair condition.

British Columbia.—An unusually severe winter has been followed by a cold wet spring rendering the ground unfit for cultivation till much later than usual. However, at the end of April the spring work was progressing favourably. Grass on the ranges made good growth and a plentiful supply of water for irrigation purposes is available. Fruit trees suffered severely from winter killing.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during April range very much lower than for the corresponding period of 1915, the highest being 73.4, the lowest 18.0, and the mean temperature 43.25; compared with extremes of 87.2 and 25.0, and a mean of 49.68 a year ago. The precipitation amounts to 2.7 inches, consisting of 1.65 inch of rain and 10.5 inches of snow; compared with 0.99 of an inch in April 1915, made up entirely of rainfall. The bright sunshine averaged 5.86 hours a day, as against 6.98 hours for this time last year.

Although the first sowing of the season was done on the 26th, when some test plots of wheat and barley on high land were put in by the Cereal Division, practically all seeding remains to be done, as the soil, as a whole, is not yet sufficiently dry for such operations, and it will probably be the middle of May before grain seeding can be finished. Last year this work was completed by the end of April.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "Heavy snowfalls on April 2 and from the 8th to the 10th resulted in short periods of good sleighing. A very heavy rain occurred on the 5th, which removed most of the snow at that time and did much to draw out the frost. The greater part of April has been fine and cool. The ground firmed up rapidly, and the meadows were rolled on the 25th, three days earlier than in 1915. Most of the new meadows have wintered well, and, at the close of the month, there is a good appearance of grass and clover. The rivers opened up on the 18th, but large bodies of heavy Arctic ice in Northumberland straits and on the shores of the gulf of St. Lawrence have kept the days and nights cool and chilly. There is every indication that the season will be nearly as late as that in 1915. Beneficial rains and the gradual soaking in of the very heavy snowfall of March should be favourable to large grain crops. The absence of hard frosts at night has left the meadows in good shape, with very little spring heaving reported. The roads and driveways about the station have been repaired and graded, and are now in excellent shape for the spring traffic."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "April has been unusually dry, the precipitation amounting to only 2.34 inches, consisting of three snowfalls of about an inch each, and 2.04 inches of rain, of which 1.32 inch was registered in a few hours on the 5th, when the fields got badly washed. The temperatures recorded range about normal, and the month, on the whole, has been a seasonable one with a mean temperature of 39.81. Land naturally dry on

the front part of the Station was fit to work on the 24th, and some onions and lettuce were seeded on the 25th. Some plants of early cabbage and lettuce were also put out at this time. The field roots for seed were planted on the 26th. It was also possible to manure and prepare an acre for mangels on the 28th and 29th."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "April has been a typical spring month with less rainfall than usual and flurries of snow on four different days. The mean temperature is more than a degree lower than for this period a year ago, and the precipitation over an inch less. As a result of the melting of the heavy snowfall of February and March, the roads most of the time have been in exceptionally poor condition for traffic with both sleighs and wheels. The snows has melted quite gradually without causing serious damage by floods, and the frost has been drawn out of the ground quite evenly. The work that has been engaging attention at this Farm during the month, other than caring for live stock, poultry, and bees, has included hauling wood and logs; moving a mill to saw logs; sawing lumber; crushing grain; getting all implements and tools ready for spring work; chopping, and clearing land; piling brush and burning same; making hot-beds and caring for same; and cleaning up in general. All classes of live stock at the Experimental Farm are in good condition and doing well. Sixteen fat steers, averaging 1,300 pounds, were disposed of to a firm in St. John, N.B., at \$8.10 per 100 pounds, live weight, the average profit for the 93-day test being \$13.76 per animal, made up as follows:—

Good butchers heavy fed,	\$13.66	per steer.
" light fed	\$16.13	"
Good stockers, heavy fed	\$10.98	"
" light fed	\$14.28	"

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "While April has a forty-two year record at Fredericton of being the driest month in the year with only 2.8 inches of precipitation, the month just closed just halves the average, with a precipitation of 1.4 inch. There have been only five light storms; but there has been an almost continuous northwest wind, and a large proportion of cloudy weather. Except in very sheltered positions, there has been but little start in vegetation. The absence of hot sun and keen frost has been favourable to grasses, clovers, and fruit trees. Live stock have come through the winter in good shape. Poultry have been giving large egg yields, but the fertility of eggs seems weak and very poor hatches are reported. The very dry weather has injured stream driving operations in some sections, and considerable lumber is stranded in the streams. In the northern part of the province, a good depth of snow is yet reported in the woods and ice in the lakes is still solid, so there is hope that, with warm weather, the streams in that section will rise to good driving pitch."

Ste. Anne de la Pocatiere, Que.—Jos. Begin, Superintendent, reports: "April has been very dry, with a large amount of sunshine. The temperature has been normal; the mean is 37.7, compared with

39.4 in 1915. There have been neither very high nor very low temperatures. The snow disappeared entirely about the 12th. The precipitation amounts to only 0.94 of an inch and since the 17th there has been no rainfall at all. A strong wind has helped to dry up the ground during the last week of the month, and the season's ploughing started at the Station on the 27th. The seeding of grain was begun on April 28, on well drained rotation plots,—this is much earlier than usual in this section. There is not, however, likely to be any pasture available for a considerable time, for the ground is cold and the grass has not really started to grow yet."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "April has been warmer, drier, and brighter than the average of the last four years for the same month, the mean temperature being 40.05 degrees, the precipitation 1.72 inch, and the number of hours of sunshine 190.8; whilst for 1912, 1913, 1914 and 1915, the figures average, respectively, mean 35.24, precipitation 2.29 inches, and sunshine 184.7 hours. The strong northeast wind which blew continuously during the last eight days of the month, dried up the land quickly, and harrows will have to be used on ploughed ground very soon if there is no rain, to keep in store the moisture which is needed for germination and start in life of plants. Some potatoes and garden seeds have been sown at a few places in the district, on early sandy loam soils with a southern exposure, but no farm work has yet been commenced with the exception of a little ploughing. At the Station, the harrows have been kept going during the last week of the month to prevent the loss of too much moisture, and mangels, onions and peas were sown for cultural experiments and variety tests. Over four hundred chicks have been hatched and a number of early layers should be available out of the pullets for next winter. The bees were taken out about the middle of the month to afford them a chance of a flight and clean out the alimentary tract. All the sheep have been shorn and dipped. The precipitation of the month came when there was still snow on the ground, so is not likely to be of much help to this year's crops."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The weather during April has been fine, with a precipitation amounting to 2.34 inches. The mean temperature is 40.8, the highest 68.0, and the lowest 18.0, compared with a mean of 44.5, a highest of 79.0, and a lowest of 16.0, for April 1915. The ice went out of the river on the 2nd, with very little damage to the meadows. The country roads were almost impassable the first part of the month, but the bright, warm days, together with the rainfall, took the frost out very quickly, but, unfortunately, the roads have dried up very rough in places. All roads running through the farm have been graded, and the roadsides cleaned. Nearly all seeds have been sown in the hot-beds and the young plants are progressing very rapidly. Ploughing and harrowing began about the 21st, while drainage work was recommenced on the 26th. Young clover seems to be looking well in this district, and, by all appearances, the crop should be a heavy one. A sheep shearing and dipping demonstration, held at

the Station on the 29th, was attended by quite a number of farmers from the immediate surroundings, and all seemed to show a very keen interest in the sheep industry."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "April has been a cold, backward month, the mean temperature being only 34.77. The large amount of snow that was on the land at the beginning of the month took considerable time to disappear, and the soil did not get dry enough to work until the last few days of the month. Farmers are now getting a start at ploughing and discing, but very little seed has yet been got in. At the Experimental Farm, work on the land started on April 24, and a little seeding was done on the 26th; but much of the land is still too wet."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The month of April has been cold, with north and northwest winds predominating. As a consequence, the land has been slow in drying, and seeding operations have been held back to a great extent. Seeding commenced on the 20th and became general by the 24th. About 50 per cent of the wheat crop in this district has now been sown. The work at the Experimental Farm during the month has consisted chiefly in caring for the stock and poultry, cleaning seed grain, getting machinery into order for spring, caring for hot-house, and putting up potato samples for distribution this season."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The spring has been very slow in opening and so far, up to the end of April, no seeding has been done in the district, although harrowing on some farms has commenced. The condition of the soil seems excellent. There was no moisture in the land in the autumn and consequently it did not freeze, and snow covered the ground before very hard frosts set in, so that, apparently, the water from the melting snow in the spring went into the ground. Another evidence that, the ground absorbed most of the snow water is in the fact that, although there was a heavy snowfall during the winter, there has been no flood in the spring. Some difficulty was experienced early in April in obtaining sufficient competent labour, but towards the end of the month all the necessary men seemed available."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—"The weather during April has been cooler than usual, with an average mean temperature of 37.3, which is the lowest on record at this Station for this period. The hours of sunshine recorded also total less than usual. Strong, cold winds have prevailed, making it rather disagreeable. The first seeding at the Station was done on the 20th, which is ten days later than in 1915. Approximately, 60 per cent of the wheat in this district has been sown. A large part of the crop is being put in on burnt-off stubble land. Notwithstanding the long, severe winter, live stock appear to have come through in good shape, owing to the abundant supply of feed."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during April has been cool. Work on the land commenced on the 3rd and continued during the afternoons to the end of the first week in the month, and steadily thereafter. Wheat seeding

began on April 10th, and, at the Station, the seeding of all grains is well on toward completion at the close of the month. The grain is going in under satisfactory conditions, the soil working up readily and the supply of moisture being abundant."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The weather during April has been dry, and marked by rather an unusual amount of wind. The soil, in consequence, was beginning to dry out, but a rain and sleet storm during the last two or three days of the month, when .36 of an inch of moisture fell, materially improved conditions. Seeding operations are fairly well advanced on the 30th and, in the southern part of the Province, from 60 per cent to 75 per cent of the wheat had been seeded."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "During April, on only eight nights has the temperature been above freezing, the highest minimum temperature recorded being 36. Cold winds have been prevalent, and range cattle are having a hard time to find sufficient food. The severe winter has killed many varieties of tender fruits; but Wealthy, Duchess and McIntosh apple trees have, in most cases, come through in good condition. The clover on sheltered positions where the snow has remained all winter has come through in good condition, but at the Experimental Station and in other similar localities where the snow was blown off, in most cases the plant has been killed. The first asparagus was gathered at the Station on April 29th. The bees have been busy collecting pollen from the Anemones, and have now started gathering nectar from the shrub known as Kinnikinnik (*Cornus Amomum*)."

Agassiz, B.C.—P. H. Moore, Superintendent, reports:—"Another very wet, cool month has just been experienced which, following the wettest March in history, does not make conditions the very best for farmers. Since the Experimental Farm was established there has not been a spring so backward for seeding operations. Toward the close of the month a small amount of grain has been sown and a considerable quantity of land is partially prepared. Clover and grass have been making slow progress, but, except where winter-killed, they are making a good showing. The area of winter-killed clover and dry grass is not so great as was at first anticipated, and wherever there was any snow the crop was protected. There has been no frost during the month. Live stock at the Experimental Farm are all in good condition and sheep and young cattle have been turned to pasture. On account of the cool, wet weather, only a small amount of shearing has been done in the country, and the larger part of the wool clip is yet to be taken off. All spring litters and the general swine herd are in excellent condition. About 800 chicks have been hatched, all of which are doing exceptionally well."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: The climatic conditions existing during April have been such as to hinder rather than hurry seeding operations. Soils, where drained, have worked well. A large portion of the seeding has been done since the 15th, which is a month later than usual. Where grain was sown in March or early April, it has germinated

and grown well. Pasture grasses and clover fields have made satisfactory growth. Autumn cereals grew well during the month, and attained the following stages of development: Winter barley, twenty inches high, and coming into head; autumn rye, thirty-six inches high, and showing heads; autumn wheat, eighteen inches high; winter oats, twelve inches high. All fruit trees, small fruits, vines, and bushes are showing a great abundance of bloom, bees are active, and the fruit crop prospect is excellent. Flowering bulbs have given very satisfactory bloom. The hyacinths, daffodils and narcissi reached their best about the 20th, while the tulips were later than usual in developing into full bloom, and only have reached their best at the end of the month. Vegetable garden work has been delayed by cold, damp conditions. Alfalfa, where grown, attained a height of twenty inches during the month. The sale of farm produce, excepting potatoes, has been brisk."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of April are given in the following table:—

Meteorological Record for April, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	High-est	Low-est	Mean		Possible	Actual
Ottawa, Ont.	73.4	18.0	43.25	2.70	406	176.0
Charlottetown, P.E.I.	55.0	24.0	36.82	3.23	408	164.2
Kentville, N.S.	57.0	21.0	39.81	2.34	405	139.9
Nappan, N.S.	57.0	24.0	38.23	2.13	407	142.6
Fredericton, N.B.	64.0	10.0	40.90	1.41	407	169.3
Ste. Anne de la Pocatiere, Que.	59.6	18.4	37.70	0.94	409	218.0
Cap Rouge, Que.	63.0	17.2	40.05	1.72	409	190.8
Lennoxville, Que.	68.0	18.0	40.80	2.34	406	174.8
Brandon, Man.	65.1	-1.0	34.77	0.22	411	175.4
Indian Head, Sask.	77.0	0.0	35.83	0.82	416	120.6
Rosthern, Sask.	72.5	48.3	36.60	0.69	419	194.3
Scott, Sask.	74.2	9.1	37.30	0.52	418	178.8
Lacombe, Alberta.	71.8	17.9	40.93	0.54	420	201.1
Lethbridge, Alberta.	78.1	18.5	44.35	0.46	413	225.0
Invermere, B.C.	76.0	21.0	42.00	0.62	415	182.5
Agassiz, B.C.	69.0	34.0	48.51	6.30	413	91.8
Sidney, B.C.	61.0	32.0	46.49	1.52	411	155.6

Ottawa, May 12, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (April 1) that very wet and stormy weather, accompanied by much snow, has caused delay in all agricultural operations. The early sown winter wheat has generally withstood the bad conditions well and is satisfactory, though it has made no progress during the month and is mostly backward. Wheat on heavy land, or land subject to flooding, has suffered a good deal, while that sown late in the autumn is also

satisfactory. The area under wheat appears to be about seven or eight per cent less than last year. Winter oats and beans are mostly healthy and promising crops, although backward, but there are a number of exceptions, especially in the west. Preparation of the land for spring crops was almost at a standstill, and very little grain was sown.

France.—The Ministry of Agriculture reports that the generally cold and wet weather has interfered with spring sowing, excepting in the South. The planting of potatoes has gone on whenever the weather permitted. On the whole the appearance of the cereal crops is satisfactory.

Broomhall's Corn Trade News states that the condition of French Winter Wheat at the beginning of April was 69 compared with 69 a year ago, and 70 last month.

United States.—The Crop Reporting Board of the Department of Agriculture reports that on May 1st, 11·4 per cent of the acreage of the winter wheat had been abandoned, leaving 33,020,000 acres to be harvested. This is 18·4 per cent less than the acreage harvested last year. The average condition of winter wheat on May 1st was 82·4 compared with 78·3 on April 1, 92·9 on May 1, 1915, and 87·5, the average for the past ten years on May 1. A condition of 82·4 on May 1 is indicative of a yield per acre of approximately 15·1 bushels, assuming average variations to prevail thereafter. The average condition of rye on May 1 was 88·7 compared with 87·8 on April 1, 93·3 on May 1, 1915 and 90·6 the average for the past ten years on May 1. Stocks of hay on farms May 1 are estimated as 11,049,000 tons (13·0 per cent of crop), against 8,468,000 (12·1 per cent) on May 1, 1915, and 8,109,000 tons (12·1 per cent), the five year average on May 1. Of spring plowing 70·4 was completed up to May 1, compared with 78·3 per cent on May 1, 1915, and a ten year average on May 1 of 68·6. Of Spring Planting 56·7 per cent was completed up to May 1, compared with 65·3 per cent on May 1, 1915, and a ten year average on May 1 of 55·9.

New Zealand.—The wheat crop this year is officially returned at 7,309,020 bushels, against 6,644,336 last year, whilst the oats crop is 12,722,733 bushels against 11,436,301 bushels harvested a year ago. As the 1915 crops were insufficient for home consumption it is clear that little or nothing will be available for export from the 1916 crop.

South Africa.—The Official Crop Report states that the maize crop in a number of districts suffered from drought during January and February. It was not until the beginning of March that general rains fell, which probably saved much of the younger crops, but unfortunately it would appear that the first sown crops have suffered much and, in many cases, irretrievably. The estimated shortages in the various provinces, compared with the previous year, are as follows: Transvaal 27 per cent; Orange Free State, 9·6 per cent; Natal, 13·4 per cent; Cape of Good Hope, 35·6 per cent. Last year's crop was a record one, and the probable shortage, while serious enough, is, on present indications, not such as to warrant the belief that this year's production will be insufficient for the Union's requirements.

India.—The Department of Statistics, Calcutta, under date April 20, 1916, issued a special forecast dealing with the state of the Indian wheat crop up to the first week of April and referring to 98·6 per cent of the total wheat acreage of India.

The total area now reported is 30,100,000 acres (excluding Delhi which is unimportant) as compared with 32,148,000 acres for the same tracts at this time last year, or a decrease of 6·4 per cent. As compared with the final estimate of last year for the same tracts, the present estimate falls short by 6·6 per cent. The total estimated yield is 8,490,000 tons (excluding Delhi) as against 10,293,000 tons at this time last year, or a decrease of 17·5 per cent. As compared with the final estimate of last year for the same tracts, the present estimate shows a decrease of 1,779,000 tons or 17·3 per cent.

The failure of the winter rains seriously affected the crop, particularly on unirrigated areas in the Punjab, the United Provinces, the North-West Frontier Province, Ajmer-Merwara, Rajputana, Sind, and the northern parts of the Bombay Presidency. In the Central Provinces and Berar, Bihar and Orissa, Hyderabad, the Bombay Deccan, and in the eastern and southern parts of Central India, the weather conditions have, on the whole, been favourable.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The Bulletin of Agricultural and Commerical Statistics for April publishes the following information respecting the condition of winter sown crops on April 1, 1916, compared with March 1, 1916, and April 1, 1915. The condition is expressed numerically by a percentage scale in which 100 represents the promise of a yield equal to the average yield of the past ten years, supposing the crop not to be subjected to any extraordinary phenomena up to the time of harvest.

Conditions of Winter Wheat, Rye and Barley on April 1, 1916, compared with March 1, 1916, and April 1, 1915.

NOTE:—100=average yield per acre during the last ten years.

	WINTER WHEAT			WINTER RYE			WINTER BARLEY		
	April 1, 1916	Mar. 1, 1916	April 1, 1915	April 1, 1916	Mar. 1, 1916	April 1, 1915	April 1, 1916	Mar. 1, 1916	April 1, 1915
Denmark.....	100	100	101	100	100	104	-	-	-
Scotland.....	100	100	100	-	-	-	-	-	-
Ireland.....	85	98	100	-	-	-	-	-	-
Roumania.....	120	-	-	120	-	-	120	-	-
Switzerland.....	100	-	99	102	-	98	101	-	101
United States.....	90	-	-	98	-	-	-	-	-
Egypt (lower).....	102	103	107	-	-	-	103	104	99
Egypt (upper).....	102	102	102	-	-	-	102	101	104

Crops in the Northern Hemisphere.—In Italy during March rain was plentiful in the north, while dry weather prevailed in the south; taken as a whole weather conditions were favourable to growth. Preparatory work and spring sowing, which was already in hand in February, have been carried on during March under average conditions. Weather conditions in Roumania have remained favourable for winter sown crops, as well as for spring work, and have also become propitious for spring sowing, which is already in progress. In India there have been light showers in all the provinces and states except Mysore, which have materially benefitted the wheat crop. Towards the centre of India, the weather conditions have on the whole been favourable, and the wheat crop is generally reported to be good. Standing crops are generally doing well except in some unirrigated portions of the N.W. Frontier Province, Punjab, Rajputana and of Madras. More rain is urgently wanted in the Punjab, parts of Rajputana and Bengal. In Egypt the weather was generally favourable, though reported as having been rather cold and variable in the second half of the month in Beheira and Beni Suef. Water supply is sufficient and watering, especially of late sown fields, is in progress. Attacks from rust and smut, though very common, are rather mild and the damage is limited in extent. The general condition of the wheat and barley continues to be good. In Minia and the south the wheat crop is coming to maturity. Barley harvesting has begun in Upper Egypt and will shortly begin in Lower Egypt. The sowing of Cotton is early almost throughout the country and is either finished or approaching termination. The germination is generally reported to be very satisfactory.

Southern Hemisphere.—The yield of maize in Argentina is estimated as 161,134,000 bushels as compared with 338,238,000 bushels in 1914-15. Revised figures for Russia place the yield of maize in that country at 3,566,094,000 bushels as compared with 3,188,865,000 bushels in 1914. The total world's production of maize in 1915-16 is 3,727,228,000 as against 3,527,103,000 in 1914-15, an increase of over two hundred million bushels or 5·6 per cent.

Beet Root Sugar.—The following are preliminary figures of the production of raw beet root sugar, expressed in short cwt., from the beginning of the current campaign (Sept. 1st to Feb. 29): France (yield up to 15th March) 3,112,750; Netherlands, 5,268,372; Switzerland, 52,911. The final figures for the Netherlands in 1915 were 6,315,400 cwt. and for Switzerland 82,670 cwt. The production in Canada and the United States for the same period was 397,850 and 17,256,000 cwt. respectively.

THE WEATHER DURING APRIL.

The Dominion Meteorological Office reports that the mean temperature did not deviate very much from the normal in any part of the Dominion. Positive departures ranging between 1° and 3°

prevailed over a larger territory than did the negative, and included Alberta and western Saskatchewan, most of Ontario and Quebec and New Brunswick. The negative departures, which were generally less than 2°, occurred in parts of British Columbia, in eastern Saskatchewan and Manitoba, and in Nova Scotia and Prince Edward Island. Precipitation was considerably in excess of the average over western and southern Ontario, while elsewhere in the Dominion the departures were relatively small. In Manitoba the departures were very generally negative, while over the remainder of the West and in British Columbia, they were positive. From the Ottawa Valley east, the departures were negative, excepting only some parts of eastern Nova Scotia and the Island.

MALE POPULATION BETWEEN THE AGES OF 18 AND 45 YEARS, BOTH YEARS INCLUDED, IN CANADA AS SHOWN BY THE CENSUS OF 1911.

Owing to the great number of inquiries being received from various sources as to the numbers of males of Canadian, British and Foreign birth in each province of the Dominion who are between the ages of 18 and 45 years of age, the Census and Statistics Office gives the following tables which show for June 1, 1911 (1) the percentage of the totals between 18 and 45, in each province, who were Canadian, British or Foreign born; (2) the distribution per cent of the total of each class according to province of residence and (3) a general table which gives the figures for each province by single years of age according to nativity.

The first table is to be read crosswise and shows the proportion of the male population, 18 to 45 years, for Canada and for each of the nine provinces which was Canadian, British or Foreign born. The native born were 98·37 per cent of males 18 to 45 years in Prince Edward Island, 93·42 per cent in New Brunswick, 87·22 per cent in Nova Scotia or better than 90 per cent for the Maritime provinces as a whole. In Quebec the native born represents 87·44 per cent of the males 18 to 45 years of age; in Ontario 70·57 per cent. In all the Western provinces the native born constitute less than one-half of the males 18 to 45, being 40·62 per cent in Manitoba, 38·51 per cent in Saskatchewan, 30·46 per cent in Alberta and 26·23 per cent in British Columbia.

British born males are 18·38 per cent of the total males of this age period and from 24 to 34½ per cent in the provinces west of the Great Lakes.

The Foreign born males constitute the largest proportion of the males between 18 and 45 years in Alberta and British Columbia.

Table I. Percentage of the Male Population 18 to 45 years of age which was Canadian, British or Foreign born at the date of the Census, 1911.

Provinces.	Total	Canadian	British	Foreign
Canada	100.00	64.49	17.82	17.69
Prince Edward Island.....	100.00	98.37	0.93	0.70
Nova Scotia.....	100.00	87.22	8.57	4.21
New Brunswick.....	100.00	93.42	3.45	3.13
Quebec.....	100.00	87.44	5.90	6.66
Ontario.....	100.00	70.57	18.38	11.05
Manitoba.....	100.00	40.62	32.42	26.95
Saskatchewan.....	100.00	33.51	24.46	37.03
Alberta.....	100.00	30.46	26.00	43.54
British Columbia.....	100.00	25.23	34.57	39.20

In the next table the totals of Canadian, British and Foreign born of the ages of 18 and 45 years are distributed according to provinces on a percentage basis. The table is to be read vertically and shows that of the native born population of Canada Quebec contains 30.81 per cent and Ontario 37.04 per cent. Of the total British born males of this age period Ontario possesses nearly 35 per cent and the four Western provinces nearly 54 per cent. Of the total Foreign born males 18 to 45 years 21.15 per cent were located in Ontario, 20.39 per cent in British Columbia and over 47 per cent in the Middle West.

Table II. Distribution Per cent of each class of the Population 18 to 45 years according to Birthplace.

Provinces	Canadian-born	British-born	Foreign-born
Canada	100.00	100.00	100.00
Prince Edward Island.....	1.50	0.03	0.03
Nova Scotia.....	7.74	2.75	1.36
New Brunswick.....	5.79	0.77	0.71
Quebec.....	39.81	7.53	8.56
Ontario.....	37.04	34.93	21.15
Manitoba.....	4.49	12.99	10.87
Saskatchewan.....	5.51	12.69	19.34
Alberta.....	3.38	10.43	17.59
British Columbia.....	3.74	17.86	20.39

The population of the Yukon and the Northwest Territories are not included in the percentage of the preceeding statements nor are they included in the numbers of the following table:—

Table III. Male Population of Canada 18 to 45 years, of age, classified

—	Total 18 to 45	18	19	20	21	22	23	24	25	26	27	28	29
CANADA ¹	1,720,070	73,369	70,055	74,569	77,237	77,964	76,056	78,924	79,817	76,416	72,579	77,034	63,275
Canadian born...	1,109,383	56,265	52,470	52,869	53,456	51,690	49,234	49,263	47,519	45,561	43,330	45,210	37,526
British born.....	306,377	6,847	7,575	9,256	11,329	12,369	13,178	14,822	16,020	15,772	15,004	16,346	14,061
Foreign born.....	304,310	10,237	10,010	12,444	12,450	13,905	13,644	14,830	16,278	15,063	14,245	15,478	11,668
PRINCE EDWARD ISLAND	16,868	1,059	937	897	851	783	703	721	656	664	566	599	569
Canadian born...	16,592	1,073	922	883	839	772	695	709	644	655	557	591	563
British born.....	157	6	10	8	4	5	6	5	9	5	7	6	3
Foreign born.....	119	10	5	6	8	6	2	7	3	4	2	2	3
NOVA SCOTIA	98,493	5,091	4,751	4,697	4,406	4,535	4,161	4,217	4,152	3,820	3,780	3,911	3,240
Canadian born...	85,909	4,673	4,336	4,234	3,991	4,041	3,672	3,642	3,504	3,256	3,239	3,268	2,742
British born.....	8,437	239	262	311	309	335	327	367	434	350	362	424	324
Foreign born.....	4,147	179	153	152	166	159	162	208	214	214	179	219	174
NEW BRUNSWICK	68,710	3,906	3,551	3,513	3,100	3,030	2,827	2,912	2,724	2,701	2,483	2,849	2,140
Canadian born...	64,188	3,692	3,350	3,340	2,933	2,856	2,656	2,717	2,533	2,547	2,319	2,627	1,978
British born.....	2,371	113	111	80	78	100	94	94	91	74	90	124	64
Foreign born.....	2,151	101	90	93	89	74	77	101	100	80	74	98	68
QUEBEC	390,897	20,182	18,496	18,937	18,292	18,679	17,682	17,341	17,104	15,835	15,422	16,212	13,376
Canadian born...	341,783	18,681	17,047	17,288	16,681	16,683	15,754	15,232	14,566	13,715	13,261	13,773	11,346
British born.....	23,066	566	587	638	736	852	882	972	1,111	1,014	1,052	1,216	977
Foreign born.....	26,048	935	862	1,011	875	1,144	1,046	1,137	1,427	1,106	1,109	1,223	1,053
ONTARIO	582,246	25,399	24,550	24,963	26,482	25,498	24,796	25,951	25,623	24,811	23,758	24,857	20,805
Canadian born...	410,896	20,319	19,286	18,775	19,886	18,357	17,558	17,769	16,950	16,535	15,664	16,058	13,684
British born.....	106,997	2,829	2,996	3,451	4,012	4,093	4,372	4,887	5,105	5,006	4,987	5,313	4,704
Foreign born.....	64,353	2,251	2,268	2,757	2,584	3,048	2,866	3,295	3,568	3,270	3,107	3,486	2,417
MANITOBA	122,762	4,862	4,529	5,308	5,555	5,659	5,725	5,963	6,364	5,939	5,447	5,872	4,675
Canadian born...	49,868	2,664	2,410	2,515	2,659	2,457	2,434	2,297	2,413	2,145	2,011	2,110	1,706
British born.....	39,806	867	993	1,365	1,581	1,768	1,887	2,116	2,290	2,261	2,015	2,174	1,854
Foreign born.....	33,088	1,331	1,126	1,428	1,315	1,434	1,404	1,550	1,661	1,533	1,421	1,588	1,115
SASKATCHEWAN	158,907	5,380	5,520	6,620	7,426	7,719	7,857	8,368	8,575	8,313	7,885	8,151	6,705
Canadian born...	61,193	2,254	2,266	2,594	2,975	3,046	2,982	3,329	3,247	3,129	3,042	3,004	2,562
British born.....	38,871	847	1,010	1,289	1,682	1,767	1,890	2,115	2,154	2,233	2,005	2,190	1,989
Foreign born.....	58,843	2,279	2,244	2,737	2,769	2,906	2,985	2,924	3,174	2,951	2,838	2,957	2,154
ALBERTA	122,915	3,947	3,096	4,822	5,527	5,771	5,891	6,024	6,389	6,282	5,835	6,287	5,095
Canadian born...	37,446	1,823	1,284	1,546	1,707	1,700	1,786	1,746	1,826	1,800	1,615	1,900	1,474
British born.....	31,954	653	743	918	1,291	1,444	1,584	1,689	1,789	1,847	1,714	1,809	1,527
Foreign born.....	53,515	1,971	1,969	2,358	2,529	2,627	2,521	2,589	2,774	2,635	2,506	2,578	2,094
BRITISH COLUMBIA	158,272	3,513	3,725	4,792	5,538	6,290	6,414	7,427	8,230	8,051	7,403	8,296	6,670
Canadian born...	41,508	1,606	1,569	1,694	1,787	1,778	1,697	1,822	1,836	1,779	1,622	1,679	1,471
British born.....	54,718	727	863	1,196	1,636	2,005	2,136	2,577	3,037	2,982	2,772	3,090	2,609
Foreign born.....	62,046	1,180	1,293	1,902	2,115	2,507	2,581	3,028	3,357	3,290	3,009	3,327	2,590

¹Exclusive of Yukon and Northwest Territory.

according to nativity by Single Years and by Provinces, Census, 1911.

30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
82,855	55,941	63,004	53,781	53,398	63,822	51,610	45,873	52,889	42,356	60,509	35,947	44,063	35,361	35,856	45,530
47,094	33,915	33,720	34,449	34,423	39,058	32,998	30,225	34,396	28,224	37,808	23,930	29,521	24,433	25,097	30,677
18,264	12,093	12,589	9,840	10,029	12,273	9,451	7,895	9,290	7,535	11,029	6,477	7,754	5,881	5,694	7,634
17,497	9,933	11,695	9,492	8,946	12,491	9,161	7,753	9,183	6,547	11,672	5,540	6,788	5,047	5,065	7,219
658	472	524	439	508	563	460	467	502	432	603	398	474	391	428	514
648	468	522	432	494	550	449	454	492	426	590	389	466	384	422	503
3	2	-	6	9	6	5	9	7	3	7	5	6	5	5	5
7	2	2	1	5	7	6	4	3	3	6	4	2	2	1	6
4,335	2,728	3,483	2,967	3,067	3,549	2,952	2,733	3,224	2,702	3,648	2,170	2,740	2,177	2,304	2,893
3,622	2,365	3,008	2,560	2,899	3,019	2,534	2,410	2,819	2,385	3,133	1,871	2,361	1,922	2,059	2,544
452	276	314	269	281	341	282	230	276	219	348	240	271	185	194	235
261	87	161	138	107	189	136	93	129	98	167	59	108	70	51	114
3,013	1,919	2,286	2,056	2,096	2,472	2,037	1,894	2,248	1,829	2,530	1,436	1,882	1,574	1,535	2,167
2,732	1,787	2,149	1,918	1,955	2,258	1,903	1,767	2,102	1,696	2,354	1,321	1,767	1,467	1,434	2,030
112	80	81	73	67	99	77	63	83	67	86	67	69	60	57	87
189	52	56	65	74	115	57	64	63	66	90	48	46	47	44	50
16,907	11,762	13,640	12,943	12,009	13,682	11,508	10,735	12,201	9,813	13,183	7,854	10,298	8,256	8,478	10,070
13,998	10,079	11,570	11,289	10,430	11,451	9,984	9,412	10,402	8,620	10,914	6,933	9,014	7,366	7,629	8,665
1,386	847	986	709	730	1,023	721	628	831	629	1,071	476	709	481	440	746
1,523	836	1,084	945	799	1,208	803	695	968	564	1,198	445	575	409	409	569
26,556	18,534	20,752	17,768	18,250	21,499	17,841	15,915	18,567	15,049	20,908	13,247	16,169	13,214	13,615	16,849
16,600	12,630	14,230	12,422	12,918	14,609	12,631	11,508	13,282	10,779	14,399	9,730	11,802	9,864	10,233	12,343
6,011	3,954	4,169	3,415	3,529	4,128	3,396	2,838	3,450	2,959	4,069	2,473	3,015	2,361	2,431	3,044
3,945	1,941	2,353	1,931	1,893	2,702	1,814	1,569	1,835	1,311	2,440	1,038	1,352	989	951	1,462
6,542	4,104	4,562	3,830	3,698	4,583	3,490	3,000	3,537	2,715	4,220	2,427	2,762	2,268	2,209	2,917
2,145	1,533	1,736	1,549	1,545	1,747	1,353	1,166	1,393	1,099	1,611	1,003	1,112	1,002	921	1,132
2,427	1,560	1,621	1,276	1,222	1,534	1,117	924	1,096	890	1,204	782	876	646	639	841
1,970	1,011	1,205	1,005	931	1,302	1,020	910	1,048	726	1,405	662	774	620	649	944
8,565	5,917	6,157	4,939	4,639	5,872	4,608	3,905	4,171	3,180	4,860	2,635	3,060	2,433	2,222	3,175
3,191	2,267	2,464	1,939	1,876	2,198	1,738	1,464	1,522	1,252	1,813	953	1,110	929	839	1,208
2,363	1,719	1,602	1,218	1,230	1,445	1,171	996	1,019	757	1,085	682	769	554	463	627
3,011	1,931	2,091	1,782	1,583	2,229	1,699	1,445	1,630	1,171	1,962	1,000	1,181	950	920	1,340
6,847	4,387	4,830	3,762	3,856	4,744	3,632	2,974	3,480	2,792	3,996	2,301	2,642	2,003	2,062	2,651
2,029	1,357	1,504	1,165	1,215	1,453	1,078	938	1,082	909	1,244	764	816	621	677	887
1,978	1,246	1,303	1,035	1,028	1,269	926	755	873	722	967	587	649	488	478	622
2,840	1,784	2,023	1,562	1,613	2,022	1,628	1,281	1,525	1,161	1,765	1,040	1,177	894	907	1,142
9,432	6,118	6,770	5,077	5,225	6,858	5,082	4,250	4,939	3,844	6,561	3,389	4,036	3,045	3,003	4,294
2,129	1,420	1,537	1,175	1,291	1,713	1,328	1,106	1,302	1,053	1,750	990	1,073	878	883	1,365
3,532	2,409	2,513	1,839	1,903	2,428	1,756	1,452	1,655	1,339	2,172	1,185	1,390	1,101	987	1,427
3,771	2,289	2,720	2,063	2,031	2,717	1,998	1,692	1,982	1,447	2,636	1,244	1,573	1,066	1,133	1,502

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the Official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	April 1		April 8		April 15		April 22		April 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.....	1 09	—1 14½	1 12½	—1 19	1 13½	—1 16½	1 13½	—1 14½	1 13½	—1 17½
No. 2 Nor.....	1 06½	—1 12½	1 10½	—1 16½	1 11½	—1 14½	1 11½	—1 13	1 11½	—1 14½
No. 3 Nor.....	1 03½	—1 09½	1 07	—1 13	1 07½	—1 10½	1 07½	—1 09	1 07½	—1 10½
No. 4.....	1 00½	—1 07½	1 04½	—1 11	1 05	—1 07½	1 05½	—1 06½	1 05½	—1 08½
No. 5.....	0 91½	—0 98½	0 96½	—1 02½	0 96½	—0 99½	0 96½	—0 97½	0 97½	—1 00½
No. 6.....	0 83½	—0 90½	0 88½	—0 94½	0 88½	—0 91½	0 88½	—0 89½	0 89½	—0 93½
Feed.....	0 78½	—0 85½	0 83½	—0 89½	0 83½	—0 86½	0 83½	—0 84½	0 84½	—0 87½
Oats—										
No. 2 C.W.....	0 41½	—0 42½	0 42½	—0 42½	0 42	—0 43½	0 44½	—0 46½	0 45½	—0 40½
No. 3 C.W.....	0 39½	—0 40½	0 40½	—0 40½	0 40½	—0 41½	0 42½	—0 44½	0 43½	—0 44½
No. 1 Feed Ex.....	0 39½	—0 40½	0 40½	—0 40½	0 40½	—0 41½	0 42½	—0 44½	0 43½	—0 44½
No. 1 Feed.....	0 37½	—0 38½	0 38½	—0 39½	0 38½	—0 40½	0 41½	—0 43½	0 42½	—0 43
No. 2 Feed.....	0 37½	—0 38½	0 37½	—0 39½	0 38½	—0 40½	0 40½	—0 42½	0 41½	—0 42
Barley—										
No. 3 C.W.....	0 58	—0 61	0 59	—0 62½	0 59	—0 63	0 62	—0 63	0 61	—0 66
No. 4 C.W.....	0 53½	—0 56	0 54	—0 57½	0 54	—0 58	0 57	—0 58	0 56	—0 61
Rejected.....	0 50	—0 52	0 49	—0 52½	0 50	—0 55	0 55	—	0 54	—0 57
Feed.....	0 50	—0 52	0 49	—0 52½	0 50	—0 55	0 55	—	0 54	—0 57
Flax—										
No. 1 N.W.C.....	1 91½	—1 93	1 84½	—1 94	1 82½	—1 91	1 86½	—1 89½	1 77½	—1 85½
No. 2 C.W.....	1 88½	—1 90	1 81½	—1 91	1 79½	—1 88	1 83½	—1 86½	1 71½	—1 86½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	January		February		March		April	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 22	—1 43	1 16	—1 42	1 12	—1 22	1 16	—1 30½
Chicago.....	1 21½	—1 39	1 10½	—1 35½	1 21	—1 21½	1 17	—1 25½
New York (f.o.b. afloat).....	-	-	-	-	1 27½	—1 29½	1 25½	—1 35½
Corn, No. 2, Mixed—								
St. Louis.....	0 70	—0 77	0 71½	—0 77	0 73	—0 73½	0 73½	—0 76
New York (f.o.b. afloat).....	0 72½	—0 79½	0 80½	—0 89½	0 83½	—0 84½	0 83½	—0 86½
Corn, No. 2—								
Chicago.....	-	-	0 71½	—0 79½	0 75	—0 75½	0 74½	—0 79
Oats, No. 2—								
St. Louis.....	0 42½	—0 52	0 40½	—0 52½	0 44	-	0 42½	—0 45
Chicago.....	0 43	—0 51	0 41½	—0 50	0 43½	—0 44	0 44½	—0 47
Rye, No. 2—								
Chicago.....	0 97	—1 04½	0 90	—1 03	0 95	-	0 94	—0 97½

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	April 3		April 10		April 17		April 24	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian best hard	1 92½—1 94½		—	—	—	—	—	—
“ No. 1.	1 90—1 91½		1 94½—1 97½		1 92½—1 95½		1 87—1 90	
“ No. 2.	1 87—1 88½		1 91½—1 94½		1 90—1 92½		1 84—1 87	
“ No. 3.	1 84—1 85½		1 88½—1 91½		1 87—1 90		1 81—1 84	
American best winter	1 68—1 74		1 71—1 77		1 71—1 77		1 65—1 71	
“ poor winter	1 59—1 62		1 59—1 62		1 59—1 62		1 53½—1 56	
Californian	1 86½—1 92½		1 86½—1 92½		1 86½—1 92½		1 86½—1 92½	
Argentine	1 85½—1 91½		1 85½—1 91½		1 79½—1 85½		1 82½—1 88½	
Australian	2 01—2 04		2 01—2 04		2 01—2 04		2 01—2 04	
Oats (per bush.)—								
Canadian	0 80½—0 85½		0 81½—0 86½		0 88—0 90½		0 93—0 95½	
American	0 77½—0 82½		0 78½—0 84		0 82½—0 85½		0 85½—0 88	
Buenos Aires	0 75½—0 76½		—	—	—	—	—	—
Bahia Blanca	0 77—0 77½		—	—	—	—	—	—
Flour (per 280 lb.)—								
Canadian good	11 18—11 42		11 18—11 42		11 18—11 42		11 18—11 42	
“ common	10 21—10 45		10 21—10 45		10 21—10 45		10 21—10 45	
American spring, good	11 42—11 66		11 42—11 66		11 42—11 66		11 42—11 66	
“ common	10 21—10 45		10 21—10 45		10 21—10 45		10 21—10 45	
“ inferior	9 74—9 97		9 74—9 97		—	—	—	—
“ winter, good	10 45—10 94		10 45—10 94		11 18—11 42		11 18—11 42	
“ common	—	—	—	—	10 45—10 69		10 45—10 69	
“ inferior	—	—	—	—	9 74—9 97		9 74—9 97	
Californian	12 65—12 89		12 65—12 89		12 65—12 89		12 65—12 89	
Australian	11 18—11 42		11 18—11 42		11 42—11 66		11 42—11 66	
Japanese	10 94—11 18		10 94—11 18		11 18—11 42		11 18—11 42	

LIVERPOOL.

Description	April 4		April 11		April 18		April 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1.	2 08	—	2 02—2 03½		1 96—1 96½		1 92½—1 93½	
“ No. 1 insp.	—	—	—	—	—	—	1 87—1 88½	
“ No. 3.	—	—	—	—	—	—	1 81½—1 82½	
“ No. 4.	—	—	—	—	1 82½—1 83½		—	—
No. 1 hard Duluth	2 06½—2 08		2 00½—2 02		1 94½—1 95½		—	—
Nor. Chicago Insp.	2 00½—2 02		—	—	—	—	—	—
No. 2 hard winter	—	—	—	—	—	—	—	—
No. 2 hard winter, Gulf, new	1 69—1 70½		1 66—1 66½		1 65½—1 66		1 64½—1 67½	
No. 2 red winter	1 72½—1 75		1 71½—1 72½		1 71½—1 75		1 67½—1 70	
Blue Stem	—	—	1 86½—1 86½		1 83½—1 84½		1 82½—1 82½	
White Walla	—	—	1 83½—1 85		1 81½—1 81½		1 80—1 80½	
Oats (per bush.)—								
Chilian white	0 90—0 93½		0 90—0 93½		0 93½—0 95		0 93½—0 96½	
“ black	0 84½—0 86		0 84½—0 86		0 87½—0 88½		0 87½—0 88½	
“ grey	0 88½—0 89½		0 89½—0 90		0 90½—0 91½		0 90—0 93½	
“ tawny	0 88½—0 89½		0 89½—0 90		0 90½—0 91½		0 90—0 93½	
Flour (per 280 lb.)—								
Canada spring patents	11 42—11 66		11 42—11 66		11 42—11 66		11 42—11 66	
American “	11 54—11 78		11 54—11 78		11 54—11 78		11 54—11 78	
“ soft winter patents	11 42—11 66		11 42—11 66		11 42—11 66		11 42—11 66	
Kansas patents	11 42—11 66		11 42—11 66		11 42—11 66		11 42—11 66	
Oatmeal (per 240 lb.)—								
Canadian rolled oats	10 21—10 33		10 21—10 33		10 21—10 33		10 21—10 33	
“ middle cut	9 86—9 97		9 86—9 97		9 86—9 97		9 86—9 97	
“ fine cut	9 86—9 97		9 86—9 97		9 86—9 97		9 86—9 97	
“ pinhead	9 86—9 97		9 86—9 97		9 86—9 97		9 86—9 97	

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
April 1.....	53 6	1 63	53 8	1 57	30 5	0 81
" 8.....	51 8	1 57	53 7	1 56	30 1	0 80
" 15.....	53 2	1 62	53 1	1 54	30 7	0 81
" 22.....	55 3	1 68	52 10	1 54	31 8	0 83
" 29.....	56 3	1 71	53 5	1 56	32 4	0 86
Average.....	54 0	1 64	53 4	1 55	31 0	0 82

V. Average Prices of Imported Meat and Cheese at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.).

Description and Market	April 5		April 12		April 19		April 26	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	17 23	-	16 73	-	18 25	16 21	-	-
Liverpool.....	16 21	14 19	-	-	-	-	-	-
London.....	15 72	13 18	16 21	13 43	18 25	16 21	19 09	16 21
Manchester.....	16 21	14 19	-	-	-	-	-	-
Edinburgh.....	17 20	14 70	16 95	14 75	17 45	15 70	19 30	17 20
Argentine chilled—								
Birmingham.....	19 55	14 95	18 25	15 21	20 02	17 23	21 29	17 74
Leeds.....	17 74	14 70	18 25	15 21	19 77	16 48	20 53	17 46
Liverpool.....	17 74	15 72	17 74	15 21	17 74	15 21	20 78	18 25
London.....	17 74	14 70	18 25	15 21	20 28	16 73	21 29	17 46
Manchester.....	17 74	15 72	17 74	15 21	18 25	15 21	21 29	18 25
Edinburgh.....	17 75	15 45	18 80	15 95	19 25	17 20	21 00	17 70
Glasgow.....	-	15 20	-	-	-	-	-	-
Australian frozen—								
Birmingham.....	14 70	12 71	14 70	-	15 21	13 69	-	-
Liverpool.....	15 21	13 69	15 21	13 18	15 72	13 18	17 23	14 19
Manchester.....	15 21	13 69	15 21	13 18	16 21	13 69	17 23	14 19
Glasgow.....	15 20	-	15 70	-	16 20	15 70	16 70	-

GREEN BACON (per cwt. of 100 lb.)

Description and Market.	March 1		March 8		March 15		March 22		March 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—										
Bristol.....	19 56—18 47	20 00—18 01	20 44—19 56	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44
Liverpool.....	19 56—18 02	19 56—18 24	20 22—19 13	21 00—20 22	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44	21 22—20 44
London.....	20 00—18 69	20 00—18 69	20 44—19 13	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66
Glasgow.....	19 56—19 13	19 78—19 56	20 44—20 00	20 88—20 44	21 22—20 88	21 22—20 88	21 22—20 88	21 22—20 88	21 22—20 88	21 22—20 88
Canadian Cumberland cut—										
Liverpool.....	16 95—15 86	17 16—16 08	18 47—17 16	19 13—18 24	19 56—18 69	19 56—18 69	19 56—18 69	19 56—18 69	19 56—18 69	19 56—18 69
Danish sides—										
Bristol.....	21 22—20 88	21 66—21 22	22 54—21 66	23 42—22 32	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54
Liverpool.....	21 00—20 44	21 22—20 88	22 10—21 44	23 20—22 54	23 64—22 98	23 64—22 98	23 64—22 98	23 64—22 98	23 64—22 98	23 64—22 98
London.....	21 66—20 66	21 66—20 66	22 10—21 22	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32	23 20—22 32
Glasgow.....	21 22	- 21 22	- 21 66	- 22 10	- 22 54	- 22 54	- 22 54	- 22 54	- 22 54	- 22 54

GREEN HAMS (per cwt. of 100 lb.).

	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
Canadian long cut—																
Bristol.....	-	-	-	-	20	44	-19	56	20	88	-20	00	21	22	-20	44
Liverpool.....	20	00	-19	13	19	78	-18	91	20	22	-19	13	20	88	-20	00
London.....	20	00	-19	13	19	78	-18	69	19	56	-18	69	20	88	-20	00
American long cut—																
Bristol.....	18	02	-16	73	18	02	-16	73	18	47	-17	38	18	69	-17	81
Liverpool.....	17	81	-16	51	17	28	-16	40	18	24	-17	38	18	91	-18	24
London.....	18	24	-17	38	18	02	-16	95	18	69	-17	81	19	13	-18	47
Glasgow.....	18	24	-17	38	17	81	-17	38	19	56	-19	13	20	00	-19	56
American short cut—																
Bristol.....	18	47	-17	60	18	47	-17	60	18	91	-18	24	19	35	-18	69
Liverpool.....	18	47	-17	60	18	14	-17	28	18	91	-18	24	19	67	-18	91
London.....	18	24	-17	38	17	81	-16	95	18	47	-17	81	19	56	-18	69
Glasgow.....	17	60	-17	38	17	81	-17	60	19	13	-18	91	19	35	-19	13

CHEESE (per cwt. of 100 lb.).

	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
Canadian—																
Bristol.....	21	66	-20	88	22	10	-21	22	22	32	-21	44	22	76	-21	88
Liverpool.....	21	88	-21	00	22	00	-21	00	22	44	-21	55	22	76	-22	10
London.....	21	66	-21	22	21	66	-21	22	22	54	-22	10	22	98	-22	32
Glasgow.....	22	10	-21	66	22	10	-21	88	22	54	-22	32	22	76	-22	54
New Zealand—																
Bristol.....	21	22	-20	88	21	66	-21	22	22	10	-21	66	22	54	-22	10
London.....	21	00	-20	66	21	22	-20	88	22	10	-21	66	22	54	-22	10
Glasgow.....	21	22	-21	00	22	10	-21	66	22	76	-22	32	22	98	-22	54

GREEN BACON (per cwt. of 100 lb.).

Description and Market	April 5		April 12		April 19		April 26	
	\$	c.	\$	c.	\$	c.	\$	c.
Canadian sides—								
Bristol.....	21	44	-20	88	21	66	-21	00
Liverpool.....	21	44	-20	66	21	66	-20	88
London.....	21	66	-20	88	21	66	-20	88
Glasgow.....	21	66	-21	22	21	66	-21	22
Canadian Cumberland cut—								
Liverpool.....	20	00	-19	13	20	44	-19	56
Danish sides—								
Bristol.....	23	42	-22	54	23	64	-22	76
Liverpool.....	23	42	-22	76	23	42	-22	98
London.....	23	20	-22	32	23	85	-22	98
Glasgow.....	22	98	-		22	54	-	

GREEN HAM8 (per cwt. of 100 lb.).

Description and Market	April 5		April 12		April 19		April 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—								
Bristol.....	21 22	—20 44	21 66	—20 88	21 66	—20 88	21 66	—20 88
Liverpool.....	21 22	—20 44	21 44	—20 66	21 66	—20 88	21 66	—20 88
London.....	21 66	—20 88	21 66	—20 88	21 66	—20 88	21 66	—21 22
American long cut—								
Bristol.....	19 35	—18 47	19 78	—19 13	19 78	—19 13	19 78	—19 13
Liverpool.....	19 35	—18 69	19 78	—19 13	19 78	—19 13	19 78	—19 13
London.....	19 56	—19 13	19 78	—19 13	20 00	—19 56	20 00	—19 56
Glasgow.....	19 78	—19 35	20 22	—19 78	20 44	—20 00	20 44	—20 00
American short cut—								
Bristol.....	19 78	—19 13	20 22	—19 56	20 22	—19 56	20 22	—19 56
Liverpool.....	20 00	—19 35	20 11	—19 67	20 22	—19 67	20 22	—19 56
London.....	20 00	—19 13	19 78	—19 13	20 22	—19 56	20 22	—19 56
Glasgow.....	19 78	—19 56	20 00	—19 56	20 00	—19 56	20 22	—20 00

CHEESE (per cwt. of 100 lb.).

Description and Market	April 5		April 12		April 19		April 26	
	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.	\$ c.	¢ c.
Canadian—								
Bristol.....	23 20	—22 32	23 20	—22 32	23 42	—22 76	23 04	—22 98
Liverpool.....	22 98	—22 32	22 98	—22 32	22 98	—22 54	23 20	—22 54
London.....	23 42	—22 08	23 42	—22 08	23 42	—22 98	23 85	—23 42
Glasgow.....	22 76	—22 54	22 08	—22 54	22 98	—22 54	22 98	—
New Zealand—								
Bristol.....	22 98	—22 54	22 98	—22 54	22 98	—22 54	23 20	—22 76
London.....	22 54	—22 10	22 54	—22 10	22 98	—22 54	23 42	—22 98
Glasgow.....	22 76	—22 54	22 98	—	22 98	—	22 98	—

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DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended May 31, 1916.

This report by the Census and Statistics Office gives the usual preliminary estimate of the areas sown to grain crops in Canada and the condition of these crops as reported by correspondents on May 31. The reports show that the spring this year is late, and that heavy rains throughout the Dominion have in many places made it difficult to work the land. In Nova Scotia and New Brunswick the month was favourable to seeding, but in Quebec and Ontario seeding at the end of May was considerably behindhand, especially as compared with last year.

THE WHEAT CROP.

According to the preliminary estimates of correspondents, made in many instances before the completion of seeding, wheat in Canada this year will occupy a total area of 11,491,600 acres. This is 1,494,800 acres, or 11.5 per cent, below the high record of last year, when 12,986,400 acres were harvested, but 1,197,700 acres, or 11.6 per cent, above the harvested area of 1914, which was 10,293,900 acres. The area to be harvested of fall wheat for 1916 is 1,042,200 acres, leaving the area estimated to be sown to spring wheat as 10,449,400 acres. In the three Northwest provinces the area sown to wheat is estimated at 10,471,200 acres, as compared with 11,744,700 acres, the area of 1915, and with 9,335,400 acres, the harvested wheat area in the Northwest provinces for 1914. In Manitoba the area sown to wheat for 1916 is placed at 2,904,400 acres, as compared with 3,342,900 acres last year, in Saskatchewan it is 5,889,100 acres, as against 6,838,100 acres, and in Alberta 1,677,700 acres, as against 1,563,700 acres.

AREAS UNDER OTHER FIELD CROPS.

It is estimated that the area devoted to oats for 1916 is 10,499,500 acres, as compared with 11,365,000 acres in 1915. This is a diminution of 865,500 acres, or 7.6 per cent, as compared with last year, but an increase of 438,000 acres, or 4.3 per cent, as compared with 10,061,500 acres, the area harvested in 1914. The area sown to barley is estimated at 1,317,500 acres, as against 1,509,350 acres last year, the areas sown to other grain crops being as follows: rye 109,000 acres against 112,300 acres, peas 159,200 acres against 196,210 acres, mixed grains 395,000 acres against 466,800 acres. The acreage under hay and clover is reported as 7,963,000, as against 7,875,000 last year, an increase of 88,000 acres, and under alfalfa the acreage is 88,700, as against 92,600 last year.

CONDITION OF FIELD CROPS.

Measured in percentage of a standard of 100 as representing a full crop, the condition of the principal field crops on May 31 was as follows: Fall wheat 84, spring wheat 92, all wheat 90, oats 90, barley 89, rye 91, peas 90, mixed grains 89, hay and clover 98, alfalfa 94, pastures 97. Converting this scale into one wherein 100 represents the average condition at May 31 of the past six years 1910-1915, the condition of the principal grain crops may be expressed as follows: Fall wheat 101, spring wheat 98, rye 100, oats 97, and barley 97.

Census and Statistics Office,
Ottawa, June 13, 1916.

ERNEST H. GODFREY,
Editor.

I. Preliminary Estimate of Areas under Field Crops in 1916, compared with Areas harvested in 1915.

Field crops	1915	1916	Field crops	1915	1916
	acres	acres		acres	acres
Canada—			Quebec—con.		
Fall wheat.....	1,208,700	1,042,200	Barley.....	85,000	73,000
Spring wheat....	11,777,700	10,449,400	Rye.....	8,700	7,800
All wheat.....	12,986,400	11,491,600	Peas.....	24,400	22,400
Oats.....	11,365,000	10,499,500	Mixed grains....	101,000	90,500
Barley.....	1,509,350	1,317,500	Hay and clover	2,922,000	2,938,000
Rye.....	112,300	109,060	Alfalfa.....	2,860	2,700
Peas.....	196,210	159,265	Ontario—		
Mixed grains....	466,800	395,140	Fall wheat.....	972,000	774,800
Hay and clover	7,875,000	7,963,000	Spring wheat....	121,000	100,000
Alfalfa.....	92,685	88,735	All wheat.....	1,093,000	874,800
P. E. Island—			Oats.....	3,095,000	2,561,000
Spring wheat....	34,400	35,000	Barley.....	449,000	356,000
Oats.....	196,000	203,000	Rye.....	78,000	76,000
Barley.....	3,700	3,600	Peas.....	169,000	134,000
Peas.....	70	70	Mixed grains....	345,000	284,000
Mixed grains....	8,000	8,200	Hay and clover	3,082,000	3,131,000
Hay and clover	198,000	196,000	Alfalfa.....	60,000	54,000
Alfalfa.....	55		Manitoba—		
Nova Scotia—			Fall wheat.....	10,900	9,400
Spring wheat....	13,300	13,300	Spring wheat....	3,332,000	2,895,000
Oats.....	112,000	114,000	All wheat.....	3,342,900	2,904,400
Barley.....	4,900	4,600	Oats.....	1,441,000	1,442,000
Rye.....	300	360	Barley.....	490,000	445,000
Peas.....	190	185	Rye.....	5,800	5,800
Mixed grains....	4,100	4,000	Mixed grains....	1,550	1,100
Hay and clover.	538,000	537,000	Hay and clover	159,000	158,000
Alfalfa.....	30	25	Alfalfa.....	4,700	4,500
New Brunswick—			Saskatchewan—		
Spring wheat....	14,000	13,700	Fall wheat.....	4,100	4,100
Oats.....	201,000	208,000	Spring wheat....	6,834,000	5,885,000
Barley.....	2,100	1,900	All wheat.....	6,838,100	5,889,100
Peas.....	420	400	Oats.....	2,937,000	2,824,000
Mixed grains....	900	860	Barley.....	287,000	262,000
Hay and clover	569,000	575,000	Rye.....	2,700	3,700
Alfalfa.....	140	110	Peas.....	400	350
Quebec—			Mixed grains....	1,950	2,000
Spring wheat....	71,000	68,000	Hay and clover	67,000	70,000
Oats.....	1,400,000	1,237,000	Alfalfa.....	1,800	1,800

I. Preliminary Estimate of Areas under Field Crops in 1916, compared with Areas harvested in 1915—concluded.

Field crops	1915	1916	Field crops	1915	1916
Alberta—	acres	acres	British Columbia—	acres	acres
Fall wheat.....	215,700	247,700	Fall wheat.....	6,000	6,200
Spring wheat....	1,348,000	1,430,000	Spring wheat....	10,000	9,400
All wheat.....	1,563,700	1,677,700	All wheat.....	16,000	15,600
Oats.....	1,912,000	1,837,000	Oats.....	71,000	73,500
Barley.....	185,000	169,000	Barley.....	2,650	2,400
Rye.....	16,800	15,400	Peas.....	1,300	1,370
Peas.....	430	490	Mixed grains....	2,600	2,650
Mixed grains....	1,700	1,770	Hay and clover	167,000	168,000
Hay and clover	173,000	190,000	Alfalfa.....	12,100	12,600
Alfalfa.....	11,000	13,000			

II. Condition of Field Crops, May 31, 1916-16.

NOTE.—100=Standard or full crop.

Field crops	Per cent of standard condition						
	1910	1911	1912	1913	1914	1915	1916
Canada—							
Fall wheat.....	88	81	71	81	80	94	84
Spring wheat....	91	97	94	92	92	96	92
All wheat.....	90	92	87	89	91	95	90
Oats.....	94	95	92	92	93	92	90
Barley.....	93	93	91	91	92	92	89
Rye.....	88	90	87	88	89	91	91
Peas.....	93	92	84	88	92	93	90
Mixed grains....	95	94	88	90	93	91	89
Hay and clover..	98	91	96	81	90	86	98
Alfalfa.....	—	—	91	77	88	87	94
Pasture.....	—	—	—	85	90	87	97
P. E. Island—							
Spring wheat....	102	96	101	97	98	99	99
Oats.....	102	96	102	98	98	99	98
Barley.....	96	98	102	97	97	100	100
Peas.....	100	96	98	96	98	100	99
Mixed grains....	100	99	99	98	98	100	99
Hay and clover..	110	82	92	97	100	97	101
Alfalfa.....	—	—	90	40	83	93	—
Pasture.....	—	—	—	93	96	93	98
Nova Scotia—							
Spring wheat....	100	92	97	86	93	90	96
Oats.....	102	94	97	93	94	92	97
Barley.....	98	93	92	86	92	93	97
Rye.....	92	96	76	91	95	92	100
Peas.....	94	90	95	90	91	104	98
Mixed grains....	98	97	96	89	95	97	99
Hay and clover..	105	86	99	96	90	97	98
Alfalfa.....	—	—	84	100	72	90	88
Pasture.....	—	—	—	93	86	93	93
New Brunswick—							
Spring wheat....	100	92	98	92	97	98	99
Oats.....	103	93	97	92	98	96	99
Barley.....	94	86	94	84	92	78	97
Peas.....	97	83	96	82	97	82	92
Mixed grains....	96	90	93	89	93	84	98
Hay and clover..	108	87	100	88	100	90	100
Alfalfa.....	—	—	81	64	88	91	90
Pasture.....	—	—	—	83	95	84	97
Quebec—							
Spring wheat....	95	95	82	89	92	89	90
Oats.....	98	93	82	91	93	89	93
Barley.....	94	92	86	85	92	88	91
Rye.....	91	90	80	86	89	83	91

II. Condition of Field Crops, May 31, 1910-16.—con.

NOTE.—100= Standard or full crop.

Field crops	Per cent of standard condition						
	1910	1911	1912	1913	1914	1915	1916
Quebec—con.							
Peas.....	92	91	78	87	92	89	94
Mixed grains.....	96	92	79	90	92	90	92
Hay and clover.....	105	95	97	79	94	82	91
Alfalfa.....	—	—	86	76	91	79	94
Pasture.....	—	—	—	79	93	84	99
Ontario—							
Fall wheat.....	93	77	68	82	79	94	82
Spring wheat.....	94	97	89	90	91	93	85
All wheat.....	93	86	76	85	84	94	84
Oats.....	93	92	88	88	91	91	77
Barley.....	92	93	88	90	92	89	80
Rye.....	87	88	86	85	86	90	88
Peas.....	94	93	83	89	92	90	84
Mixed grains.....	93	94	81	89	93	91	82
Hay and clover.....	95	88	92	80	83	83	99
Alfalfa.....	—	—	91	73	87	86	94
Pasture.....	—	—	—	83	85	86	99
Manitoba—							
Fall wheat.....	80	100	87	70	96	89	82
Spring wheat.....	91	98	97	94	98	92	92
All wheat.....	91	98	96	92	98	92	91
Oats.....	92	96	97	94	94	90	92
Barley.....	92	98	98	93	94	93	90
Rye.....	81	96	94	100	100	89	90
Peas.....	92	99	97	88	100	98	100
Mixed grains.....	97	100	94	97	93	100	93
Hay and clover.....	84	99	98	92	97	75	95
Alfalfa.....	—	—	—	95	96	84	97
Pasture.....	—	—	—	95	97	75	96
Saskatchewan—							
Fall wheat.....	77	95	93	82	85	92	100
Spring wheat.....	96	98	96	92	94	104	91
All wheat.....	86	98	96	91	93	104	91
Oats.....	92	98	96	93	93	91	91
Barley.....	93	93	96	93	92	94	90
Rye.....	95	91	96	97	87	86	93
Peas.....	89	100	95	110	92	95	90
Mixed grains.....	96	96	93	97	93	102	109
Hay and clover.....	70	98	101	96	96	88	97
Alfalfa.....	—	—	96	90	93	88	100
Pasture.....	—	—	—	91	96	90	94
Alberta—							
Fall wheat.....	71	86	77	74	81	96	93
Spring wheat.....	85	97	96	94	92	98	94
All wheat.....	80	93	89	89	89	98	93
Oats.....	87	98	94	94	91	98	100
Barley.....	90	98	98	95	92	98	94
Rye.....	84	101	98	97	95	101	94
Peas.....	89	101	97	93	83	98	97
Mixed grains.....	80	99	99	98	90	98	98
Hay and clover.....	81	100	99	93	87	100	93
Alfalfa.....	—	—	92	86	86	96	93
Pasture.....	—	—	—	93	87	101	94
British Columbia—							
Fall wheat.....	91	95	94	97	88	98	85
Spring wheat.....	95	96	100	99	96	98	89
All wheat.....	93	96	97	98	94	98	88
Oats.....	90	96	100	98	91	100	92
Barley.....	94	96	100	95	96	97	87
Rye.....	100	100	100	—	108	99	87
Peas.....	95	94	94	100	93	100	88
Mixed grains.....	83	100	103	92	86	100	99
Hay and clover.....	89	98	101	96	98	102	89
Alfalfa.....	103	98	99	83	91	104	91
Pasture.....	—	—	—	95	102	101	88

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—Dry, cool weather during May has resulted in the slow growth of all crops, and some of the grain had not yet appeared above ground on May 31. Judging from the large quantity of buds all fruit seems to have wintered well and promises a good production. More garden vegetables have been planted than usual, but have made no growth so far. Warm rains would be beneficial to all forms of growth.

Nova Scotia.—May proved a favourable month for seeding, but warm rains are needed to promote growth. No damage resulted from frosts, and the grains that are above ground appear to be in good condition. At the end of May, fruit trees were just beginning to bloom and gave indications of good yields. Vegetables were just appearing above ground.

New Brunswick.—The weather during May was ideal for seeding, and the ground was in excellent shape when the seed was put in. The first half of the month was cold and dry, so that little growth resulted, but later on warm rains came and growth was rapid. Fruit trees were just coming into bloom at the end of the month and gave indications of fair yields. Garden vegetables were not far advanced. Slight frosts occurred, but with no appreciable damage.

Quebec.—Throughout the province the month of May has been cold, and it has been very wet during the latter half; consequently seeding operations have been greatly delayed. Moreover, on account of the heavy rains, crops which were sown early on low-lying land will in many cases have to be resown. Hay and clover are reported as in excellent condition, and promise bumper crops. Fruit bloom is particularly heavy, and no damage from caterpillars has been reported.

Ontario.—In all parts of the province May has been an abnormally wet, cool month, and by May 31 a considerable percentage of the grain was still unsown, except on high, dry land where the seed was sown early in the month before the heavy rains. Much land will have to be sown to later cereals such as buckwheat and millet, or left uncropped. Fall wheat has suffered somewhat from the cold, wet weather. Pastures and meadows are in splendid condition, and a heavy crop is looked for. Reports regarding orchard and garden fruits are very favourable, all commenting on the profusion of bloom on all kinds of trees and shrubs. With dry weather for proper pollenization and no severe frosts an enormous fruit crop should be harvested, as there has been scarcely any damage from insect pests. Gardens are not well advanced, many of the vegetables not being sown at the end of the month.

Manitoba.—Seeding, though rather later than usual, took place under fair conditions. As a result of the cool weather growth has been somewhat slow, but this has insured a uniform growth of strong plants with well-developed roots. No damage from frosts or insect pests is reported, and with warm, bright weather prospects for all crops are good. Fruit trees were well laden with bloom, and promise

well, except in a few cases where rabbits have caused damage. Vegetables are not so far advanced as usual, but are in good growing condition.

Saskatchewan.—By the end of May, wheat seeding was completed almost everywhere, and about 50 per cent of the oats sown. The grain went in under ideal conditions with very little damage from drifting soils. Towards the end of the month rains fell and delayed the sowing of oats, barley and flax. The season has been a cool one, and growth is not so far advanced as usual, though all crops are in healthy condition. Orchards suffered from the ravages of rabbits and mice. Gardens are backward. Warm, bright weather is needed to ensure rapid growth.

Alberta.—Seeding has been late and growth slow owing to the cold, wet weather. Wheat is not up so high as usual, but the root growth is excellent and with warm weather rapid growth should take place. Little damage has resulted from frosts or any other causes. Gardens are in good growing condition, though not so far advanced as usual. In places fruit trees suffered damage from frost, but a fair yield of fruit of all kinds is looked for.

British Columbia.—The season is from two to three weeks later than last year, being dry and cold with heavy frosts on the higher levels; as a result germination has been backward. A number of fruit trees have been winter-killed, but on others the bloom was plentiful and the fruit appears to be well set. Garden fruits are said to be in excellent condition, and a very good crop is assured. Vegetables are backward, and early potatoes have been damaged by frosts.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during May has been most abnormally wet, the precipitation amounting to 6.89 inches, compared with 1.86 inch last year. Of this amount, 3.73 inches fell within sixty hours, the rain starting shortly after midday on the 16th and continuing almost without cessation until after midnight on the 19th, 2.99 inches being recorded on the 17th. The highest temperature registered is 81.8, the lowest 33, and the mean 54, compared with 78.6 and 31.8, respectively, and a mean temperature of 51.83 in May a year ago. The bright sunshine averages 6.76 hours a day, as against 7.40 hours in the corresponding period of 1915.

At the beginning of the month the land was still quite wet, and the almost constant rains which have prevailed have so retarded cultural operations that, by the 31st, grain seeding is even yet not quite entirely completed. The season, on the whole, is probably at least three weeks later than usual. Practically all hoed crops have yet to be put in. Naturally, grass has made rapid growth, and the prospects for hay are excellent.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first week of May was dry and bright. The weather was cool,

owing to the large bodies of ice that lay along the northern and eastern shores of the province. The ice moved away about the middle of the month. Temperatures have been moderate, the thermometer only falling below freezing twice during the month. Light showers fell on eleven different days; these were not heavy enough to stop tillage operations and usually made the soil more mellow for working. Spring work on the land at this Station began on the 8th, and four fields were sown by the 13th, which is about a week earlier than for a number of years. The land remained in such excellent condition for tillage operations, and the amount of time lost was so slight, that at the close of the month practically all cereals have been sown, and the spring work is about a fortnight ahead of the two previous seasons. The grass and clovers, which wintered well, grew very slowly during the cool weather of the first half of the month; but they came on rapidly later and now give promise of a full crop. The deciduous trees appeared green on the 25th, three days earlier than in 1915."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The mean temperature for May is 49·07, compared with 46·14 in 1915. The month has been marked by a very even temperature throughout. The precipitation, totalling 1·78 inch, has been distributed evenly over the entire period, rain falling, mostly at night, on ten days. It has been exceptionally bright, the hours of sunshine being 186·8, as compared with 160·9 a year ago. The absence of heavy rains, coupled with some good drying winds, has enabled farmers to progress rapidly with their spring work, and the month closed with operations well advanced. The temperature registered a little below freezing on the 2nd, 15th, 16th and 22nd; but no severe frost has been recorded. During the last three days of the month, the second spraying, which takes place just before the blossoms open, has been general. Garden vegetables have made a good start. The grain and grass are doing exceptionally well, and all early sown crops are starting with vigour."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "Exceptionally fine weather has prevailed throughout the greater part of May. Light showers were experienced on five different days, giving a total precipitation of 2·42 inches, as compared with 4·43 inches for the corresponding period of 1915. The mean temperature is nearly three degrees higher than for the same month last year. As very little rain has been recorded during April and May and the weather has been fine with fairly strong westerly winds, the ground dried out very rapidly, and, consequently, farming operations started about two weeks earlier than in the previous year, and practically all grain has been sown before the end of May. Notwithstanding the cool days and nights, the prevailing fine weather, with scattered showers, has caused vegetation to make very satisfactory growth, and the present prospects are for a good grass crop. The late, wet fall last year necessitated much spring ploughing; otherwise seeding would have been finished much earlier than usual, and, unless the

summer should be too dry, the prospects are good for excellent crops of all kinds."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "The weather during May has been most favourable for seeding, and this work is more advanced at this date than for some years. The precipitation amounts to 2.9 inches; while the average for forty-two years for May is 3.3 inches. The hours of bright sunshine total 203.6, against an average of 204 for the last forty-two years. The highest temperature is 76 degrees, recorded on the 28th, and the lowest 31 degrees, on the 1st and 22nd. Frost has been registered three times during the month, but in low-lying sections nearby there was frost on several other nights also. The mean temperature is 50.2 against a forty-two year average of 51. While both April and May have been dry, there seems to be an abundance of moisture, and all crops, including grass, are growing well. At the Station, a much larger grain acreage than in any previous year has been seeded; potatoes and corn will be planted early in June; and a good deal of work in preparing new land for cropping has been accomplished. Live stock at the Station and throughout this section are in good condition. Many colts have been lost from premature foaling, but at the Station farm the mares have done well and the colt crop is most promising. The dry spring has been rather adverse to getting logs out on the streams, and a number of drives have been hung up. Most of the lumber cut, however, is reported in safe water."

Ste. Anne de la Pocatière, Que.—Joseph Begin, Superintendent, reports: "The temperatures recorded during May range a little lower than usual, the highest being 77.2, the lowest 29.8, while the mean is 47.5, compared with an average mean of 48.4 for the corresponding periods of the last three years. The bright sunshine recorded averages exactly six hours a day, being about an hour less than usual for this month. Precipitation has fallen on thirteen different days, totalling 3.47 inches, this being a little too much, as the ground was already well saturated. The first half of May was more or less favourable for sowing grain on well drained or gravelly soils, while the rest of the month has been decidedly unfavourable for seeding, owing to the frequent rains. At the Station, most of the grain was in the ground by the 9th, while the mangolds, carrots and turnips for seed were sown on the 5th, and the field roots and variety test plots were got in from the 8th to the 13th. Two acres of potatoes were planted on the 22nd. Four acres of Indian corn, in addition to the variety tests, have been planted during the latter part of the month. While there has been good pasturage, the weather has been so raw that the animals have been kept in to date. Prospects are favourable for hay, but, on the whole, rather poor for grain."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "The temperature during May has been a little higher than the average for the previous four years, whilst the precipitation is much greater and the sunshine less, the respective figures being, mean temperature 51.1 degrees, precipitation 6.36 inches, and sunshine 157.3 hours for 1915, and 50.30 degrees, 4.01 inches, and 211.7 hours being the

average from 1912 to 1915. Everybody is under the impression that May has been much colder than usual, but this is probably accounted for by the cloudy, wet weather, which has been so much in evidence during the month. Seeding operations have been delayed all through the district, on account of rain, and there is not much grain sown on June 1st. If the autumn is early, much of the oats will be light and of poor quality. At the Station, grain seeding was finished in good time, because the land is all tile drained. Over eight hundred chicks have been hatched, with a very low percentage of mortality. Four French Canadian colts and fillies were dropped during the month, all strong and healthy, probably because the dams have had reasonable and constant work. The precipitation cannot all be utilised by crops, as some of the rain fell very fast and a lot of water ran off over the surface. There is every appearance of a large hay crop."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The temperatures recorded during May are, generally speaking, similar to last year, the highest recorded being 80, the lowest 23, and the mean 51, compared with extremes of 73, and 26, and a mean of 48·8 in the previous year. The precipitation totals 4·20 inches, which fell on thirteen different days, compared with 1·72 inch last year. The heavy rainfall has retarded seeding to a great extent in this district, especially on the low-lying ground, but at this Station all the cereals have been sown and the potatoes have been planted. Hoed crops, such as Swedes, mangolds and silage corn, have not been put in yet. Grasses and clovers are looking well through this district, and a heavy hay crop is looked for. Grain is coming on very slowly. The steers on feeding experiment were sold and delivered during the early part of the month. The animals comprising the balance of the live stock at the Station are in good condition."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "May has been rather cool with a mean temperature for the month of 48·9. There has been an unusual amount of high wind, and considerable damage by soil-blowing has been done throughout the province. Seeding and other farm operations have been later in getting started than for several years, but the weather has been fairly favourable for work, and good progress has been made during the month. Most farmers in Manitoba will complete seeding in the first few days of June. The rainfall has been ample for the season, and, with a little more warmth, conditions for growth would be good. At the Experimental Farm, the seeding of cereals has been completed, except some oats for green feed. Corn planting is only partly done, as it has been delayed by cold weather and rain. The crops sown first are growing satisfactorily. A carload of steers, fattened during the winter, were sold at a good price, netting a very satisfactory profit over the cost of feeding."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "May has been cold and backward, with high winds and much rainfall. Wheat seeding was completed on the 23rd, but, owing to wet weather, considerable quantity of oats and barley remains to be sown."

All early sown grain is looking well, and, with warmer weather, the prospects for a heavy crop are excellent. The work on the Experimental Farm has consisted in seeding, ploughing and cultivating. With the exception of fodder corn, all grain and roots have been sown. The prospects for hay are good, as the heavy rainfall has given the meadows a fine start. Trees and shrubs are later in leafing out than usual. All bush fruits promise a heavy crop."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "More moisture has been experienced during the month than in any May since the establishment of this Station. The spring was late in opening up, which delayed growth and seeding operations. The excessive rainfall prevented operations on the land, so that a great deal of seeding is still unfinished on the 31st. The eighteen steers, purchased in November for experimental feeding, were sold on May 2nd to the highest bidder. These were a mixed lot of two-year and three-year-olds of different types. They were purchased at an average cost of \$5.38 per 100 lb., and sold at \$7.80 per 100 lb., weighed at the Station scales, after being fed and watered. The profit, after deducting the cost of hay at \$8 per ton and mixed oat and barley chop at one cent per lb., but not charging anything for labour nor crediting anything for manure, was \$304. There has been more winter-killing in the shrubs and trees and perennial flowers than any other winter in the history of this Station. Most of the Manitoba maples throughout the district are killed, and of the several thousand seedling apple trees that survived splendidly for two, three and four years, only about one hundred are left that are not seriously damaged by winter-killing."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The weather during May has continued unusually cool and backward. There was 0.77 of an inch of rain on the 7th, and rain has been recorded on seven different days between the 22nd and the 31st, the total for the month being 2.52 inches, which is the heaviest May precipitation recorded at this Station. The cool weather has retarded the growth of all kinds of vegetation, cereal crops being from two to three weeks behind last season. Germination, while considerably delayed, has been unusually uniform. Alfalfa has wintered well, but red clover, fall rye, and a few of the more tender perennial flowers have been winter-killed. Sheep breeders report considerable loss in the lamb crop, due to the unfavourable weather. At the Station, seeding was completed in good time. Breaking up new land is now engaging attention."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during May was cooler than last year, with a comparatively heavy precipitation, there being only three years since 1907 in which the rainfall has been greater than during May of this year. This comparatively heavy precipitation has been accompanied by relatively low temperatures, and in consequence the growth at the end of the month is rather backward. The acreage seeded to grain in this section of Alberta is less than in 1915 by possibly twenty per

cent, the difference in area under grain being left for summer-fallowing this season. The liberal supply of moisture already stored in the soil is generally believed to be sufficient to warrant the expectations of a full average crop, provided other weather conditions prove favourable. The completion of seeding operations will enable farmers in many districts to continue the marketing of last year's crop now that cars are available. In certain sections, a very large percentage of that crop is still to be moved."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The weather during May has been cooler than normal. For the first three weeks, strong west winds were prevalent, causing some damage to crops in the district by drifting the surface soil, necessitating re-seeding in some cases. The drifting seemed worse on finely worked summer-fallow and on burned stubble land which had been doubled-disked previous to seeding. This trouble ceased on the 21st, when general rains began. During the last ten days of the month, 3.14 inches of moisture has been recorded; so that on June 1st, except for the fact that the crops are about two weeks later than usual, the prospects are excellent. On the 28th, a mild hailstorm was experienced at the Station, but fortunately the area affected by the storm was limited in extent. No damage has resulted to field crops at the Station, but nearly all the apple blooms have been destroyed."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "May this year has been remarkable for the continued cold weather, which has retarded all growth, and at its close the crops throughout the district are at least a fortnight behind their condition at this time last year. During the latter part of the month the land has received a copious supply of moisture, and, if the temperature would moderate and seasonable weather ensue, rapid growth would no doubt follow. At the Station, the sowing of the cereal plots was completed in the first week of May, and, except for their backwardness, the condition of all crops is good. Cutworms are causing considerable damage to the young plants in the vegetable garden. Poison bait is being applied for their destruction. The currant bushes, which were badly attacked by red spider last year, have been sprayed with a lime-sulphur solution."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "During May the weather has continued cool and wet; in fact, two degrees of frost was recorded on one occasion, while none at all was registered in April. Consequently vegetation has made slow growth, and seeding operations, already belated, continued to be retarded; but now, at the close of the month, the only crop remaining to be planted is corn. Grain in reasonably well drained fields is showing a good stand, about five inches high. Clover on good land is about eight inches high; but pasture is very short. At the Agassiz Farm, all classes of live stock are in reasonably good condition. The sheep have been shorn and dipped, and the young animals are making good lambs on short grass pasture. In swine, there has been a big call for breeding stock at fair prices, and spring litters have been in

good demand. In the poultry department, approximately twelve hundred chicks have been turned out to range and all are doing well."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The unusual climatic conditions existing during May have hindered to some extent plant development in all spring-sown seeds. Autumn-sown crops, such as rye, wheat, barley, oats, kale, clover and alfalfa, have made excellent growth. Rye and barley headed early in the month, while winter oats were well headed by the 20th and wheat is coming into head during the last days of the month. Peas and kale sown in forage mixtures last September were in full development and bloom on the 24th. The success of all autumn-sown plants emphasises the necessity of constructive work with such crops. Seeding and planting throughout the district was several weeks later than usual. There has been an increase in acreage under hay and potatoes, with a corresponding decrease in the cereal acreage. Pastures, where not over-stocked, are in good condition. The cool weather during the period of bloom of bush and tree fruits has had its effect in reducing the crop prospects as regards these. Plums, cherries and currants have not set well; while apples, pears, peaches and berries have set abundantly. Thrip injury has been extensive where proper spraying has not been executed. At this Station, ten acres of rye were cut for hay on May 15th, producing a large quantity of good feed. Dairy and poultry products have been abundant during the month with prices below average."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of May are given in the following table:—

Meteorological Record for May, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	highest	lowest	mean		possible	actual
Ottawa, Ont.	81.8	33.0	54.00	6.89	462	209.7
Charlottetown, P.E.I.	65.0	30.0	47.36	2.08	465	209.4
Kentville, N.S.	70.0	29.0	49.07	1.78	461	186.8
Nappan, N.S.	70.0	26.0	48.09	2.42	463	186.2
Fredericton, N.B.	76.0	31.0	50.20	2.91	464	203.6
Ste. Anne de la Pocatière, Que.	77.2	29.8	47.50	3.47	469	186.2
Cap Rouge, Que.	75.0	31.2	51.15	6.36	468	157.3
Lennoxville, Que.	80.0	23.0	51.00	4.20	462	155.0
Brandon, Man.	78.1	20.1	48.90	1.59	478	187.5
Indian Head, Sask.	80.0	14.0	46.35	2.75	481	151.8
Rosthern, Sask.	75.3	51.2	46.40	2.49	494	193.3
Scott, Sask.	77.8	17.8	45.30	2.52	492	200.7
Lacombe, Alberta.	71.8	19.9	45.65	2.04	489	179.3
Lethbridge, Alberta.	77.2	22.0	46.95	3.77	477	230.4
Invermere, B.C.	71.0	26.0	46.50	2.89	481	179.1
Agassiz, B.C.	76.0	30.0	50.67	4.98	476	164.2
Sidney, Vancouver I., B.C.	74.0	32.0	52.10	0.73	473	251.9

Ottawa, June 13th, 1916.

J. H. GRISDALE,
Director, Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The English Board of Agriculture reports (June 1) that the wheat crop improved during the month, and is now generally healthy and vigorous, still, however, with the exception of some areas which had suffered from the wet during the winter. Barley and oats have germinated satisfactorily, and both are generally looking well, although in the north oats appear to be the better of the two; the late sown also is mostly not so good as that put in early. The area under barley is slightly less than in 1915, but that under oats is about the same. Beans are very generally a strong and healthy crop; peas are more variable, but are doing well on the whole in most districts. Potato planting has been very late, and is not yet completed in the north. Very little of the main crop is as yet showing above ground, but what is up appears to be satisfactory, and the early kinds are looking well. Very little damage from frost is reported. The area planted is somewhat below last year's acreage—perhaps by nearly 5 per cent. Reports of the hay crop, both seeds' and meadow, are universally good. Seeds' hay is expected to give a yield 5 to 10 per cent above the ten-year mean, and meadow hay should also be 5 per cent above the average. In both cases, also, the area intended for mowing is slightly above that of last year. Prospects for small fruit are generally good, strawberries, raspberries, currants and gooseberries all promising to be over average on the whole, although, as usual, several districts report poorer crops. Orchard fruit is less satisfactory, insect attacks doing considerable damage, more especially to apples and pears, which are expected to be below average, particularly in the southeast of the country; in the north, prospects are better. Plums promise about an average crop—poor in the southeast, but generally good elsewhere, while cherries are good. Pastures have now plenty of grass, and live stock have generally done well during the month. The deficiency of labour is still greatly felt, and it is difficult to keep the fields clean. Women are being employed to some extent in nearly every district.

New South Wales.—On May 5 the Government Statistician reported that since the publication of the December estimate (see the Census and Statistics Monthly for March, 1916, page 97), it has become apparent that farmers generally were too conservative in their quotations, and to such an extent that the mid-harvest estimate of 62,050,000 bushels has been exceeded by about $5\frac{1}{2}$ million bushels. The State, therefore, has produced a wheat crop of $67\frac{1}{2}$ million bushels, which is 29 million bushels in excess of the previous highest production in 1913-14. Notwithstanding the unfavourable results of the previous harvest, the farmers sowed with wheat an area of 5,172,649 acres, which was over one million acres in excess of the previous season's wheat area. The areas harvested for grain and hay have not been altered materially since the December estimate, but it appears that about 10,000 acres, originally intended to be cut for hay, were reserved for grain; also a further 5,000 acres, representing

uncollected returns, have been added to the grain area. The total production of wheat is therefore 67,323,390 bushels of grain and 1,242,409 tons of hay from 5,172,649 acres sown, of which 4,190,807 acres were reserved for grain and 887,454 acres were cut for hay. The yield per acre of grain is 16.1 bushels as against only 4.7 bushels in 1914-15 and 11.9 bushels in 1913-14. With a total production of 67,323,000 bushels, and allowing $15\frac{1}{2}$ million bushels for local consumption and seed requirements, there will be available $52\frac{1}{2}$ million bushels for export either as wheat or as its equivalent in flour.

South Australia.—According to the Board of Trade Journal of May 25, a report has been published by authority of the South Australian Government on the storage and handling of wheat in bulk in South Australia, from which it appears that the successful bulk system as used in Canada can be adapted to suit South Australian conditions. The report recommends that a system of elevators to handle 30,000,000 bushels in bulk should be built to serve the whole wheat country, and should be controlled by a Government Grain Commission. All the elevators should be fire-proof and should be planned for additions to their storage capacity. It is further recommended that permanent grain grades should be arranged in conference with representative departmental and commercial authorities from other Australian States, if possible.

France.—The French Department of Agriculture published on May 23 a report on the areas sown to the principal crops by May 1, 1916, as compared with 1915. The comparison shows a serious diminution in the areas sown, as is apparent from the following statement:

Crops	1915	1916	Decrease	
	acres	acres	p.c.	acres
Winter wheat.....	13,615,000	12,461,200	8.4	1,153,800
Spring wheat.....	527,000	402,000	23.7	125,000
All wheat.....	14,142,000	12,863,200	9.0	1,278,800
Meslin.....	257,200	250,000	2.8	7,200
Rye.....	2,569,400	2,287,200	11.0	282,200
Winter oats.....	1,914,000	1,717,000	10.3	197,000
Spring oats.....	6,427,200	5,807,100	9.6	620,100
All oats.....	8,341,200	7,524,100	9.8	817,100
Winter barley.....	370,000	254,000	31.3	116,000
Spring barley.....	1,289,100	1,194,700	7.3	94,400
All barley.....	1,659,100	1,448,700	12.6	210,400

The principal decrease is for wheat, the area of which in 1916 is less than in 1915 by 1,278,800 acres, or 9 per cent. Oats have decreased by 817,100 acres, or 9.8 per cent, rye by 282,200 acres, or 11 per cent and barley by 210,400 acres or 12.6 per cent. Comparing the area of all these cereals for 1916 with the year before the war, and deducting the territory occupied by the enemy, the total decrease amounts to 4,831,000 acres, or $16\frac{1}{2}$ per cent less than in 1914. Of this total,

wheat amounts to a decrease of 2,322,000 acres, or 15.3 per cent, less than the area of 1914, oats 1,623,500 acres less and the other cereals 884,600 acres less. These large decreases are due entirely to the war and the mobilisation of troops. It is too soon to forecast the yield of the forthcoming harvest, but the reduced areas sown indicate that there will be a considerable deficit as compared with the normal production of the country.

Russia.—Broomhall's Corn Trade News of June 6 states that according to a correspondent at Nicolaieff autumn sown crops came through the winter very well, and conditions were favourable for spring sowing. The correspondent was of the opinion that a further considerable shrinkage in the area sown was inevitable, but that this would not be very greatly felt as a very good yield per acre should be obtained. A later report states that very cold weather prevailed at the end of May, but previous to this cold spell moderately warm weather was experienced, owing to which both winter and spring crops were growing well. Very favourable reports had been received of spring crops in the Volga region where there is a big acreage under spring wheat.

United States.—The Crop-reporting Board of the U. S. Department of Agriculture states (June 8) that the total area sown to wheat for 1916 is 50,871,000 acres, as compared with 59,898,000 acres last year, a decrease of 9,027,000 acres, or 15.1 per cent. The acreage under winter wheat is 33,020,000 acres, and under spring wheat 17,851,000 acres. Oats occupy 40,599,000 acres, a decrease of 0.4 per cent over last year, and barley 7,757,000 acres, or 4.9 per cent more than last year. The acreage under rye is 2,729,000 acres, or 4.6 per cent less than last year. The following table gives the indicated yield for 1916 with comparative figures of condition and yield:

Crops	Condition in per cent of normal				Yield per acre		Total yield in millions of bushels	
	June 1, 1915	May 1, 1916	June 1, 1916	June 1, 10 year average	1915 (final)	1916 ¹	1915	1916 ¹
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Winter wheat.....	85.8	82.4	73.2	82.4	16.2	14.2	655	469
Spring wheat.....	94.9	—	88.2	93.9	18.3	13.8	357	246
All wheat.....	88.2	—	77.7	86.2	16.9	14.1	1,012	715
Oats.....	92.2	—	86.9	88.6	37.8	30.9	1,540	1,255
Barley.....	94.6	—	86.3	90.7	32.0	24.4	237	139
Rye.....	92.0	88.7	86.9	90.2	17.2	16.0	49	44
Hay.....	87.8	88.4	90.3	87.6	—	—	—	—
Pastures.....	91.3	85.2	93.4	89.0	—	—	—	—

¹Interpreted from condition reports.

The area of clover intended for hay is estimated to be 1.8 per cent larger than last year's.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

Areas under Cereals, 1916.—The Bulletin of Agricultural and Commercial Statistics for May gives the areas sown to the principal cereals in countries of the northern hemisphere for 1916, as compared with 1915, and with the five year average, 1909-13, as reproduced in acres in Table I.

I. Areas sown to Cereal Crops in the Northern Hemisphere 1915 and 1916.

Countries	1915	1916	Per cent of 1916 compared with 1915	Five year average 1909-13	Per cent of 1916 compared with the five-year average
	000 acres	000 acres	p.c.	000 acres	p.c.
Wheat—					
Denmark.....	164	164	100.0	114	144.8
Spain.....	—	9,878	—	—	—
France.....	13,615	12,441	91.4	16,160	77.0
Italy.....	12,502	11,762	94.1	11,722	100.3
Rumania.....	4,805	4,862	101.2	4,576	106.2
Sweden.....	—	285	—	234	122.2
Switzerland.....	114	122	107.1	105	116.2
Canada.....	1,294	1,101	85.1	948	116.1
United States.....	42,013	33,020	78.6	28,356	116.4
British India.....	32,148	30,100	93.6	29,218	103.0
Japan.....	1,250	1,520	121.6	1,197	127.0
Rye—					
Denmark.....	521	521	100.0	652	79.9
Spain.....	—	1,840	—	—	—
France.....	2,569	2,276	88.6	2,961	76.9
Italy.....	294	297	100.8	303	97.9
Rumania.....	169	198	116.1	—	—
Sweden.....	—	921	—	970	94.9
Switzerland.....	67	70	105.2	60	116.4
United States.....	3,153	3,058	97.0	2,236	136.7
Barley—					
Spain.....	—	4,310	—	—	—
France.....	348	246	66.6	—	—
Italy.....	608	608	100.0	613	99.2
Rumania.....	120	111	92.1	—	—
Switzerland.....	16	18	109.2	13	137.8
Japan.....	3,239	3,109	96.0	3,189	97.5
Oats—					
Spain.....	—	1,194	—	—	—
France.....	1,914	1,693	88.4	—	—
Italy.....	1,208	1,236	102.3	1,253	98.6
Switzerland.....	92	101	109.9	81	125.4

Condition of Cereals.—Table II shows the condition of wheat, rye, barley and oats, in the countries named, on May 1, 1916, compared with April 1, 1916, and with May 1, 1915. In this table condition is expressed numerically by a percentage scale in which 100 represents the promise of a yield equal to the average yield of the past ten years, supposing the crop not to be subjected to any extraordinary phenomena up to the time of harvest.

II. Condition of Cereals in Countries of the Northern Hemisphere on May 1, 1916.

NOTE.—100 = Average yield per acre for the previous ten years.

Countries	Wheat			Rye			Barley			Oats		
	May 1 1916	April 1 1916	May 1 1915	May 1 1916	April 1 1916	May 1 1915	May 1 1916	April 1 1916	May 1 1915	May 1 1916	April 1 1916	May 1 1915
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Denmark.....	-	100	96	-	100	99	-	-	-	-	-	-
Scotland.....	100	100	100	-	-	-	-	-	-	-	-	-
Ireland.....	85	85	101	-	-	-	90	90	101	95	-	101
Rumania.....	-	120	-	-	120	-	-	120	-	-	-	-
Sweden.....	112	-	-	98	-	-	-	-	-	-	-	-
Switzerland.....	101	100	98	102	102	98	101	101	99	101	-	99
United States.....	94	90	-	98	98	-	-	-	-	-	-	-
Lower Egypt.....	-	102	107	-	-	-	-	103	99	-	-	-
Upper Egypt.....	-	102	102	-	-	-	-	102	104	-	-	-

Southern Hemisphere.—The yield of corn in New Zealand is reported to be 350,000 bushels from 6,000 acres in 1915-16, as against 284,000 bushels from 5,400 acres in 1914-15. Of potatoes in New Zealand the yield is 5,600,000 bushels from 26,000 acres in 1915-16, as against 4,952,000 bushels from 22,000 acres in 1914-15. The yields per acre are for corn 58.31 bushels, compared with 51.78 and for potatoes 215 bushels against 226 bushels. In Uruguay the yields of grain for 1915-16 are in bushels as follows, the yields for 1915 being placed within brackets: Wheat 11,023,000 (3,596,000), rye 6,300 (900), barley 184,000 (39,600), oats 1,945,000 (878,000) and flaxseed 1,063,000 (588,000).

OCCUPATIONS OF THE PEOPLE OF CANADA.

Vol. VI of the Report on the Census of 1911, which has just been issued by the Census and Statistics Office, records the occupations of the people of Canada in that year and gives comparative figures for the preceding census years 1891 and 1901, and, for some data, 1881 as well. The information collected is presented by detail in six tables occupying 469 pages, preceded by an introduction in which the main points of the inquiry are epitomised and including 25 summary tables. The statistics were prepared under the direction of Mr. E. S. Macphail of the Census and Statistics Office, and the introduction was also written by him.

It is noteworthy that for the Census of 1911 the information collected on the schedule was for the first time in Canada compiled by machinery. Electrically driven sorting and tabulating machinery has enabled the Census Office considerably to augment the output of census data, to publish results with accelerated speed at less relative cost and with a minimum of errors necessary to be corrected before publication. The principle of the mechanical devices employed is explained in the introduction. Here we need only state that the use of tabulating machinery for the compilation of the census statistics is dependent primarily upon a card or record which is perforated in

certain positions corresponding to the data recorded by the enumerators on the schedules.

The report shows that out of a total population in Canada in 1911 of 7,179,650 (excluding 26,993, the population of the Yukon and Northwest Territories), the occupation was recorded of 2,723,634, representing nearly 38 per cent of the total population, and 49 per cent of the population of 10 years and over. Of the total engaged in gainful occupations in 1911 2,358,813, or 79·5 per cent, were males and 364,821, or 14·3 per cent, were females. In the following table is given the total number of workers classified by industries for each of the census years 1881 to 1911:—

Industries	1881	1891	1901	1911
	No.	No.	No.	No.
Agriculture.....	662,266	735,207	716,860	933,735
Building trades.....	230,873	185,599	213,307	246,201
Domestic and personal service.....	90,085	139,929	163,670	214,012
Civil and municipal government.....	7,938	18,267	17,306	76,604
Fishing and hunting.....	28,500	30,045	27,225	34,812
Forestry.....	8,116	12,812	16,764	42,914
Manufactures.....	161,535	227,080	274,175	491,342
Mining.....	7,160	16,127	28,650	62,767
Miscellaneous.....	13,005	—	490	—
Professional.....	48,461	62,623	83,219	120,616
Trade and merchandising.....	78,905	109,632	160,410	283,087
Transportations.....	40,741	69,048	80,756	217,544
Total.....	1,377,585	1,606,369	1,782,832	2,723,634

In commenting upon this table the report states that in the thirty years 1881 to 1911 the increase in the number of agricultural producers did not keep pace with the increase in population. In the 1881 Census 15·4 per cent of the total population was engaged in agriculture, in 1891 the percentage (15·3 per cent) was practically the same; in 1901 the proportion dropped to 13·5 per cent and in 1911 to 13 per cent.

From 1891 to 1911 the increase in the total population within the present limits of the nine provinces was 49·5 per cent. During the same period there was an increase of 27 per cent in the number employed in agricultural pursuits. But it must not be overlooked that the increase in time and labour-saving devices on the farm has been so extensive as to compensate to a large degree for the fact that the population employed in the primary production of foods has not kept pace with the increase in population. The increase in the number employed in the various manufacturing industries was 264,262, or better than 116 per cent in the same period. The distribution of commodities, wholesale and retail, required more than 2½ times as many persons in 1911 as were needed in 1891, while the transportation demands, land and water, of the country required the services of three men in 1911 where one person sufficed ten years previously.

A special and useful feature of the report is a detailed list of the occupations dealt with. This is arranged alphabetically as Table III, with the totals engaged in each occupation by sex and with reference to numbers and letters of the classified arrangement under which the main data are given in the succeeding tables. By consulting therefore Table III for any particular industry in its alphabetical order, and obtaining therefrom its group-number, the letter of the class and the number of the sub-class, the detailed information available for that industry may be readily found in the tables where such information is given.

AGRICULTURE IN SWEDEN.

To Sweden, one of the smaller neutral countries profoundly affected by the great war, the world is indebted for progress in many directions. Amongst numerous illustrious Swedes the mind recalls the names of Swedenborg, Celsius, Linnæus, and Jenny Lind the incomparable songstress; more recently we owe to G. de Laval the invention of the cream separator and to Alfred Nobel the munificent prizes of the Nobel Foundation.

A complete account of the natural resources and activities of Sweden has just been published in English by order of the Swedish Government. The work consists of two large illustrated octavo volumes of 1,540 pages, the first being devoted to the Land and the People and the second to Swedish Industries. It has been carried out by the Swedish Central Bureau of Statistics under the editorship of the late Dr. Gustav Sundbärg for the original edition and under the direction of Dr. J. Guinchard of the Stockholm Municipal Bureau of Statistics as Editor in Chief for the present English edition, assisted by a large number of experts and authors whose names are duly recorded in Vol. I.¹

Between Sweden and Canada there are points of resemblance in that both are northern countries with areas extending beyond the Arctic circle; both have large areas of water and streams dependent upon melting snows and both have rigorous climates producing hardy citizens. The Laplanders of Sweden may be compared with the Esquimaux of Canada. From this new Handbook the following particulars are derived, the metric denominations, however, being converted into the Canadian equivalents.

Area and Population.—Sweden occupies a total area of about 173,000 square miles. It is a little smaller than France or the German Empire, but is nearly half as large again as the United Kingdom. The population in Sweden in 1913 was returned as 5,638,583; but it is estimated that nearly two million Swedes live in other countries, including 1½ million in America. The density of population in Sweden is about 35 per square mile of land for the whole country, but in the south the density gradually increases to 129 per square mile.

¹Sweden: Historical and Statistical Hand Book, 2nd ed. English issue. Two Volumes, 8vo. Government Printing Office, Stockholm, 1914.

Agriculture.—Of the total land area, 14,289 square miles, or 9 per cent, is cultivated, 5,041 square miles, or 3·2 per cent, is natural meadow, 82,549 square miles, or 52 per cent, is in woods and 56,827 square miles, or 35·8 per cent, consists of other land. Altogether the total area devoted to agriculture exceeds 12 million acres. The areas devoted to the principal cereals were in 1911 as follows: Wheat 250,756 acres, rye 988,770 acres, barley 446,118 acres, oats 1,951,796 acres, meslin 403,858 acres and leguminous crops 100,975 acres.

The following table shows the yield of the principal cereals for each of the three years 1911, 1912 and 1913:

Year	Wheat	Rye	Barley	Oats	Meslin	Leguminous crops
	bush.	bush.	bush.	bush.	bush.	bush.
1911.....	8,004,000	23,343,000	13,292,000	67,406,000	10,810,000	1,972,000
1912.....	7,797,000	23,076,000	14,156,000	82,604,000	12,165,000	1,890,000
1913.....	9,330,000	22,266,000	16,912,000	93,945,000	14,486,000	1,970,000

In 1913 a preliminary estimate showed that the yields per acre were as follows: Wheat 31·08, rye 24·53, barley 40·15, oats 46·71, meslin 32·92 and leguminous crops 20·52 bushels. Sweden is not a wheat-exporting country; on the contrary the excess of imports of wheat, including flour, over exports was, in 1913, 7,757,246 bushels, as compared with 6,579,497 in 1912 and 6,646,955 in 1911. The acreage under potatoes in 1913 was 376,661 and the total production 75,367,952 bushels, an average per acre of 200 bushels as compared with the decennial average of 143 bushels per acre for the 10 years 1901–10. Of other root crops the total production in 1913 was 145,959,224 bushels from 259,884 acres, an average of 561 bushels per acre.

Live Stock.—From time immemorial stock-raising has been the principal industry of Sweden; but a new era commenced during the decade 1830–40, when better breeding stock began to be imported, especially from England. Cattle are bred principally for milk production, the leading breeds being the Alpine or North Swedish, the Swedish Red Polled, the Ayrshire, the Red and White Swedish cattle of central Sweden and the Black and White Swedish Lowland cattle of southern Sweden. Swedish farm horses have been improved by the importation for crossing purposes of the Clydesdale, the Percheron, the Pinzgauer and the Norwegian and Belgian horses. A few thoroughbreds are raised chiefly from English stallions. Native types of the farm horse are the Dalbo and North Swedish. Sheep and pigs also owe their improvement to stock imported from Great Britain, including the Cheviot for Gottland sheep, the Oxford Down, Shropshire and Southdown. The Large White breed of pigs has also been introduced from England. In 1911 the number of live

stock in Sweden was returned as follows: Horses 588,485, cattle 2,689,607, sheep, 945,709, goats 66,136, pigs 951,164, reindeer 276,084.

Dairying.—Dairying occupies an important place in connection with Swedish agriculture. In 1910 there were in Sweden 1,416 dairies, of which 550 were co-operative, 475 were dairies of companies, 278 were manor-farm dairies and 113 were manor-farm milk-purchase dairies. About the middle of the sixties J. G. Schwartz invented the ice method of creaming, which led to dairying on a large scale, and in the eighties a still greater revolution was effected by the invention of cream separating by machinery by G. de Laval. Butter occupies the first place amongst dairy products, and in 1910 the butter production of Sweden was 72,616,792 lb. In 1912 the total export of butter from Sweden amounted to 468,189 short cwt., of which 351,170 cwt., or 75 per cent, went to England, 97,107 cwt., or 20.74 per cent, to Denmark, 18,369 cwt., or 3.92 per cent, to Germany and 1,543 cwt., or 0.33 per cent, to other countries. The total cheese production of Sweden in 1910 was 22,346,171 lb. Only very small quantities of cheese are exported.

Dairying Implements and Utensils.—An important industry is that of the manufacture of dairying machines and utensils, especially of cream separators. Upwards of 130,000 separators are sold annually in all parts of the world where dairying is carried on. About half of these are manufactured at the great works at Stockholm known as the Aktiebolaget Separator, at which are employed 60 engineers and clerks and 1,000 men.

THE WEATHER DURING MAY.

The Dominion Meteorological Service reports that the temperature was nowhere above the average over the Dominion, except in the Gaspé peninsula where there was a positive departure of about 2°. On the other hand the temperature was nowhere much below the average, the largest negative departures, amounting to about 3°, occurring in British Columbia, Alberta and Saskatchewan. The precipitation throughout British Columbia was below the average also in the Maritime Provinces south of the Miramichi river, elsewhere over the large remaining portion of the continent it was above the average, and in nearly all localities to a very marked extent. The chief negative departures were 2 inches at Vancouver and 2.1 inches at St. John; and the chief positive departures were in the western provinces, 2.9 inches at Prince Albert; 1.8 inch at Medicine Hat; 1.1 inch at Battleford, and 1 inch at Swift Current; in Ontario, 2.6 inches at Parry Sound; 3.8 inches at Elora and Paris; 2.7 inches at Toronto; 3.4 inches at Kingston, and 4.4 inches at Ottawa; in Quebec, 3.2 inches at Montreal; 3.5 inches at Quebec and 2.1 inches at Brome.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and grade	May 6		May 13		May 20		May 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 16½—1 19½	1 18½—1 20½	1 15—1 19½	1 13—1 16½				
No. 2 Nor.....	1 14—1 17½	1 16½—1 18½	1 13½—1 17½	1 11½—1 15½				
No. 3 Nor.....	1 09½—1 13½	1 12½—1 14½	1 09½—1 14	1 07½—1 10½				
No. 4.....	1 06—1 10	1 08½—1 10½	1 04½—1 09½	1 02½—1 05½				
No. 5.....	0 98—1 02	1 00½—1 02½	0 98½—1 02½	0 96½—0 99½				
No. 6.....	0 91—0 95½	0 93½—0 95½	0 92—0 95½	0 91—0 94½				
Feed.....	—	—	0 86½—0 91½	0 85—0 88½				
Oats—								
No. 2 C.W.....	0 46½—0 47	0 46½—0 47½	0 47½—0 47½	0 46½—0 48½				
No. 3 C.W.....	0 44½—0 45	0 44½—0 46	0 46—0 46½	0 45½—0 47½				
No. 1 Feed Ex.....	0 44½—0 45	0 44½—0 45½	0 46—0 46½	0 45—0 47½				
No. 1 Feed.....	0 43½—0 44½	0 44—0 45½	0 45½—0 45½	0 44½—0 46½				
No. 2 Feed.....	0 42½—0 43½	0 43—0 44½	0 44½—0 44½	0 42½—0 45½				
Barley—								
No. 3 C.W.....	0 65—0 67	0 67½—0 68	0 67—0 68½	0 67½—0 68½				
No. 4 C.W.....	0 60—0 62½	0 63—	0 62—0 63	0 62—0 63				
Rejected.....	0 55—0 58	0 58—	0 55—0 58	0 55—				
Feed.....	0 51—0 58	0 58—	0 55—0 58	0 55—				
Flax—								
No. 1 N.W.C.....	1 70½—1 80½	1 69½—1 74½	1 65½—1 72	1 59½—1 66½				
No. 2 C.W.....	1 67½—1 77½	1 66½—1 71½	1 62—1 69	1 56—1 63½				

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	February		March		April		May	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 16—1 42	1 12—1 22	1 16—130½	1 22—1 24				
Chicago.....	1 10½—1 35½	1 21—1 21½	1 17—1 25½	1 22½—1 22½				
New York (f.o.b. afloat).....	—	1 27½—1 29½	1 25½—1 35½	1 29—1 31½				
Corn, No. 2, Mixed—								
St. Louis.....	0 71½—0 77	0 73—0 73½	0 73½—0 76	0 76—				
New York (f.o.b. afloat).....	0 80½—0 89½	0 83½—0 84½	0 83½—0 86½	0 86—0 86½				
Corn, No. 2—								
Chicago.....	0 71½—0 79½	0 75—0 75½	0 74½—0 79	0 77½—0 78½				
Oats, No. 2—								
St. Louis.....	0 40½—0 52½	0 44—	0 42½—0 45	0 43½—				
Chicago.....	0 41½—0 50½	0 43½—0 44	0 44½—0 47	0 45½—0 46				
Rye, No. 2—								
Chicago.....	0 90—1 03	0 95—	0 94—0 97½	0 97—0 97½				

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	May 1		May 8		May 15		May 22		May 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	1 84	— 1 87	1 84	— 1 87	1 86½	— 1 91½	1 84	— 1 87	1 81	— 1 82½
“ No. 2.....	1 81	— 1 84	1 81	— 1 84	1 85½	— 1 88½	1 81	— 1 84	1 78½	— 1 79½
“ No. 3.....	1 78½	— 1 81	1 78½	— 1 81	1 82½	— 1 85½	1 78½	— 1 81	1 75½	— 1 76½
American best winter...	1 65	— 1 71	1 65	— 1 71	1 65	— 1 71	1 65	— 1 71	1 77	— 1 79½
“ poor winter...	1 53½	— 1 56	1 53½	— 1 56	1 53½	— 1 56	1 53½	— 1 56	1 47	— 1 59
Californian.....	1 92½	— 1 95½	1 89½	— 1 92½	1 89½	— 1 92½	1 89½	— 1 92½	1 97½	— 2 01
Argentine.....	1 82½	— 1 88½	1 82½	— 1 88½	1 82½	— 1 85½	1 82½	— 1 88½	1 77	— 1 78½
Australian.....	2 01	— 2 04	1 97½	— 2 01	1 97½	— 2 01	1 94½	— 1 97½	1 94½	— 1 97½
Oats (per bush.)—										
Canadian.....	0 95½	— 0 98½	0 93	— 0 95½	0 93	— 0 98½	0 93	— 0 95½	0 93	— 0 94½
American.....	0 88	— 0 90½	0 88	— 0 90½	0 91½	— 0 93	0 91½	— 0 93	0 90	— 0 90½
Chilian.....	—	—	0 95½	— 0 98½	0 95½	— 0 98½	0 95	— 0 95½	0 95	— 0 95½
Flour (per 280 lb.)—										
Canadian good.....	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66
“ common.....	10 21	— 10 45	10 21	— 10 45	10 21	— 10 45	10 21	— 10 45	10 21	— 10 45
American spring good...	11 66	— 11 91	11 66	— 11 91	11 66	— 11 91	11 66	— 11 91	11 66	— 11 91
“ com.....	10 45	— 10 69	10 45	— 10 69	10 45	— 10 69	10 45	— 10 69	10 45	— 10 69
“ winter good.....	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66	11 42	— 11 66
“ common.....	10 69	— 10 94	10 69	— 10 94	10 69	— 10 94	10 69	— 10 94	10 69	— 10 94
“ inferior.....	9 74	— 9 97	9 74	— 9 97	9 74	— 9 97	9 74	— 9 97	9 74	— 9 97
Californian.....	12 65	— 12 89	12 15	— 12 41	12 15	— 12 41	11 18	— 12 15	11 18	— 12 15
Australian.....	11 42	— 11 91	11 18	— 11 66	11 18	— 11 66	10 94	— 11 42	10 94	— 11 42
Japanese.....	11 18	— 11 42	10 94	— 11 18	10 94	— 11 18	10 94	— 11 18	10 94	— 11 18

LIVERPOOL.

Description	May 2		May 9		May 16		May 23		May 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1.....	1 92½	—	1 89½	— 1 90½	1 88½	— 1 89½	1 76½	— 1 78½	1 69	— 1 69½
Nor. Man. No. 1 sea'bd insp.....	1 88	— 1 89½	1 88	— 1 88½	1 86½	— 1 87½	1 74	— 1 80	—	—
Nor. Man. No. 2.....	—	—	—	—	—	—	—	—	1 67½	— 1 67½
Nor. Man. No. 3.....	—	—	1 81½	—	—	—	—	—	1 63	— 1 64½
Nor. Man. No. 4.....	—	—	1 71½	— 1 75	1 71½	— 1 72	—	—	—	—
Nor. Duluth No. 1.....	1 82½	— 1 82½	1 80	— 1 81½	1 79½	— 1 80	1 72½	— 1 73½	1 66½	— 1 67½
Blue Stem.....	1 81½	— 1 81½	1 81½	— 1 81½	1 80½	—	1 79½	— 1 80	1 77½	— 1 78½
White Walla.....	1 78½	— 1 79	1 77½	— 1 78½	1 75	—	1 72	— 1 72½	1 71	— 1 71½
Hard winter No. 2 gulf new.....	1 65½	— 1 66½	1 65	— 1 65½	1 66½	— 1 67½	1 61½	— 1 64½	1 59½	— 1 60½
Red winter No. 2.....	—	—	1 75	—	1 71½	— 1 72½	1 66½	— 1 67½	1 63	— 1 63½
White winter.....	—	—	1 81½	— 1 81½	1 82½	—	—	—	—	—
Australian.....	1 94½	— 1 96	1 93½	— 1 94½	1 93½	— 1 95	1 80½	—	1 82½	— 1 83½
Oats (per bush.)—										
Chilian white.....	0 93½	— 0 96½	0 95	— 0 96½	0 98	— 0 99½	0 95½	— 0 96½	0 95	— 0 98
“ black.....	0 90	— 0 91½	0 90½	— 0 91½	0 95	— 0 95½	0 93½	— 0 95	0 91½	—
“ grey.....	0 91½	— 0 93½	0 93½	— 0 95	0 98	— 0 98½	0 96½	—	0 95	— 0 95½
“ tawny.....	0 91½	— 0 93½	0 93½	— 0 95	0 98	— 0 98½	0 96½	—	0 95	— 0 95½
Flour (per 280 lb.)—										
Canada spring patents...	11 42	— 11 66	11 30	— 11 54	11 30	— 11 54	11 06	— 11 30	10 94	— 11 18
America spring patents...	11 54	— 11 78	11 42	— 11 66	11 42	— 11 66	11 06	— 11 30	10 94	— 11 18
America soft winter patents.....	11 42	— 11 66	11 30	— 11 54	11 30	— 11 54	11 06	— 11 30	10 81	— 11 06
Kansas patents.....	11 42	— 11 66	11 18	— 11 42	11 06	— 11 30	10 81	— 11 06	10 69	— 10 94
Oatmeal (per 240 lb.)—										
Canadian rolled oats...	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33
“ middle cut....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ fine cut.....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ pinhead.....	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
May 6.....	55 7	1.691	53 1	1.076	32 10	0.871
" 13.....	55 5	1.685	53 5	1.083	33 1	0.877
" 30.....	55 0	1.673	52 10	1.071	33 0	0.875
" 27.....	54 7	1.660	52 9	1.070	33 4	0.884
Average.....	55 2	1.68	53 0	1.075	33 1	0.877

V. Average Prices of Imported Meat at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.)

Description and Market	May 3		May 10		May 17		May 24		May 31	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—										
Birmingham.....	18 76	16 73	19 09	17 23	21 29	—	21 29	—	—	—
Liverpool.....	—	—	—	—	—	—	21 29	19 09	—	—
London.....	19 09	15 96	19 77	16 73	20 78	17 23	20 78	17 23	—	—
Manchester.....	—	—	—	—	—	—	21 29	19 09	—	—
Edinburgh.....	—	17 20	20 00	17 70	21 00	18 80	—	—	21 00	19 30
Argentine chilled—										
Birmingham.....	21 29	17 46	—	—	22 63	18 25	22 56	18 76	23 07	19 33
Leeds.....	20 78	16 98	21 29	17 23	22 30	18 25	22 30	19 55	—	—
Liverpool.....	21 80	18 25	22 30	19 09	22 30	18 25	—	—	—	—
London.....	21 29	17 23	23 32	18 50	22 30	17 46	21 80	17 74	22 63	19 09
Manchester.....	21 80	18 25	22 30	19 09	22 63	18 25	—	—	—	—
Edinburgh.....	21 00	17 70	21 00	18 80	—	—	—	18 80	—	—
Australian frozen—										
Birmingham.....	—	—	17 23	16 21	18 76	16 73	18 76	16 73	—	—
Liverpool.....	18 25	15 21	19 09	15 72	19 09	17 23	19 09	17 23	19 09	17 23
Manchester.....	18 25	15 21	19 09	15 72	19 09	17 23	19 09	17 23	19 09	17 23
Glasgow.....	16 70	—	—	—	—	—	—	—	—	—

GREEN BACON (per cwt. of 100 lb.).

Description and Market	May 3		May 10		May 17		May 24		May 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—										
Bristol.....	22 10—21 44	21 88—21 22	21 66—21 00	21 22—20 66	20 88—20 22	20 88—20 22	20 88—20 22	20 88—20 22	20 88—20 22	20 88—20 22
Liverpool.....	22 10—21 22	22 10—21 22	22 24—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22
London.....	22 10—21 22	22 10—21 22	22 24—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22	22 10—21 22
Glasgow.....	22 10—21 66	22 10—21 88	21 88—21 66	21 44—21 22	—	—	—	—	—	—
Canadian Cumberland cut—										
Liverpool.....	21 00—20 22	20 88—20 22	20 44—19 56	20 00—18 91	19 78—18 69	19 78—18 69	19 78—18 69	19 78—18 69	19 78—18 69	19 78—18 69
Glasgow.....	—	—	—	—	—	—	—	—	—	—
Danish sides—										
Bristol.....	24 29—23 64	24 29—23 64	24 29—23 64	24 08—23 42	23 64—22 96	23 64—22 96	23 64—22 96	23 64—22 96	23 64—22 96	23 64—22 96
Liverpool.....	24 29—23 86	24 29—23 64	24 29—23 42	24 29—23 42	23 86—22 96	23 86—22 96	23 86—22 96	23 86—22 96	23 86—22 96	23 86—22 96
London.....	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98	23 86—22 98
Glasgow.....	23 64—23 42	23 64—23 42	23 42	—	23 20	—	23 20	—	23 20	—

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended June 30, 1916.

In this report the Census and Statistics Office estimates finally the areas sown to the principal field crops in Canada for the season of 1916, records the condition of grain and hay crops at the end of June and gives estimates of the numbers of farm live stock at the same date.

AREAS SOWN TO FIELD CROPS.

The reports received from correspondents at the end of June are confirmatory of the estimates issued a month ago, when seeding had not been completed. What differences exist are in almost all cases caused by slightly higher returns this month. The area sown to wheat in Canada is now definitely estimated at 11,517,600 acres, which is 1,468,800 acres, or 11·3 per cent, below the high record of last year, when 12,986,400 acres were harvested; but 1,223,700 acres, or 11·9 per cent, above the harvested area of 1914, which was 10,293,900 acres. The acreages estimated as sown to other crops are as follows: Oats 10,644,000 as against 11,365,000 last year; barley 1,397,900 against 1,509,350; rye 159,680 against 112,300; peas 101,420 against 196,210; mixed grains 410,770 against 466,800; hay and clover 7,974,000 against 7,875,000; alfalfa 89,900 against 92,630. Of late sown crops the acreages are as follows: Buckwheat 356,500 against 343,800 in 1915; flax 723,000 against 806,600; corn for husking 183,700 against 253,300; beans 34,500 against 43,310; potatoes 448,800 against 478,600; turnips, etc. 156,200 against 172,700; sugar beets 15,000 against 18,000 and corn for fodder 297,100 against 343,400.

CONDITION OF GRAIN AND HAY CROPS.

The reports show that the prospects for grain crops are excellent throughout the West, but owing to the lateness of the season there will be a greater risk of damage from early frosts than last year. For all Canada the condition of the principal grain crops, expressed in percentage of the standard, ranges from 82 for peas to 91 for rye; but in the Northwest provinces the condition is well over 90, and for Manitoba and Saskatchewan it is even higher than at the same date last year, when the high promise at the end of June was so abundantly fulfilled. Converting the figures in per cent of a standard of 100 to the scale in which 100 represents the average condition on June 30 of the past eight years, 1908-1915, the condition becomes for wheat, rye, barley and oats as follows: Fall wheat 99·2, spring

wheat 100·2, all wheat 100·2, rye 103·6, barley 98·5, oats 96. That is to say, if conditions between June 30 and the date of harvest are not abnormal, the anticipated yield per acre is about equal to the average for wheat, 3·6 per cent above average for rye, about 2 per cent below average for barley and 4 per cent below average for oats.

Census and Statistics Office,
Ottawa, July 15, 1916.

ERNEST H. GODFREY,
Editor.

I. Revised Estimate of Areas under Field Crops in 1916, compared with 1915.

Field crops	1915	1916	Field crops	1915	1916
	acres	acres		acres	acres
Canada—			Ontario—con.		
Fall wheat.....	1,208,700	1,042,200	Barley.....	449,000	368,000
Spring wheat.....	11,777,700	10,475,400	Rye.....	78,000	69,000
All wheat.....	12,986,400	11,517,600	Peas.....	169,000	134,000
Oats.....	11,365,000	10,644,000	Mixed grains.....	345,000	295,000
Barley.....	1,509,350	1,397,900	Hay and clover.....	3,082,000	3,059,000
Rye.....	112,300	159,680	Alfalfa.....	60,000	56,000
Peas.....	196,210	101,420	Manitoba—		
Mixed grains.....	466,800	410,770	Fall wheat.....	10,900	9,400
Hay and clover.....	7,875,000	7,974,000	Spring wheat.....	3,332,000	2,953,000
Alfalfa.....	42,630	89,900	All wheat.....	3,342,900	2,962,400
P.E. Island—			Oats.....	1,441,000	1,470,000
Spring wheat.....	34,400	34,500	Barley.....	490,000	494,000
Oats.....	196,000	199,000	Rye.....	5,800	6,200
Barley.....	3,700	3,600	Mixed grains.....	1,550	1,400
Peas.....	70	60	Hay and clover.....	159,000	158,000
Mixed grains.....	8,000	8,000	Alfalfa.....	4,700	4,700
Hay and clover.....	198,000	199,000	Saskatchewan—		
Nova Scotia—			Fall wheat.....	4,100	4,100
Spring wheat.....	13,300	13,400	Spring wheat.....	6,834,000	5,913,000
Oats.....	112,000	116,000	All wheat.....	6,838,100	5,917,100
Barley.....	4,900	4,700	Oats.....	2,937,000	2,935,000
Rye.....	300	320	Barley.....	287,000	272,000
Peas.....	190	180	Rye.....	2,700	3,200
Mixed grains.....	4,100	4,100	Peas.....	400	360
Hay and clover.....	538,000	553,000	Mixed grains.....	1,950	2,000
Alfalfa.....	30	30	Hay and clover.....	67,000	75,000
New Brunswick—			Alfalfa.....	1,800	1,850
Spring wheat.....	14,000	14,000	Alberta—		
Oats.....	201,000	198,000	Fall wheat.....	215,700	247,700
Barley.....	2,100	1,900	Spring wheat.....	1,348,000	1,366,000
Peas.....	420	400	All wheat.....	1,563,700	1,613,700
Mixed grains.....	900	870	Oats.....	1,912,000	1,878,000
Hay and clover.....	560,000	574,000	Barley.....	185,000	170,000
Alfalfa.....	140	120	Rye.....	16,800	14,400
Quebec—			Peas.....	430	380
Spring wheat.....	71,000	70,000	Mixed grains.....	1,700	1,800
Oats.....	1,400,000	1,308,000	Hay and clover.....	173,000	196,000
Barley.....	85,000	81,000	Alfalfa.....	11,000	12,000
Rye.....	8,700	8,300	British Columbia—		
Peas.....	24,400	23,000	Fall wheat.....	6,000	6,200
Mixed grains.....	101,000	95,000	Spring wheat.....	10,000	10,500
Hay and clover.....	2,922,000	2,985,000	All wheat.....	16,000	16,700
Alfalfa.....	2,860	2,600	Oats.....	71,000	75,000
Ontario—			Barley.....	2,650	2,700
Fall wheat.....	972,000	774,800	Peas.....	1,300	1,300
Spring wheat.....	121,000	101,000	Mixed grains.....	2,600	2,600
All wheat.....	1,093,000	875,800	Hay and clover.....	167,000	175,000
Oats.....	3,095,000	2,465,000	Alfalfa.....	12,100	12,600

II. Areas of Later Sown Cereals and Hoed Crops, 1915 and 1916.

Field crops	1915	1916	Field crops	1915	1916
	acres	acres		acres	acres
Canada—			Quebec—con.		
Buckwheat.....	343,800	356,500	Turnips, etc.....	10,200	10,000
Flax.....	806,600	723,000	Corn for fodder.....	34,000	31,000
Corn for husking.....	253,300	183,700	Ontario—		
Beans.....	43,310	34,500	Buckwheat.....	169,000	186,000
Potatoes.....	478,600	448,800	Corn for husking.....	237,000	170,000
Turnips, etc.....	172,700	156,200	Flax.....	5,000	4,500
Sugar beets.....	18,000	15,000	Beans.....	37,500	29,000
Corn for fodder.....	343,400	297,100	Potatoes.....	155,000	133,000
P.E. Island—			Turnips, etc.....	112,000	97,000
Buckwheat.....	2,600	2,500	Sugar beets.....	18,000	15,000
Potatoes.....	31,000	31,000	Corn for fodder.....	287,000	248,000
Turnips, etc.....	7,900	8,000	Manitoba—		
Corn for fodder.....	260	250	Flax.....	34,000	27,000
Nova Scotia—			Potatoes.....	28,300	28,000
Buckwheat.....	10,200	10,000	Turnips, etc.....	4,300	4,100
Beans.....	840	850	Corn for fodder.....	18,000	14,000
Potatoes.....	33,700	34,500	Saskatchewan—		
Turnips, etc.....	9,200	9,000	Flax.....	697,000	619,000
Corn for fodder.....	500	500	Potatoes.....	30,300	30,000
New Brunswick—			Turnips, etc.....	12,400	12,200
Buckwheat.....	58,000	53,000	Corn for fodder.....	2,000	1,800
Beans.....	270	250	Alberta—		
Potatoes.....	40,000	39,000	Flax.....	70,000	72,000
Turnips, etc.....	8,000	7,700	Potatoes.....	27,300	26,000
Corn for fodder.....	110	100	Turnips, etc.....	4,900	4,500
Quebec—			Corn for fodder.....	1,100	1,000
Buckwheat.....	104,000	105,000	British Columbia—		
Corn for husking.....	16,300	13,700	Potatoes.....	16,000	15,300
Beans.....	4,700	4,400	Turnips, etc.....	3,800	3,700
Flax.....	600	500	Corn for fodder.....	430	450
Potatoes.....	117,000	112,000			

III. Condition of Field Crops, June 30, 1909-16.

NOTE.—100=Standard of full crop.

Field crops	Per cent of standard condition							
	1909	1910	1911	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada—								
Fall wheat.....	77	85	75	70	81	78	93	80
Spring wheat.....	86	82	95	90	88	86	93	89
All wheat.....	—	83	90	85	86	85	93	87
Oats.....	94	86	94	86	88	87	92	86
Barley.....	86	87	93	89	88	86	92	88
Rye.....	81	88	91	88	86	85	94	91
Peas.....	84	87	89	80	87	87	93	82
Mixed grains.....	87	85	94	85	87	87	94	84
Hay and clover.....	76	91	85	86	72	74	80	99
Alfalfa.....	—	89	82	91	77	82	88	95
Pasture.....	83	89	91	96	82	83	89	101
P.E. Island—								
Spring wheat.....	89	99	95	98	93	97	95	99
Oats.....	89	99	99	98	94	97	95	99
Barley.....	90	96	95	97	91	96	96	98
Peas.....	93	96	86	98	95	97	97	98
Mixed grains.....	88	99	94	99	89	98	98	100
Hay and clover.....	67	104	67	75	78	95	101	94
Alfalfa.....	—	83	83	100	83	80	100	—
Pasture.....	73	104	76	91	86	95	99	100

III. Condition of Field Crops, June 30, 1909-16—con.

NOTE.—100=Standard or full crop.

Field crops	Per cent of standard condition							
	1909	1910	1911	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Nova Scotia—								
Spring wheat.....	86	98	91	90	89	89	94	96
Oats.....	91	99	93	82	91	91	95	96
Barley.....	85	94	92	88	90	91	96	93
Rye.....	68	95	78	98	88	88	97	86
Peas.....	81	93	91	91	91	93	96	95
Mixed grains.....	87	97	94	92	90	92	96	98
Hay and clover.....	76	106	81	91	—	79	106	103
Alfalfa.....	—	95	70	88	—	82	95	105
Pasture.....	78	104	71	92	—	81	105	102
New Brunswick—								
Spring wheat.....	90	95	93	88	90	90	92	95
Oats.....	93	97	97	83	86	89	92	96
Barley.....	88	80	94	85	90	87	90	88
Rye.....	80	83	88	90	—	—	85	94
Peas.....	82	89	91	84	91	93	94	96
Mixed grains.....	83	92	96	83	86	90	89	99
Hay and clover.....	68	110	83	89	73	85	92	104
Alfalfa.....	—	97	69	87	—	59	75	100
Pasture.....	82	105	88	94	81	90	92	102
Quebec—								
Spring wheat.....	85	89	92	76	85	83	92	80
Oats.....	91	93	95	73	87	84	93	79
Barley.....	89	91	93	79	86	84	92	82
Rye.....	87	89	89	80	85	85	91	94
Peas.....	83	84	90	74	92	83	93	80
Mixed grains.....	90	74	94	77	88	83	93	82
Hay and clover.....	81	103	88	80	64	72	75	100
Alfalfa.....	—	88	82	84	71	75	83	90
Pasture.....	82	100	91	87	73	77	83	100
Ontario—								
Fall wheat.....	79	94	73	68	82	78	93	78
Spring wheat.....	76	85	88	81	82	84	95	81
All wheat.....	—	90	77	73	82	80	94	80
Oats.....	90	90	89	83	83	87	93	73
Barley.....	78	91	89	82	82	85	92	81
Rye.....	77	89	83	86	83	84	93	86
Peas.....	85	88	88	79	81	88	93	75
Mixed grains.....	84	91	93	86	84	89	93	73
Hay and clover.....	70	90	75	78	63	65	70	100
Alfalfa.....	—	93	78	85	71	79	85	96
Pasture.....	76	89	82	89	74	79	83	104
Manitoba—								
Fall wheat.....	—	—	—	82	73	74	—	97
Spring wheat.....	94	73	99	82	84	82	92	93
All wheat.....	—	—	—	85	84	82	92	93
Oats.....	93	73	96	81	87	88	91	94
Barley.....	89	75	94	79	88	80	92	92
Rye.....	100	74	97	85	70	100	86	95
Peas.....	65	76	96	85	—	98	100	100
Mixed grains.....	91	71	99	76	92	89	93	99
Hay and clover.....	84	65	97	83	79	66	70	101
Alfalfa.....	—	67	100	92	90	82	95	95
Pasture.....	94	69	100	83	93	86	84	102

III. Condition of Field Crops, June 30, 1906-16—concluded.

NOTE.—100=Standard or full crop.

Field crops	Per cent of standard condition							
	1909	1910	1911	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Saskatchewan—								
Fall wheat.....	—	—	—	77	75	79	94	99
Spring wheat.....	99	78	99	85	90	90	90	91
All wheat.....	—	—	—	85	89	90	90	91
Oats.....	98	82	97	82	90	89	89	92
Barley.....	95	85	96	84	93	89	89	93
Rye.....	105	83	99	84	96	92	92	99
Peas.....	93	84	90	89	100	93	96	89
Mixed grains.....	99	95	97	91	90	93	94	95
Hay and clover.....	94	77	98	88	94	93	81	100
Alfalfa.....	—	77	92	92	91	94	92	99
Pasture.....	99	79	100	93	97	96	93	102
Alberta—								
Fall wheat.....	66	64	83	72	76	73	98	87
Spring wheat.....	97	66	97	86	93	84	98	92
All wheat.....	—	65	92	82	89	82	98	92
Oats.....	100	67	98	87	94	85	97	92
Barley.....	97	73	96	88	96	86	96	93
Rye.....	101	83	92	93	95	84	101	94
Peas.....	100	70	94	88	86	83	97	94
Mixed grains.....	95	74	92	91	98	78	95	95
Hay and clover.....	95	58	95	91	88	83	100	87
Alfalfa.....	—	71	88	87	91	79	102	98
Pasture.....	101	63	102	94	97	93	105	97
British Columbia—								
Fall wheat.....	88	84	89	92	97	89	95	82
Spring wheat.....	73	88	87	90	96	93	98	86
All wheat.....	—	86	87	91	96	92	97	85
Oats.....	93	88	91	93	96	91	97	88
Barley.....	72	98	84	96	88	94	93	90
Rye.....	100	90	99	100	95	100	93	83
Peas.....	81	85	88	93	101	94	108	91
Mixed grains.....	100	98	80	92	103	95	98	87
Hay and clover.....	65	91	88	95	97	92	103	81
Alfalfa.....	—	102	85	100	90	100	111	85
Pasture.....	65	86	89	91	100	90	96	88

INTERPRETATION OF CROP REPORTS.

Table III shows the condition of field crops on June 30, expressed numerically by provinces in percentage of a standard of 100 as representing the promise of a full crop. For the whole of Canada the condition of the principal cereals according to this method of expression was as follows: Fall wheat 80, spring wheat 89, all wheat 87, rye 91, barley 88 and oats 86. If we convert these figures into a standard wherein 100 represents the average yield per acre of the eight years 1908-1915, the condition at June 30 is as follows: Fall wheat 99, spring wheat 100, all wheat 100, rye 104, oats 96, barley 99. That is to say, the yields per acre of these crops, according to

the average of the reports of their condition on June 30, are expected to be about equal to the average in the case of wheat, and 3 per cent above average for rye. For oats and barley the yields per acre anticipated are less than the average by 4 per cent and 1 per cent, respectively. In these forecasts it is assumed that conditions between June 30 and harvest will be equal to the average conditions during the same period of the eight years 1908 to 1915.

In the following statement the result of these calculations is shown both in the form of percentages and in anticipated yields per acre:

Crops	Average standard condition June 30, 1908-15	Average yield per acre 1908-15	Standard condition June 30, 1916	Anticipated yield per acre 1916	Condition (100=average yield 1908-15)
	p.c.	bush.	p.c.	bush.	p.c.
Fall wheat.....	81	23.46	80	23.17	99
Spring wheat.....	89	20.23	89	20.23	100
All wheat.....	87	20.64	87	20.54	100
Rye.....	88	18.29	91	18.91	103
Barley.....	89	28.74	88	28.42	99
Oats.....	90	36.74	86	35.10	96

The anticipated yields in this table for 1916 are based upon the appearance of the crops on June 30, but conditions may change greatly between this date and the time of harvest, especially in the case of spring sown crops. The following statement shows the condition of the crops on June 30 in each of the years 1913, 1914 and 1915, expressed in percentage of the average of the previous five, six and seven years, respectively, and the actual result expressed in the same way after final ascertainment of the yields per acre at the end of the year:

Crops	1913		1914		1915	
	Condition (100=average of 1908-12)	Yield Dec. 31, (100=average of 1908-12)	Condition (100=average of 1908-13)	Yield Dec. 31 (100=average of 1908-13)	Condition (100=average of 1908-14)	Yield Dec. 31 (100=average of 1908-14)
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Fall wheat.....	102	102	99	95	116.6	131.5
Spring wheat.....	99	111	102	79	105.5	156.1
All wheat.....	100	110	103	80	108.2	153.3
Rye.....	98	104	101	101	107.5	119.3
Barley.....	99	107	103	85	103.7	126.8
Oats.....	98	108	100	86	103.6	130.0

In only two crops, those of fall wheat in 1913 and rye in 1914, was the anticipation exactly fulfilled. In other cases the actual yields exceeded the forecast in 1913, but were considerably below it in 1914, whilst in 1915 the yields were in excess of the forecast by over 50 per

cent for wheat, 19 per cent for rye, 26 per cent for barley and 30 per cent for oats. In 1914 the condition of the grain crops in the western provinces deteriorated rapidly after June 30 in consequence of excessive drought and heat; but in 1915 all forecasts were considerably below the excellent results actually realised. For fall wheat the forecast on June 30 should be more accurate because of the nearer approach of harvest, and this apparently was actually the case.

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—In almost all parts of the Island the weather has been favourable for farming operations, and there is every indication of a record crop. All kinds of live stock are in a thriving condition; the demand for horses is poor, but high prices are paid for beef cattle.

Nova Scotia.—June has been a moderately warm month with an excessive rainfall, which in most parts has delayed the sowing of later cereals. The growth of grass is luxuriant, and an excellent hay crop is assured. There is an increase in the number of horses and milch cows, more farmers are said to be going into the dairying business.

New Brunswick.—The weather has been cool and wet. Vegetation is fairly well advanced, although much in need of bright sunshine. Pastures are said never to have looked better. There is a decrease in the number of live stock, which however are reported to be in a healthy condition.

Quebec.—In the western parts of the province heavy rainfalls have been most unfavourable to the crops, while in the east they were not so heavy or numerous, and crops look more promising. One correspondent states that the damp cloudy weather has caused a more tender growth, which, he fears, may cause lodging. The luxuriant growth of pastures is having the best results upon cattle of all kinds, both in flesh producing and in the flow of milk.

Ontario.—In all parts of the province the weather has been very wet with little or no sunshine. As a result the crops are very backward, the ground in the low-lying districts being sodden. There is an increase in the acreage sown to buckwheat, and there will also be an increase in the acreage of summer fallowed land. A very good hay crop is assured. The pastures are in excellent condition, and all classes of live stock are thriving.

Manitoba.—The grain crops are somewhat later than last year, as the cool weather resulted in slow growth, but all are in healthy condition. Some slight damage has been done by cutworms, but no injury from frost has occurred; so that prospects on the whole are good. Forage crops are being more widely sown. Horses and cattle are doing well, as pastures are in good condition, and there is a marked absence of flies owing to the cool weather. Swine are fewer in number, many of the young pigs dying off.

Saskatchewan.—Throughout the province the crop outlook is excellent, though the stage of development is from one to two weeks

later than last year. Very little damage has resulted from any cause except in a few cases where cutworms and wireworms have been at work. There is an abundance of moisture for a long period of growth. Pasturage is good and cattle are doing well both as to flesh and milk. Horses are in good condition generally, though several reports mention the loss of young foals. There have been many losses too amongst young pigs. Complaints are made of the ravages of the willow beetle, many trees being stripped of their foliage completely.¹

Alberta.—Crops are said to be about ten days later than last year, but are in excellent condition with vigorous growth taking place. There has been plenty of moisture except in the northeasterly parts of the province, and with warm weather all things point to a good harvest. Pastures are good and live stock generally are in good condition, though losses amongst young colts are reported. As in Saskatchewan, reports state that many trees are being defoliated by insect pests.¹

British Columbia.—The weather in British Columbia has been generally favourable, except on Vancouver Island and the non-irrigated portions of the interior, where the crops have suffered from drought. Some very hot days caused the rapid melting of snow, and floods occurred in the Crow's Nest district. There was an average hay crop, and live stock are healthy.

TELEGRAPHIC CROP REPORTS.

As in 1915, arrangements have been made with the Experimental Farms Branch of the Department of Agriculture for the despatch to the Census and Statistics Office of telegraphic crop reports on the last days of June, July and August. At the end of June, 45 telegrams were received from all parts of Canada, and on July 3, 1916, these were summarised and a bulletin issued to the Press as below. The consensus of reports was to the effect that the prospects for grain crops were excellent throughout the west, but the crops being about ten days later than last year much would depend upon freedom from early frosts.

Maritime Provinces.—**PRINCE EDWARD ISLAND:** The weather conditions have been most favourable for all crops. Spring work was completed fully two weeks ahead of last year; beneficial rains fell occasionally. All the grain crops are sturdy. Roots and potatoes came on well. In some districts hay is light, in others heavy; it will be an average crop. **NOVA SCOTIA, KENTVILLE:** June has been an exceptionally fine growing month, following an ideal month for getting crops in. All farm crops are looking better than usual. **AMHERST:** An unsettled June, making seeding very difficult. A large percentage of all grain was sown early in June and has germinated well; roots and potatoes have yet to be planted. Weather too cold and wet for good growth, barley suffering most. **NEW BRUNSWICK, FREDERICTON:** With thirteen rainy days in June the precipitation amounted to six inches; low-lying crops have been damaged, and weeds are smothering the root crops. Grass and grain are generally above average. The potato acreage is equal to last year, and the early planting is good. A considerable acreage of turnips and buckwheat has not yet been seeded.

Quebec.—Abundant rains have favoured the growth of grass, and prospects are excellent for a good hay crop. Low-lying lands have suffered from too much rain. **PASPÉBIAC, BONAVENTURE:** Wheat, oats and burley look exceptionally well; potatoes are very good; if rains keep on, crops may be injured; in low lands almost impossible to get weeding done. **RIMOUSKI:** All crops have a magnificent appearance, only low lands have suffered from rains. **STE. ANNE DE LA POCAITÉRE:** June has been rainy and cool, seeding late and difficult; grain and fodder corn rather poor on undrained and low land; hay crop never gave greater promise; field roots are making good start; pasturage abundant and fruits very

¹See article on page 199 of this issue.

promising. CAP ROUGE: Rains nearly every day; pastures are good, and hay crop will be very heavy; owing to too much precipitation only three-fourths of the usual area was sown to grain; potatoes and corn do not look well; all root crops have germinated well. NOMINQUE, LABELLE: Hay has a very fine appearance, grain somewhat backward, but promising, potatoes fine for season and pastures magnificent. LAC À LA TORTUE: The appearance of cereals is only medium, except on high lands; corn good, potatoes good, peas very good. The frequent rains have caused many weeds in hoed crops and have flooded lands insufficiently drained. LENNOXVILLE, SHERBROOKE: Seeding has been retarded greatly, especially corn and hoed crops; haying two weeks later; grain crops very backward; corn three weeks later than usual. AUBREY, CHATEAUGUAY: Grain has the appearance of a bumper crop; corn doing well; potatoes not very good; other roots looking well.

Ontario.—About one-third less grain was sown than in previous years. In condition it is uneven, spotted and badly affected by rain. A great deal will not ripen, and will be cut for green feed. Corn this year occupies not more than two-thirds of last year's area, in some parts no crop was got in at all, and the land must be summer fallowed. The hay crop is good, but fine weather is required for saving it. Potatoes are in bad shape and roots are late.

Manitoba.—BRANDON: Abundant rains have fallen during latter part of June. The crop is very well rooted, and there is a strong healthy growth; except for lateness prospects are excellent. MORDEN: Weather fine and warm with sufficient rainfall. At present everything looks like a bountiful crop.

Saskatchewan.—INDIAN HEAD: Generally speaking grain crops throughout this district are good. WEYBURN: All grain crops are looking well with plenty of moisture and growing very fast. Hay is good. GULL LAKE: Wheat from ten to eighteen inches high; none in shot blade owing to too much rain. MOOSEJAW: Condition of the principal field crops very satisfactory. Earliest wheat nearly shot blade stage; very good stand on ground not hurt by high winds. Oats and barley showing rapid growth; plenty of moisture and good growing weather. Potatoes and corn coming on well. MAPLE CREEK: Rank growth of all grains. Wheat in the shot blade. Early sown wheat almost ready to head. Abundance of moisture. PIELATE: All wheat and oats in this district are good. Most of it is an ideal crop. CABRI: Wheat 14 to 18 inches high; oats 8 to 10; flax 3 to 6. Crops growing fine. Everything points to another bumper crop in this district. RADVILLE: Crops in fine condition; plenty of moisture; wheat 2 feet high. ROSTERN: Much rain, and rank strong growth in all grains. Hay and pasture particularly good. Much oats and barley sown on late spring ploughing. Early frosts the only prevention of a big harvest. SCOTT: Weather cool and unsettled; precipitation heavier than is usual for June. Stand of all kinds of grains unusually thick. Early sown wheat in shot blade. Labour scarce and expensive. Farmers anxious regarding binder twine supply. LLOYDMINSTER: Wheat eighteen inches, early oats twelve. Weather warm with an ideal growing rain Thursday night. Every indication of a heavy crop. Spring was late, but in ten days will be as advanced as last year. GRASSY LAKE: All field crops in this district are in excellent condition. Wheat, oats, barley and rye are heavier and better than they have ever been since this part of the country was settled. Corn and flax are good, but need warm weather.

Alberta.—MEDICINE HAT: The wheat crops are uneven. Fallow wheat is heading. The late sown wheat is doing well with the ideal weather. The oat crops are all late sown, but growing very quickly. The potato crop is very promising indeed. Flax is well up. JENNER: Sufficient moisture here. Surrounding crops in fine condition, some wheat heading out. Mr. J. P. Irwin, Assistant Supervisor of Illustration Stations, reports that a large percentage of crops in southern Alberta stubbled in suffered considerably for lack of rain recently, but rains of past few days have brought them on in good shape again. Many districts suffered from early high winds, but rains of last week in May and later relieved situation. Hoed crops look well. All hay crops are excellent. LETHBRIDGE: General crop outlook excellent, being as good as last year. MESSON: Crops in this district are exceptionally good; a good even stand all over the ground; lots of moisture to insure a crop, with occasional warm showers and warm days. Grain growing very fast. Wheat 22 inches high. Indications of a bumper crop. CARMANGAY: Crops are looking well. Beneficial rains have fallen the last two days. A good crop is looked for if it does not get frosted. PINENR CREEK: Beneficial rains have fallen the last two weeks, and the condition of the grain and hay crops is excellent. Hoed crops and later cereals have germinated evenly and are coming along well. MACLEOD: All grain crops are looking well. Some wheat starting to head. Prospects bright for bumper crop. Plenty of rain during June. LACAMBE: Cool weather until early June delayed growth but promoted root development. Wheat 30 inches high.

British Columbia.—AGASSIZ: The month has been cool with over 2½ inches precipitation, well distributed. One week was quite warm. Highest temperature eighty-eight. Conditions have been excellent for crop growth. Cereal, root and corn crops doing well. Season three weeks later than last year. Clover for silage harvested. INVERMERE: Crops backward but promise well. Alfalfa and clover ready to cut. Cutworms have caused considerable damage to root crops and garden truck. SUMMERLAND: Irrigated land very poor owing to drought. Beneficial rains have fallen this week and will help range land and cereal crops. VICTORIA: June very dry. All crops below average. Rain during last days of month has improved the prospect for spring sown cereals, forage crops and orchard fruit.

ESTIMATED NUMBERS OF FARM LIVE STOCK.

It is estimated from the reports of correspondents that the numbers of farm live stock in Canada on June 30 were as follows: Horses 2,990,635; milch cows 2,603,345; other cattle 3,826,519; sheep 1,965,101; swine 2,814,672. As compared with 1915 these figures represent decreases of horses by 5,464; of milch cows by 63,501; of sheep by 73,561 and of swine by 297,228; but an increase of "other cattle" by 427,364. The decreases apply principally to eastern Canada; in the West all descriptions show increases over last year, except swine in all three provinces, and "other cattle" in Manitoba.

Numbers of Farm Live Stock, 1911-1916.

Live stock	1911	1912	1913	1914	1915	1916
	No.	No.	No.	No.	No.	No.
Canada—						
Horses.....	2,595,912	2,692,357	2,866,008	2,947,738	2,996,099	2,990,635
Milch cows.....	2,594,179	2,604,488	2,740,434	2,673,286	2,666,846	2,603,345
Other cattle.....	3,939,257	3,827,373	3,915,687	3,363,531	3,399,155	3,826,519
Sheep.....	2,175,302	2,082,381	2,128,531	2,058,045	2,058,662	1,965,101
Swine.....	3,610,428	3,477,310	3,448,326	3,434,261	3,111,900	2,814,672
Prince Edward Island—						
Horses.....	35,935	35,638	35,952	36,114	36,898	38,562
Milch cows.....	52,109	49,415	48,565	47,317	47,045	46,032
Other cattle.....	68,287	64,688	64,261	61,048	59,503	57,260
Sheep.....	91,232	87,793	85,660	85,351	86,640	88,797
Swine.....	56,377	50,463	43,762	41,718	40,792	38,300
Nova Scotia—						
Horses.....	61,355	61,735	62,550	62,581	63,244	64,193
Milch Cows.....	129,302	130,104	130,468	128,237	128,814	130,141
Other cattle.....	158,122	156,051	153,726	148,269	144,458	140,673
Sheep.....	220,907	216,135	217,734	211,921	205,542	200,979
Swine.....	63,322	61,194	56,580	53,892	53,402	51,928
New Brunswick—						
Horses.....	65,458	65,582	65,103	65,702	65,827	65,169
Milch cows.....	108,532	110,507	106,904	102,713	101,665	100,221
Other cattle.....	113,659	113,136	107,864	99,256	96,437	92,223
Sheep.....	158,216	148,723	135,115	121,739	111,026	105,997
Swine.....	87,391	85,905	77,014	73,325	72,533	70,683
Quebec—						
Horses.....	369,237	367,402	369,074	372,009	372,567	332,628
Milch cows.....	753,134	755,770	761,816	733,476	720,420	639,805
Other cattle.....	697,860	695,906	693,540	625,958	612,500	555,693
Sheep.....	637,062	620,881	602,751	571,287	551,491	497,711
Swine.....	793,348	747,254	661,768	634,569	632,729	531,303
Ontario—						
Horses.....	811,585	805,271	902,628	904,975	903,527	896,208
Milch cows.....	1,032,979	1,033,392	1,141,071	1,085,843	1,077,808	1,082,119
Other cattle.....	1,471,694	1,380,890	1,460,015	970,445	935,606	901,924
Sheep.....	743,483	677,462	705,848	640,416	611,789	589,581
Swine.....	1,864,165	1,693,594	1,652,440	1,553,624	1,469,573	1,404,618
Manitoba—						
Horses.....	280,374	293,776	304,088	316,707	317,847	318,387
Milch cows.....	155,337	148,471	152,792	156,306	157,494	159,274
Other cattle.....	279,776	267,130	256,926	251,996	246,603	239,205
Sheep.....	37,322	40,800	42,840	45,303	50,880	51,943
Swine.....	188,416	183,370	184,745	186,276	163,308	130,320

Numbers of Farm Live Stock, 1911-1916—concluded.

Live stock	1911	1912	1913	1914	1915	1916
	No.	No.	No.	No.	No.	No.
Saskatchewan—						
Horses.....	507,400	551,645	580,386	609,521	630,062	646,633
Milch cows.....	181,146	184,896	194,843	204,624	211,684	218,230
Other cattle.....	452,466	461,244	468,255	474,436	543,609	556,710
Sheep.....	114,216	114,810	115,568	126,027	133,311	158,350
Swine.....	286,295	344,298	386,784	454,703	411,324	334,489
Alberta—						
Horses.....	407,153	451,573	484,809	519,424	544,772	567,543
Milch cows.....	147,687	157,922	168,376	179,068	183,974	188,205
Other cattle.....	592,163	587,307	610,917	632,032	660,000	686,730
Sheep.....	133,592	135,975	178,015	211,001	238,579	245,474
Swine.....	237,510	278,747	350,692	397,123	229,696	215,202
British Columbia—						
Horses.....	57,415	59,735	60,518	60,705	61,355	61,312
Milch cows.....	33,953	34,011	35,599	35,702	37,944	39,318
Other cattle.....	105,230	101,021	100,183	99,091	100,439	103,101
Sheep.....	39,272	40,702	45,000	45,000	46,404	46,269
Swine.....	33,604	32,485	34,541	39,031	38,543	37,829

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—June has been cooler, darker and wetter than usual,—the highest temperature being 82·5, the lowest 41 and the mean 62·3, compared with extremes of 90·1 and 46·2 and a mean temperature of 64·93 for the corresponding period of last year. The precipitation totals 4·24 inches, distributed over seventeen different days, while the rainfall in June, 1915, amounted to 2·94 inches distributed over only seven different days. The bright sunshine averages but 6·47 hours a day.

At the Experimental Farm, the sowing of roots was finished early in June and so, also, was the planting of Indian corn, both being from a week to ten days later than usual. Hay, the cutting of which has begun, has made remarkable growth. Although the growth of hoed crops has been somewhat slower than usual, a good deal of labour has had to be devoted to cultivating the same.

A considerably less acreage than usual of both grain and corn has been got in in the Ottawa district generally. The growing grain is suffering from the rain, and it is feared that much of it will not ripen and, consequently, will have to be cut for green feed. Hay, however, has made exceptional growth, and a very heavy crop of good quality is assured with fine weather for saving it.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "Occasional light showers of rain fell during the first three weeks of June; heavy, soaking rains that were very beneficial occurred on the 26th and the night of the 28th. Spring work at this Station, and throughout the province generally, was completed fully two weeks earlier than last year. The weather conditions have been most

favourable for seeding operations and germination. The cereal crops have a beautiful dark green colour and are sturdy. Wheat sown on May 17th is 20.5 inches high on the 30th. Roots and corn have started well and all potatoes have come up strong. On the whole, hay is likely to prove an average crop. Some districts have at present prospects of a very heavy yield. Two Farmers' Institute picnics, with a total attendance of 830 visitors, were held at the Station during the month."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "June has been unusually dark, the bright sunshine for the thirty days totalling only 106.5 hours, compared with 180.2 hours this time last year and 250.3 hours in 1914. The precipitation amounts to 3.69 inches divided between eighteen different days; and this moisture did not run off, but all of it soaked into the soil, with the exception of the 1.45 inch recorded on the 28th, mostly in the afternoon, which, however, caused severe washing of the fields owing to the water running off in torrents. These moderate rains have resulted in a splendid growth of all farm crops and have not materially hindered the carrying on of farm work. The temperature, on the average, has been about two degrees higher than the two previous years. This has been favourable to the corn crop, which is making excellent growth. The early part of June was fairly satisfactory for fruit bloom, which, although uneven, indicated a fair set of fruit. The wet weather, when the trees were in full bloom, has undoubtedly lessened the set considerably, and, generally speaking, the crop will not be nearly so heavy as at first anticipated. Hay has never looked better than at present; it is considerably earlier than last year, and, while last year's crop was considered large, that of this season will be considerably better. Grains, roots and potatoes everywhere are making excellent progress."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "June has been exceedingly unsettled, rain being recorded on eleven different days, the precipitation amounting to 4.74 inches. Only on gravelly and sandy soils could this moisture be considered beneficial, as the heavier land was already well saturated with water. After the 10th, seeding operations became very difficult, more especially on the heavier soils, due to the fact that the land was not fit for cultivation; consequently, the end of the month finds many farmers with much acreage unplanted, especially where intended for roots and potatoes. Most of the cereal crop was sown late in May or early in June, buckwheat being the only grain still unsown after the 10th. Grass and the different varieties of grain have only made fair growth. Early sown roots and potatoes have made but medium growth, and during the latter part of the month they have practically stood still, owing to the excessive amount of rainfall. The rains have been accompanied by cool weather, making conditions the more detrimental to the growth of vegetation. The Army Worm on the Tantramar marshes (which lie on the boundary of Nova Scotia and New Brunswick) has done considerable damage; 30 acres were

totally laid to waste by it in one particular section, and, should the pest continue to increase, the damage will be most serious. The Canker Worm is also very prevalent in the orchards this year, and the weather has been such that spraying for same has not been very effective. All classes of live stock at this Station are in good condition and doing nicely".

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "The first half of June was very favourable for farm work, though crop growth would have been better with more sun and higher temperatures; but the last half brought almost a deluge, with continuous cloudy and rainy weather, the precipitation for that period being almost five inches, while the total for the month is 6.12 inches. The sunshine record is only 139.5 hours, against 190 hours in 1915, 262 hours in 1914, and an average for forty-two years of 216 hours. The mean temperature is 59.4, against a forty-two year average of 60. As a result of the heavy rainfall, crops on low-lying and poorly drained land are badly damaged, and in some cases it has been impossible to get planting and seeding done. At the Experimental Station, but two out of fourteen acres of root land are yet seeded. In the case of early hoed crops, it has been impossible, where farmers are short-handed, to keep pace with the weeds. Except where land is flooded, the hay crop promises to be heavy, and the same may be said of the grain. The potato acreage is about the same as last year, and early potatoes on dry land are making a good stand, but there is some complaint of late planted seed rotting in the wet ground. A bumper apple crop seems assured."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "June has been unusually cloudy, with frequent rains. The temperature has been about normal, the mean being 58.7. The highest reading of the thermometer so far this year is 81, registered on the 14th. Only 170.4 hours of sunshine have been recorded during the month, compared with 265.2 hours for the same period in 1915. The rainfall amounts to 5.18 inches, distributed over fourteen different days, being the heaviest ever recorded at the Station and exceeding the aggregate precipitation of the corresponding period of the three following months in 1915. Seeding operations have been greatly hindered by the unfavourable weather, and not more than three-quarters of the cereal crop has been sown. Grain on low-lying land is just showing above the ground and has a yellowish faded colour; and the same is the case with fodder corn in this section, the result of lack of sunshine and excessive moisture. Hay promises to be a heavy crop this year, but not of the best quality. Roots are doing better than last year; so, also, are potatoes on dry land."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "The range of temperature is not as wide for June as the average for the same period of the last four years, and the mean is lower. The precipitation amounts to 5.47 inches, compared with 3.01 inches in 1912, 2.53 inches in 1913, 3.28 inches in 1914, and 2.63 inches in 1915. The bright sunshine totals 165.8 hours, which is the lowest

since 1911. The frequent rains of May and June have delayed the sowing of corn and small grains in the district, but everything was got in at about the usual time at the Station, because most of the land is tile drained. Hay will be an exceedingly heavy crop. Oats have suffered from too much precipitation. It is rather early yet to say how corn and roots will do. It is estimated that not more than 75 per cent of the usual quantity of oats was sown on account of the bad weather, and, as some of it was put in quite late, the crop will certainly be much lighter than usual. With the extra amount of moisture already in the soil, it is certain that the precipitation of June is a disadvantage, and, in averaging up, it does not compensate for any long period of drought which may be experienced during the latter part of the season."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The weather during June has been very unfavourable for the crops. The precipitation amounts to 4.72 inches, compared with 2.06 inches last year. The maximum temperatures range considerably lower than last year, the highest being 79 as against 85 in 1915; but, as the minimum temperatures average higher this year, being 35 compared with 31 in 1915, the mean is about normal, being 59 compared with 58.8 a year ago. The total bright sunshine recorded amounts to 180.1 hours, compared with 249.5 the previous June. Rain fell on seventeen different days during the month, and the excessive moisture has been very detrimental to seeding, so much so, that a good deal of the land intended for grain has been sown to swedes and buckwheat. Haying is two weeks later than usual. Corn is very backward, with poor prospects; while the cereal crops are none too promising. No frost has been recorded since May 15th, and, with no caterpillars this summer, the outlook for the fruit harvest is excellent. Pastures are in good condition, which is relieving farmers of the necessity of buying grain feeds. The first crop of clover at this Station was harvested towards the end of the month on land where the second crop is intended for seed production."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "The beginning of June saw a large amount of seeding still to be done in Manitoba. This was finished up during the first half of the month. This delayed seeding, together with cool weather, gave the crop a very late start. Although there was very little rain up to the 20th, no shortage of moisture was felt. During the last part of June the weather has been very favourable; abundant rains have fallen, and the temperature has been getting a little warmer. The crop, which is thick and vigorous, has been growing rapidly, and prospects are excellent, except that growth has made a late start, but, in the latter respect, time is being made up. On the Experimental Farm, corn planting was finished during the first few days of the month. Summer fallow ploughing has been completed. Road repairing and fencing have taken considerable attention, and the cultivation of hoed crops and fallows has begun. No hay has been cut, as that crop is very late."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The weather during June has been mostly favourable for all crops. Rain has been experienced on ten different days, being evenly distributed over the month. Hay promises to be heavy. Crops, on the whole, are about ten days later than last season, but, with favourable weather during the next few weeks, should come on rapidly. Cut-worms have done some damage to fodder corn and root crops, and considerable damage to late oats and barley is reported from various points in the province. Insect pests, while not so prevalent as last season, have done some damage to shade trees throughout the southern part of Saskatchewan.

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The spring opened late and, May being cool, the farmers found themselves with strong late weed growth and much land unseeded. The abundance of moisture throughout May and June afforded a splendid opportunity to kill weeds, especially wild oats, and many farmers throughout the district ploughed a second time land that had been prepared for oats and barley. As a consequence, this year the oat and barley crops will be considerably later than usual, but, at the same time, they will also be much cleaner. A half section of the area recently purchased for the Experimental Station has been sown to oats and barley. This land had been worked under unfavourable conditions for a number of years and was exceedingly weedy. After harrowing early in the spring and ploughing shallow after weed growth was well started, the crop has been got in under favourable conditions in every respect, except that it is late. Pasture and hay are more promising than they have been for the past three years and all classes of live stock are in good condition. The lawns, flower borders, and arboretum are making the best display this season they have ever done."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The weather during June has been cool and unsettled, with heavy rains on the 10th and 30th. The total precipitation amounts to 4.23 inches, the heaviest on record for June at this Station. Cereal and hay crops have made vigorous growth, and, at the end of the month are, approximately, a week later than at this period in 1915. Potatoes and fodder corn are late, the former crop being only two or three inches high on the 30th. Both the spring and the fall rye are heading out, and early sown wheat is in the shot blade. Reports indicate considerable loss of shade trees and small fruit bushes, due to winter killing. The Western Willow Beetle has been destroying the foliage on the willow and poplar trees. At the Station, the depredations of this insect have been controlled by spraying. The winter killing in the apple orchard has been even more extensive than was at first estimated. Many employers are running short-handed, owing to the scarcity and high price of labour."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The rainfall during June, although heavier than in May, has not been so abundant as usual during this season in this locality. Frost

has been recorded, but no damage has resulted. The weather, although only moderately warm on the whole, has caused rapid growth during the past fortnight. The crops throughout central Alberta are in splendid condition, and about a week later than last year. At the Station, Prelude wheat has attained a height of thirty inches, and is heading on the 30th. With favourable conditions from now on, the yields of grain in this section should be excellent. The pasture and hay crops have made rapid growth during the month, and are in splendid condition. Steers on pasture are making very satisfactory gains, and some beef from grass-fattened animals has already been placed on the market."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The rainfall during June has been ample. Grain has made favourable growth, and the crop outlook, so far as the vigour of the plants and moisture in the soil are concerned, is excellent, although the stage of development is from a week to two weeks (depending on the locality) behind what it was on the corresponding date a year ago. This lack of development, however, is more apparent than real, for, with a week or two of hot weather, the difference will disappear. The first cutting of alfalfa will be later than usual; practically none had been cut up to the end of the month. The first crop will be lighter than normal, due to the cool weather for the last six or eight weeks. Grass on the range is excellent."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The exceptionally cool weather for the time of year, experienced in the previous months, continued during the earlier part of June. On the 15th there was a warm wave, which continued for four days. A rapid thaw in the mountains resulted, causing abnormally high water in the Columbia Valley, and, but for a sudden drop in the temperature on the 19th, would have certainly caused much damage to property and possibly to life. There has been a sufficiency of rainfall throughout the district, and the cereal crops, on the whole, look well. Roots have suffered severely from the depredations of cutworms, which have also done great damage to garden crops throughout the district. Alfalfa and clover are now being cut. The acreage sown to alfalfa in this locality is steadily increasing, the yield being heavier than clover and the crop not so subject to winter injury in exposed districts. Though backward for the time of year, the crops of all kinds at the Station look better than they have in previous years."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The weather for June has been generally cool and cloudy, with plenty of precipitation. All crops have made excellent growth, with the exception of corn, which, especially on low-lying land, is not flourishing. Grain, hay and mangolds have made the most growth. Turnips have been very seriously affected by the Flea-beetle. Clover and hay improved greatly during the month, and considerable clover hay was made during the one fine week experienced. In cases where clover silage is made, nearly all of the first crop has been harvested. At the Experimental Farm, the first haying has been finished, the entire

crop having been put into the silo. All classes of live stock are in good condition. The young stock has gained with the improving of the pastures and the cows have increased their milk flow since clover silage has been fed to them. Lambs have gained from 0.5 of a pound to 0.9 of a pound per day each, since birth. Chickens and ducklings have made excellent growth on range. While there has been an abundance of white clover and alsike bloom, the weather has not been very good for the bees".

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The weather during June has been very dry, and the crops are not up to the average. Hay making has made good progress and strawberry picking is well advanced. Rains during the closing days of the month have improved the prospects for spring sown cereals, forage crops, and fruits."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of June are given in the following table:

Meteorological Record for June, 1915.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	highest	lowest	mean		possible	actual
Ottawa, Ont.	82.5	41.0	62.30	4.24	469	194.2
Charlottetown, P.E.I.	75.0	38.0	59.17	2.74	471	202.7
Kentville, N.S.	79.0	37.0	58.30	3.60	467	160.5
Nappan, N.S.	77.0	32.0	58.31	4.74	470	180.5
Fredericton, N.B.	81.0	37.0	59.40	6.12	471	139.5
Ste. Anne de la Pocatière, Que.	81.0	39.4	58.70	5.18	476	170.4
Cap Rouge, Que.	79.0	44.2	60.48	5.47	474	165.8
Lennoxville, Que.	79.0	35.0	59.00	4.72	468	180.1
Brandon, Man.	80.0	30.0	56.29	4.33	488	189.6
Indian Head, Sask.	82.0	36.0	55.63	3.63	490	222.9
Rosbarn, Sask.	73.5	60.4	55.70	2.15	505	246.0
Scott, Sask.	78.0	32.5	51.70	4.23	502	254.5
Lacombe, Alberta.	77.9	28.8	53.30	3.57	501	198.1
Letbridge, Alberta.	83.2	32.6	56.10	3.54	483	244.5
Invermere, B.C.	88.0	34.0	60.95	2.01	492	202.0
Agassiz, B.C.	88.0	42.0	60.33	2.68	485	177.5
Sidney, Vancouver Is., B.C.	83.0	40.0	58.26	0.55	482	270.5

Ottawa, July 14, 1916.

J. H. GRISDALE,
Director of Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The English Board of Agriculture reports (July 1) that the weather during June was cold, especially during the first fortnight, but the rainfall was moderate. Crops accordingly made comparatively little growth during the month, and all are backward, while in some districts prospects have somewhat deteriorated. Warmer weather would effect a very general improve-

ment. Wheat looks fairly well generally, but is not expected to be up to the average, while barley and oats are also below the mean. Straw will probably be rather short. On the whole, the grain crops appear to be best in the north. Beans are promising, and should yield a full average; but peas are not quite so satisfactory. Potatoes, backward like the other crops, are strong and vigorous generally, and may yield an average crop. Some frosts occurred in the north, but the crop does not seem to have taken much harm from them. Turnips and swedes, where showing above ground, are coming away nicely throughout the country, but a considerable breadth remains to be sown. Mangolds are hardly satisfactory; the weather has allowed them to make very little growth, and in some districts they are rather a thin plant. Very little hay has yet been got in, and the season must be quite a fortnight late. In the north it is only just commencing, and many districts have not yet started. Where hay-making was begun early in June progress has been very slow, owing to the cold and sunless weather which prevailed in most parts. The crop is decidedly above average. Labour is still everywhere deficient, and although wages tend to rise, it is difficult to get temporary help for hay-making and turnip-hoeing. In the latter operation, more especially, women are helping to some extent, and some help is being given in certain areas by the military. Summarising the returns, and expressing an average crop by 100, the condition of the crops on the 1st July indicated probable yields per acre which may be denoted by the following percentages: Wheat 96, barley 95, oats 95, beans 101, peas 98, potatoes 100, mangolds 96, seeds' hay 107, meadow hay 104, hops 96.

India.—The Indian Department of Statistics has issued (May 29) the final general memorandum on the wheat crop of 1915-16. The total area under wheat in India is therein estimated at 30,143,000 acres, as against 32,475,000 acres, the revised final area of last year, a decrease of 7 per cent. The total yield is estimated at 318,008,000 bushels as against 376,728,000 bushels, the revised final estimate of last year, a decrease of nearly 16 per cent.

The final general memorandum on winter oilseeds (rape, mustard and linseed), issued June 9, reports that the total area under rape and mustard for 1915-16 is 6,347,000 acres, as compared with 6,507,000 acres in 1914-15, and the total yield is estimated at 1,081,000 tons, as compared with the previous season's yield of 1,219,000 tons. The total area under linseed amounts to 3,317,000 acres, as compared with 3,325,000 acres (revised figure) in 1914-15, and the total estimated yield is 474,000 tons, as compared with 397,000 tons, the revised final estimate of the 1914-15 yield.

France.—The Journal Officiel of June 18 contains revised estimates of the French Department of Agriculture as to the areas under wheat, oats and barley in France for 1916, compared with 1915, as well as information respecting other crops as follows:

Crops	1915	1916	Increase (+) or decrease (-)
	acres	acres	acres
Wheat.....	14,142,193	12,872,839	-1,269,354
Oats.....	8,341,258	7,562,432	- 778,826
Barley.....	1,659,112	1,492,780	- 166,332
Corn.....	766,308	812,129	+ 45,821
Potatoes.....	3,218,714	3,225,821	+ 7107
Artichokes.....	247,049	255,433	+ 8,384
Sugarbeets.....	208,355	191,522	- 16,833
Distillery beets.....	70,677	68,065	- 2,612
Mangolds.....	1,229,955	1,224,657	- 5,298
Hops.....	6,657	6,716	+ 59
Flax.....	27,508	13,195	- 14,313
Hemp.....	23,137	20,038	- 3,099
Osier.....	14,110	12,852	- 1,258
Tobacco.....	18,896	16,924	- 1,972
Artificial meadows.....	6,905,696	6,839,227	- 66,469
Temporary meadows.....	756,770	784,352	+ 27,582
Green fodder.....	1,639,432	1,538,655	- 100,777
Natural meadows.....	11,703,968	11,640,101	- 63,867
Permanent grass.....	4,048,642	3,965,866	- 82,776

It will be noticed that a decrease is shown for all crops, excepting corn, potatoes, artichokes, hops and temporary meadows.

Holland.—According to the British Board of Trade Journal of June 29, fruit and vegetable crop prospects are far below those of last year. As so little care has been given to the manuring of the orchards, only a much smaller crop could be expected after the abundant crop of apples and pears in 1915.

Russia.—The British Board of Trade Journal of July 13 summarises an official report published at Petrograd (June 5/18) which states that the condition of the winter and spring grain sowings is fully satisfactory in spite of rather unfavourable conditions prevailing in the latter part of the spring. Winter wheat is fully satisfactory, being in general above the average. The condition of rye is also fully satisfactory in general over most parts of European Russia. Spring grain sowings are stated to be fully satisfactory in general, exceptions being met with but rarely and in isolated districts. In western Siberia the state of the sowings is in general satisfactory, vegetation developing normally, though in parts somewhat late. The earlier winter sowings in particular are fully satisfactory. In the governments of Yenisei and Irkutsk, too, the conditions are fully satisfactory. Spring sowings promise well. The area sown shows, in general, a diminution, more particularly in the New-Russian governments and in the southeast, as also in places in the southwest and in the northern zone, the causes being insufficiency of labour in general, combined with varying unfavourable conditions including insufficiency of working cattle, want of agricultural machinery in some places, dearness and scarcity of seeds, unfavourable meteorological conditions in the autumn or spring, etc.

United States.—The Crop-reporting Bureau of the U.S. Department of Agriculture issued (July 8) the following estimates of the areas under the principal field crops:

Crop	Acres	Per cent of 1915	Crop	Acres	Per cent of 1915
Winter wheat.....	33,020,000	81.6	Barley.....	7,757,000	104.9
Spring wheat.....	17,851,000	91.8	White potatoes.....	3,632,000	96.6
All wheat.....	50,871,000	84.9	Tobacco.....	1,398,000	102.2
Corn.....	108,620,000	100.3	Flax.....	1,591,000	116.4
Oats.....	40,599,000	99.6	Rice.....	910,900	113.5

The table shows that the wheat area is 50,871,000 acres, or 15.1 p.c. less than in 1914, when the area was 11.6 p.c. more than in 1913.

The following table gives the condition at July 1, and the total estimated production in millions of bushels, tons or lb. of the crops named, together with the comparative figures of previous years:

Crop	Condition in per cent of normal				Yield per acre			Total yield in millions of bushels, tons or lb.			
	July 1, 1915	July 1, 1916	July 1, Ten year average	June 1, 1916	1916 ¹	1915 (final)	Average 1910 to 1914	June forecast 1916 ¹	July forecast 1916 ¹	1915 (final)	Average 1910 to 1914
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Winter wheat.....	84.4	75.7	81.9	73.2	14.8	16.2	16.3	469	489	655	495
Spring wheat.....	93.3	89.0	84.5	88.2	15.1	18.3	12.5	246	270	357	233
All wheat.....	87.0	79.9	82.8	77.7	14.9	16.9	14.8	715	759	1,012	728
Corn.....	81.2	82.0	84.1	-	26.4	28.2	25.9	-	2,806	3,055	2,732
Oats.....	93.9	86.3	83.4	86.9	32.4	37.8	30.5	1,255	1,317	1,540	1,158
Barley.....	94.1	87.9	85.1	86.3	26.6	32.0	24.6	189	206	237	186
Rye.....	92.0	87.0	89.8	86.9	16.1	17.2	16.3	44	44	49	38
White potatoes.....	91.2	87.8	87.6	-	101.5	95.5	97.8	-	369	359	361
Flax.....	88.5	90.3	86.8	-	9.1	10.1	7.6	-	14	14	18
Rice.....	90.5	92.7	88.1	-	37.5	36.1	33.3	-	34	29	24
Hay.....	85.2	93.4	82.2	90.3	1.61 lb.	1.68 lb.	1.34 lb.	tons	tons	tons	tons
Tobacco.....	85.5	87.6	82.4	-	852.0	775.1	823.4	lb.	lb.	lb.	lb.

¹Interpreted from condition report. ²Eight-year average.

The amount of wheat remaining on farms July 1 is estimated at 7.3 p.c. of last year's crop, or about 73,760,000 bushels, as compared with 28,972,000 bushels on July 1, 1915, and 32,325,000 bushels, the average of stocks on July 1 for the five years 1910-1914.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

Table I, taken from the Bulletin of Agricultural and Commercial Statistics for June, 1916, gives, for countries of the northern hemisphere, the areas under wheat, barley and oats for 1916 and the condition on June 1, 1916, as compared with May 1, 1916, and June 1, 1915. In this table the condition is expressed numerically by a percentage scale in which 100 represents the promise of a yield equal to the average yield of the past ten years, supposing the crops not to be subjected to the effects of any extraordinary phenomena up to the time of harvest.

Table II gives the areas and estimates of yield for 1916 of the same crops in the countries for which the information is available, as well as percentage comparisons with the previous year.

I. Area and Condition on June 1, 1916, of Cereals in Countries of the Northern Hemisphere.

Countries	Wheat					Rye				
	Area to be harvested 1916	Per cent of area of 1915	Condition			Area to be harvested 1916	Per cent of area of 1915	Condition		
			June 1 1916	May 1 1916	June 1 1915			June 1 1916	May 1 1916	June 1 1915
	000 acres	p.c.	p.c.	p.c.	p.c.	000 acres	p.c.	p.c.	p.c.	p.c.
Denmark.....	164	100.0	—	102	—	521	100.0	—	104	—
Spain.....	10,269	102.3	—	—	—	2,139	117.5	—	—	—
France.....	12,803	91.0	—	—	—	2,287	89.0	—	—	—
Italy.....	11,762	94.1	—	—	—	297	100.8	—	—	—
Rumania.....	4,862	103.3	—	120	—	196	105.0	—	120	—
Sweden (a)....	285	—	112	112	102	921	—	94	98	92
Switzerland....	122	107.1	103	101	100	70	105.2	105	98	100
Canada.....	11,492	88.5	101	108	116	109	96.2	101	—	102
			98	—	103					
United St's (a)	33,020	78.6	89	94	104	—	—	—	—	—
United St's (b)	17,851	91.8	94	—	101	2,729	86.6	96	98	—
British India..	30,143	93.5	—	—	—	—	—	—	—	—
Japan.....	1,280	102.4	94	—	106	—	86.6	96	98	—

	Barley					Oats				
			Condition					Condition		
			June 1 1916	May 1 1916	June 1 1915			June 1 1916	May 1 1916	June 1 1915
Denmark.....	644	100	—	100	—	1,024	100.0	—	100	—
Spain.....	3,495	92.3	—	—	—	1,329	94.7	—	—	—
France.....	1,449	87.3	—	—	—	7,524	90.2	—	—	—
Italy.....	608	100.0	—	—	—	1,236	102.3	—	—	—
Rumania.....	111	92.1	—	120	—	—	—	—	—	—
Switzerland....	18	109.2	104	101	99	101	109.9	103	101	100
Canada.....	1,382	91.5	97	—	99	10,500	92.4	97	—	98
United States..	7,757	104.9	95	—	104	40,600	99.6	98	—	104
Japan.....	3,109	96.0	107	—	—	156	96.0	—	—	—

(a) Winter wheat.

(b) Spring wheat.

II. Areas and Estimated Yields of Cereals in Countries of the Northern Hemisphere, 1915 and 1916.

Countries	Area to be harvested 1916	Per cent of area of 1915	Yield of 1915	Estimate of yield 1916	Per cent of yield of 1915
	000 acres	p.c.	000 bush.	000 bush.	p.c.
Wheat—					
Switzerland.....	122	107.1	3,957	4,306	108.8
United States (a).....	33,020	78.6	655,056	468,892	71.6
United States (b).....	17,851	91.8	356,466	246,348	69.1
British India.....	30,143	93.5	383,376	318,005	82.9
Japan.....	1,280	102.4	25,799	24,446	94.8
Rye—					
Switzerland.....	70	105.2	2,059	2,374	115.3
United States.....	2,729	86.6	49,190	43,664	88.8
Barley—					
Switzerland.....	18	109.2	588	661	112.5
United States.....	7,757	104.9	237,004	189,267	79.9
Japan.....	3,109	96.0	100,863	99,819	99.0
Oats—					
Switzerland.....	101	109.9	5,278	6,153	116.6
United States.....	40,600	99.6	1,449,756	1,180,717	81.4

(a) Winter wheat. (b) Spring wheat.

For the year 1915-16 the production in New Zealand of corn is given as 365,000 bushels from 7,000 acres, as compared with 284,000 bushels from 5,500 acres in 1914-15; and of potatoes the yield is 5,749,000 bushels from 25,000 acres in 1915-16, as compared with 4,952,000 bushels from 22,000 acres in 1914-15. For corn the production represents 28.46 per cent and for potatoes 16.1 per cent above that of last year. As compared with the five-year average, 1909-10-1913-14, the figures of production are 14.2 per cent less in the case of corn and 1.8 per cent less in the case of potatoes.

AGRICULTURAL METEOROLOGY.

The Bulletin of Foreign Agricultural Intelligence, issued by the Canadian Commissioner of the International Agricultural Institute, has recently contained translations into English of several interesting articles on agricultural meteorology in different countries, with special reference to researches made by the Meteorological Bureau of the Scientific Committee of the Russian Department of Agriculture.¹

This Bureau was established in 1896, having for its objects (1) the organisation of local agricultural meteorological stations; (2) observations to determine the relations between the growth and yields of plants and meteorological factors; (3) the arrangement of agricultural districts in Russia corresponding with climatic conditions and (4) the observation of atmospheric phenomena causing serious damage to agriculture.

¹Bulletin of Foreign Agricultural Intelligence, Department of Agriculture, Ottawa, 1916, February, pp. 128-147; March pp. 227-236; April, pp. 307-314; May, pp. 373-402.

The main principle governing the work of the Bureau is that for each crop there is a "critical period" during which for the proper development of the plant it is essential that the weather should correspond to actual needs. If these critical periods can be accurately determined for each plant, and if the average probabilities of the particular weather required falling within a given period can also be ascertained, then it will be for the farmer so to adjust his practice—by, for instance, choice of the date of seeding, the use of forcing fertilisers or the adoption of improved varieties—that the critical period and the critical weather, so to speak, shall coincide. Professor P. Broounoff, Chief of the Russian Meteorological Bureau, has explained its organisation and described some of the results obtained in articles of which translations appear in the *Bulletin of Foreign Agricultural Intelligence* for February and May, 1916.

The crop at present most thoroughly studied is that of oats, and Mr. J. Poulmann of the Kursk government is stated to have demonstrated that for this crop there exists a particular period which is critical in respect to precipitation. During this period an abundance of precipitation produces a good yield and its absence determines a poor one. The critical period for oats, during which an ample precipitation is essential to a good crop, is, in Russia, about ten days before heading. Professor Broounoff writes that the physiological cause of this phenomenon is easy to find. The plant needs more moisture at the period when it is ready to develop a great number of new vegetative organs. The absence of moisture causes weak organs, which do not afterwards acquire vigour. To the phase of heading succeeds that of inflorescence when too much rain is injurious.

Dr. Girolamo Azzi has applied the Russian principles to conditions in northern Italy. There, in the province of Bologna, he writes, the critical period for wheat, in respect to rain, falls within the twenty days which precede heading. If during the ten days immediately preceding the phase of heading the total rainfall be not less than 30 mm., or, if this period be dry, yet during the preceding ten days 60 mm. have fallen, then the probability of good yields is very great, even if no more rain fall until the harvest. Another critical period in Italy relates to the high winds and heavy rains that cause lodging. New varieties of wheat possessing greater elasticity of stem and consequently greater powers of resistance against lodging have been introduced, and it is recommended that they be sown at such times that the critical period shall not fall within the time that is meteorologically unfavourable.

That the conception of "critical periods" in the growth of agricultural crops is not altogether new may be gathered from noteworthy papers which have been read before the Royal Statistical Society of London. In 1905, Dr. W. N. Shaw, F.R.S., Secretary of the British Meteorological Council, in a paper on "Seasons in the British Isles from 1878"¹ showed how important was the influence of the autumn rainfall upon the yield of wheat in the ensuing year, wheat in England

¹Journal of the Royal Statistical Society, Vol. LXVIII, June 1905, pp. 247-319.

being a fall-sown crop. It was shown that a heavy yield of wheat in any particular year was almost invariably preceded by a dry autumn, the rule being so constant as to warrant the anticipation of an under-average yield whenever a wet autumn prevented the preparation of a proper seed bed. A similar conclusion from different data was drawn from the continuous wheat plots of the Rothamsted Experimental Station. Mr. A. D. Hall, F.R.S., when Director of this Station, thus explained the causal connection of the facts observed: "If the wheat be sown in October or early November, it spends the next three or four months almost wholly in developing its system of roots. Should the weather be wet and the soil in a saturated condition, the root system will be restricted both because of the deficient aëration and because the roots need not extend far to obtain the water necessary for growth".¹

The line of inquiry suggested by Dr. Shaw was afterwards followed by Mr. R. H. Hooker, F.R. Met. Soc., who in a paper, also read before the Royal Statistical Society, presented the results of mathematical calculations of the correlation between the statistics of meteorology and the yields of certain crops.² The results for wheat were in striking corroboration of those obtained by Dr. Shaw. They indicated that the absence of rain in September and October was more important for a good wheat crop than rain or temperature at any other period of the year. Almost equally interesting were other results brought out by the same method in this paper.

It does not follow that the principles which have been evolved from the Russian developments in agricultural meteorology can be applied in Canada without local modification or confirmation; but the recent establishment of an Agricultural Section of the Dominion Meteorological Service shows that the Dominion meteorological authorities have recognised their importance. This Section was established in 1914 under the charge of Mr. R. W. Mills, B.S.A., the intention being, as stated in the Report for 1913-14 of the Meteorological Service, to co-operate in the scheme outlined conjointly by the International Meteorological Committee and the International Institute of Agriculture. In his report for 1914-15 Sir Frederick Stupart, Director of the Meteorological Service, briefly describes the first year's work, which included the testing of several methods of attacking the problems to be solved, such as climatic maps, mathematical correlations between crop yields and meteorological averages and detailed chart studies from weather data and crop notes. The need of more detailed crop notes was stated to be continuously felt; and, by co-operation with the Dominion Experimental Farms, forms based upon Russian and United States models were issued in 1915 to the experimental farms for obtaining the records desired. In process of time the accumulation of these records should provide valuable data for study of the effects of meteorological phenomena upon the growth and yield of field crops in Canada.

¹Journal of the Royal Agricultural Society of England, Vol. 66, 1905, p. 231.

²Correlation of the Weather and Crops. By R. H. Hooker. Journal of the Royal Statistical Society, Vol. LXX, March 1907, pp. 1-51.

A SERIOUS INJURY TO POPLARS AND WILLOWS.

By J. M. SWAINE, M.Sc., Assistant Entomologist for Forest Insects, Entomological Branch,
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The poplars and willows in many sections of the three prairie provinces have been seriously injured again this season by the Western Willow Leaf Beetle, *Galerucella decora*, Say. The beetles are small, dark-yellowish or brownish, rather flat, and about three-sixteenths of an inch in length.

The adult beetles and their grubs feed upon the leaves of poplars and willows, stripping off the green surface, more or less completely destroying the foliage and leaving the trees scorched and brown or partly defoliated. The adult beetles appeared this season during the last week of May and first week of June. They arrived in some localities in enormous numbers and defoliated the trees in a remarkably short time. When the beetles are present in such numbers, various other plants are attacked in addition to poplars and willows. Currants, Manitoba maples and even grasses were injured in some places.

The eggs are laid on the foliage of poplars and willows, and the larvæ or young continue the work of defoliation. The adult beetles hibernate beneath the fallen leaves and are ready to attack the young foliage early the following season.

The injury has been much more severe and much more extensive this summer than last, and will possibly be even more severe next summer. Farmers with willows and poplars to protect should have a store of Paris green or lead arsenate and a spray pump ready for work next spring.

The larvæ or young, and the beetles when in moderate numbers, can be killed by spraying the infested foliage with Paris green, 4 ounces, mixed with 4 ounces of lime in 40 gallons of water. When the beetles appear in flights of immense numbers, special measures must be employed. Paris green should then be sprayed on all foliage likely to be attacked, at the rate of 6 ounces in 40 gallons of water, with 6 to 12 ounces of freshly slaked lime added.

The following are the mixtures recommended for use in large and small quantities respectively:—

FOR USE IN LARGE QUANTITIES:

Paris green, 4-6 ounces.
Fresh lime, 4-1 lb.
Water, 40 gallons.

FOR USE IN SMALL QUANTITIES:

Paris green, 1 heaping teaspoonful.
Mixed in water, 3 gallons.
Freshly slaked lime, 3 ounces.

Lead arsenate, when it can be obtained, may be used instead of Paris green in a stronger mixture with little danger of burning the foliage; from 4 to 8 pounds of lead arsenate may be used to the barrel of 40 gallons, when a rapid control is necessary; for ordinary spraying 2 pounds to the barrel are sufficient.

Smudges of damp hay and manure will prevent serious injury to valuable trees until the poison can take effect.

Paris green and lead arsenate are violent poisons, and proper care should be taken to prevent accidents in connection with their use.

THE WEATHER DURING JUNE.

The Dominion Meteorological Service reports that the mean temperature was below average from the Rocky mountains eastward into western Quebec, and was average or above over British Columbia and eastern Quebec, and in most parts of the Maritime Provinces. The largest negative departures occurred in Manitoba and the peninsula of Ontario, and the largest positive in Prince Edward Island and Yukon Territory. The rainfall was in excess of the average over the greater part of Canada, exclusive of British Columbia, western Alberta, and a small section of central Ontario, but it was only in the peninsula of Ontario, and the upper St. Lawrence Valley that the excess was very pronounced.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	June 3		June 10		June 17		June 24	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$	\$ c.
Wheat—								
No. 1 Nor.....	1 09½	-1 13½	1 09½	-1 13½	1 09½	-1 10½	1 10	-1 11½
No. 2 Nor.....	1 08½	-1 11½	1 08½	-1 13	1 08½	-1 09½	1 08½	-1 10½
No. 3 Nor.....	1 04½	-1 06½	1 04½	-1 08½	1 03½	-1 05½	1 04½	-1 06
No. 4.....	0 99½	-1 02	0 99½	-1 03	0 98½	-1 00½	0 99½	-1 00½
No. 5.....	0 93½	-0 96	0 93½	-0 97½	0 91½	-0 94½	0 92½	-0 94½
No. 6.....	0 88	-0 90½	0 88½	-0 93½	0 88½	-0 90½	0 89½	-0 91½
Feed.....	0 82	-0 84½	0 82½	-0 87½	0 82½	-0 86½	0 83½	-0 85½
Oats—								
No. 2 C. W.....	0 45½	-0 46½	0 45½	-0 47	0 46½	-0 48½	0 45½	-0 47
No. 3 C. W.....	0 44½	-0 44½	0 44½	-0 46½	0 44½	-0 47	0 45½	-0 46½
No. 1 Feed Ex.....	0 44½	-0 44½	0 44½	-0 46½	0 44½	-0 46½	0 44½	-0 46
No. 1 Feed.....	0 43½	-0 43½	0 43½	-0 45½	0 43½	-0 45½	0 43½	-0 45
No. 2 Feed.....	0 41	-0 41½	0 41½	-0 43½	0 42½	-0 43½	0 42½	-0 43½
Barley—								
No. 3 C. W.....	0 65	—	0 65	-0 67	0 66	-0 67½	0 67½	-0 68½
No. 4 C. W.....	0 60	—	0 60	-0 62	0 61½	-0 62½	0 62½	-0 63½
Rejected.....	0 53	—	0 53	-0 58	0 58	-0 58½	0 58	-0 59½
Feed.....	0 53	—	0 53	-0 58	0 58	-0 58½	0 58	-0 59½
Flax—								
No. 1 N.W.C.....	1 58½	-1 66½	1 58½	-1 63½	1 57½	-1 59½	1 55½	-1 57½
No. C. W.....	1 55½	-1 63	1 55½	-1 60½	1 54½	-1 56½	1 52½	-1 54½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	March		April		May		June	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 12	-1 22	1 16	-1 30½	1 22	-1 24	1 06	-1 14
Chicago.....	1 21	-1 21½	1 17	-1 25½	1 22½	-1 22½	1 01½	-1 07½
New York (f.o.b. afloat).....	1 27½	-1 29½	1 25½	-1 35½	1 29	-1 31½	1 13½	-1 14½
Corn, No. 2, Mixed.....								
St. Louis.....	0 73	-0 73½	0 73½	-0 76	0 76	—	0 70	-0 76½
New York (f.o.b. afloat).....	0 83½	-0 84½	0 83½	-0 86½	0 86	-0 86½	0 79½	-0 90½
Corn, No. 2—								
Chicago.....	0 75	-0 75½	0 74½	-0 79	0 77½	-0 78	0 69½	-0 78½
Oats, No. 2—								
St. Louis.....	0 44	—	0 42½	-0 45	0 43½	—	0 37	-0 41
Chicago.....	0 43½	-0 44	0 44½	-0 47	0 45½	-0 46	0 37½	-0 41½
Rye, No. 2—								
Chicago.....	0 95	—	0 94	-0 97½	0 97	-0 97½	0 97	-0 99½

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	June 5		June 12		June 19		June 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bushel)—								
Canadian No. 1.....	1 75½	-1 77	1 56	-1 62	1 56	-1 59	1 47	-1 53½
“ No. 2.....	1 72½	-1 73½	1 53½	-1 56	1 53½	-1 56	1 44½	-1 47
“ No. 3.....	1 69½	-1 70½	1 50½	-1 53½	1 50½	-1 53½	—	—
American best winter.....	1 74	-1 77	1 59	-1 62	1 56	-1 59	1 47	-1 50½
“ poor winter.....	1 47	-1 59	1 41½	-1 47	1 41½	-1 47	1 35½	-1 38½
Californian.....	1 86½	-1 89½	—	—	—	—	1 60½	-1 63½
Argentine.....	1 74	-1 75½	—	—	—	—	1 47	-1 53½
Australian.....	1 91½	-1 94½	—	—	—	—	1 64½	-1 70
Oats (per bushel)—								
Canadian.....	0 93	-0 94½	0 91½	-0 93	0 89½	-0 90½	0 85½	-0 88
American.....	0 90	-0 91½	0 88½	-0 89½	0 86	-0 86½	0 83½	-0 84
Chilian.....	0 95	-0 95½	0 93½	-0 94½	0 91	-0 91½	0 91	-0 91½
Flour (per 280 lb.)—								
Canadian good.....	11 42	-11 66	10 94	-11 18	10 94	-11 18	10 69	-10 94
“ first bakers’.....	10 94	-11 18	10 45	-10 69	10 45	-10 69	10 21	-10 45
“ common.....	10 21	-10 45	9 74	-9 97	9 74	-9 97	9 49	-9 74
American spring good.....	11 66	-11 91	11 18	-11 42	11 18	-11 42	10 94	-11 18
“ common.....	10 45	-10 69	9 97	-10 21	9 97	-10 21	9 74	-9 97
“ winter good.....	11 42	-11 66	10 94	-11 18	10 94	-11 18	10 69	-10 94
“ winter common.....	10 69	-10 94	10 21	-10 45	10 21	-10 45	9 97	-10 21
“ winter inferior.....	9 74	-9 97	9 25	-9 49	9 25	-9 49	9 25	-9 49
Californian.....	11 66	-12 41	10 69	-11 42	10 69	-11 42	10 69	-10 94
Australian.....	10 94	-11 18	9 97	-10 69	9 97	-10 69	9 49	-9 74
Japanese.....	10 94	-11 18	10 21	-10 45	9 25	-9 49	9 00	-9 25

III. Range of Prices of Imported Grain and Flour at British Markets, 1916—con.

LIVERPOOL

Description	June 6		June 13		June 20		June 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1.....	1 55½	-1 57	1 52½	-1 53	1 47½	-1 48½	1 46½	-1 47½
“ No. 2.....	1 54½	-1 55½	1 51½	-1 52	1 45½	-1 46	—	—
“ No. 3.....	1 51½	-1 52	1 48½	-1 49	1 42½	-1 43	—	—
Nor. Duluth No. 1.....	1 50	-1 52	—	—	—	—	—	—
White Walla.....	1 67½	—	—	—	—	—	—	—
Hard Winter, No. 2.....	—	—	—	—	—	—	1 38½	-1 42½
Hard Winter No. 2, Gulf new	1 48½	-1 52	1 46	-1 47½	1 41½	-1 42½	—	—
Red winter No. 2.....	1 52	-1 53	1 47½	-1 48½	1 46	-1 48½	1 44½	-1 47½
Durum.....	—	—	1 50½	—	1 48½	—	1 42½	-1 43½
Oats (per bush.)—								
Chilian white.....	0 93½	-0 96½	0 93½	-0 96½	0 91½	-0 93½	0 90	-0 91½
“ black.....	0 91½	—	0 90	—	—	—	0 89½	-0 90½
“ grey.....	0 91½	-0 93½	0 90½	-0 92½	0 90	-0 91½	—	—
“ tawny.....	0 91½	—	0 91½	—	0 90	-0 91½	0 90	-0 91½
Flour (per 280 lb.)—								
Canada spring patents.....	10 45	-10 69	10 21	-10 45	9 97	-10 21	9 86	-10 09
America spring patents.....	10 45	-10 69	10 21	-10 45	9 97	-10 21	9 86	-10 09
America soft winter patents.....	10 33	-10 57	10 09	-10 33	9 86	-10 09	9 74	-9 97
Kansas patents.....	10 21	-10 45	9 97	-10 21	9 74	-9 97	9 61	-9 86
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	10 21	-10 33	10 21	-10 33	10 21	-10 33	10 09	-10 21
“ middle cut.....	9 86	-9 97	9 86	-9 97	9 86	-9 97	9 74	-9 86
“ fine cut.....	9 86	-9 97	9 86	-9 97	9 86	-9 97	9 74	-9 86
“ pinhead.....	9 86	-9 97	9 86	-9 97	9 86	-9 97	9 74	-9 86

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
April 1.....	s. d. 53 6	\$ c. 1 63	s. d. 53 8	\$ c. 1 57	s. d. 30 5	\$ c. 0 81
“ 8.....	51 8	1 57	53 7	1 56	30 1	0 80
“ 15.....	53 2	1 62	53 1	1 54	30 7	0 81
“ 22.....	55 3	1 68	52 10	1 54	31 8	0 83
“ 29.....	54 0	1 64	53 4	1 55	31 0	0 82
Average.....	54 6	1 64	53 4	1 55	31 6	0 82
May 6.....	55 7	1 691	53 1	1 076	32 10	0 871
“ 13.....	55 5	1 685	53 5	1 083	33 1	0 877
“ 20.....	55 0	1 673	52 10	1 071	33 0	0 875
“ 27.....	54 7	1 660	52 9	1 070	33 4	0 884
Average.....	55 2	1 680	53 6	1 075	33 1	0 877
June 3.....	53 3	1 620	53 9	1 570	33 3	0 882
“ 10.....	51 2	1 556	52 8	1 538	33 7	0 890
“ 17.....	48 10	1 485	50 9	1 482	32 1	0 851
“ 24.....	47 6	1 445	49 10	1 455	31 3	0 829
Average.....	50 2	1 527	51 9	1 511	32 7	0 863

V. Average Prices of Imported Meats at British Markets, 1916.

Fresh Meats (per cwt. of 100 lb.).

Description and Market	June 7		June 14		June 21		June 28	
	hind	fore	hind	fore	hind	fore	hind	fore
	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.	qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham	—	—	21 29	18 76	—	—	—	—
Edinburgh	21 80	20 30	21 30	18 80	21 30	18 80	21 30	18 30
Argentine chilled—								
Birmingham	23 32	19 09	21 74	19 55	—	—	20 78	19 09
Leeds	23 07	19 77	21 29	18 25	21 03	18 25	20 28	18 25
Liverpool	22 63	19 77	21 29	18 25	20 78	17 74	20 78	17 74
London	22 63	19 77	20 78	17 74	20 78	17 74	20 78	18 76
Manchester	22 63	19 77	21 29	18 25	20 78	17 74	20 78	17 74
Edinburgh	20 30	—	22 05	18 80	21 80	19 30	21 30	—
Australian frozen—								
Glasgow	20 78	19 09	20 78	18 25	20 78	—	20 28	—
Manchester	20 78	19 09	20 78	18 25	20 78	—	20 28	—

GREEN BACON (per cwt. of 100 lb.).

Description and Market	June 7		June 14		June 21		June 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol	20 22—19 56	20 44—20 00	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66	21 22—20 66
Liverpool	20 22—19 35	20 00—19 13	20 66—19 35	21 22—20 00	21 22—20 00	21 22—20 00	21 22—20 00	21 22—20 00
London	21 22—20 44	21 22—20 44	21 22—18 24	21 22—18 24	21 22—18 24	21 22—18 24	21 22—18 24	21 22—18 24
Glasgow	20 88—	—	20 44—	—	20 88—	—	21 22—20 88	—
Canadian Cumberland cut—								
Liverpool	19 56—18 47	19 35—18 24	19 78—18 47	20 00—18 69	20 00—18 69	20 00—18 69	20 00—18 69	20 00—18 69
Danish sides—								
Bristol	22 98—22 32	23 42—22 76	24 08—23 42	24 08—23 42	24 08—23 42	24 08—23 42	24 08—23 42	24 08—23 42
Liverpool	23 20—22 32	23 20—22 32	24 08—23 42	24 51—23 64	24 51—23 64	24 51—23 64	24 51—23 64	24 51—23 64
London	23 42—22 54	23 86—22 98	23 86—22 98	24 08—22 98	24 08—22 98	24 08—22 98	24 08—22 98	24 08—22 98
Glasgow	22 98—	—	22 98—	—	23 42—	—	23 42—23 20	—

GREEN HAM (per cwt. of 100 lb.).

	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—								
Bristol	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88
Liverpool	21 22—20 44	21 22—20 44	21 44—20 66	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88	21 66—20 88
London	21 44—20 88	21 66—20 88	21 22—20 44	21 88—21 00	21 88—21 00	21 88—21 00	21 88—21 00	21 88—21 00
American long cut—								
Bristol	19 13—18 24	19 13—18 24	19 35—18 69	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91
Liverpool	19 13—18 24	19 13—18 24	19 46—18 47	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91
London	19 56—18 69	19 35—18 47	19 35—18 69	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91
Glasgow	19 13—18 69	18 66—18 24	19 13—18 69	19 56—19 13	19 56—19 13	19 56—19 13	19 56—19 13	19 56—19 13
American short cut—								
Bristol	19 13—18 24	19 13—18 24	19 56—18 69	20 00—19 13	20 00—19 13	20 00—19 13	20 00—19 13	20 00—19 13
Liverpool	19 35—18 69	19 13—18 47	19 46—18 80	20 00—19 35	20 00—19 35	20 00—19 35	20 00—19 35	20 00—19 35
London	19 13—18 24	19 13—18 24	19 13—18 24	19 13—18 24	19 13—18 24	19 13—18 24	19 13—18 24	19 13—18 24
Glasgow	18 69—17 81	18 69—17 81	19 13—18 47	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91	19 56—18 91

CHEESE (per cwt. of 100 lb.)

Description and Market	June 7		June 14		June 21		June 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—								
Bristol.....	23 85	—23 42	22 54	—22 10	21 88	—21 44	21 22	—20 88
Liverpool.....	—	—21 88	21 66	—21 00	21 44	—20 77	21 22	—20 44
London.....	22 98	—22 54	22 98	—22 10	22 98	—22 10	22 10	—21 22
Glasgow.....	20 88	—	20 88	—	20 88	—20 44	19 56	—19 13
New Zealand—								
Bristol.....	24 51	—24 08	24 29	—23 86	23 86	—23 42	22 98	—22 54
London.....	23 86	—22 98	23 86	—22 98	23 86	—22 98	22 98	—22 10
Glasgow.....	23 42	—22 98	23 42	—22 98	22 54	—22 10	21 66	—21 22

GREEN HAMS (per cwt. of 100 lb.)

Description and Market	May 3		May 10		May 17		May 24		May 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—										
Bristol.....	21 66	—20 88	21 66	—20 88	21 66	—20 88	21 66	—20 88	21 66	—20 88
Liverpool.....	21 66	—21 00	21 66	—21 00	21 66	—20 88	21 66	—20 88	21 44	—20 66
London.....	21 66	—21 22	21 88	—21 00	21 66	—21 00	21 66	—20 00	21 66	—21 22
American long cut—										
Bristol.....	19 78	—19 13	19 78	—19 13	19 79	—19 13	19 56	—18 69	19 13	—18 24
Liverpool.....	19 78	—19 24	19 78	—19 24	19 56	—19 13	19 56	—18 80	19 24	—18 58
London.....	20 00	—19 35	20 00	—19 56	20 00	—19 13	19 56	—18 91	19 56	—18 69
Glasgow.....	20 44	—20 00	20 66	—20 00	20 22	—19 78	20 00	—19 56	19 56	—19 35
American short cut—										
Bristol.....	20 22	—19 56	20 22	—19 56	20 00	—19 56	19 56	—19 13	19 35	—18 91
Liverpool.....	20 33	—20 33	20 33	—19 67	20 22	—19 56	20 00	—19 24	19 89	—19 02
London.....	19 35	—20 00	20 00	—19 56	20 00	—19 13	19 56	—19 13	19 56	—18 91
Glasgow.....	20 22	—19 78	20 22	—20 00	20 00	—19 56	19 56	—19 13	19 56	—19 13

CHEESE (per cwt. of 100 lb.)

Description and Market	May 3		May 10		May 17		May 24		May 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—										
Bristol.....	23 86	—23 42	24 51	—24 08	25 17	—24 73	25 17	—24 73	24 73	—24 29
Liverpool.....	23 75	—23 20	23 97	—23 53	24 19	—23 75	24 29	—23 86	24 29	—23 86
London.....	24 29	—23 86	25 17	—24 73	25 27	—24 73	25 17	—24 73	23 42	—22 98
Glasgow.....	23 64	—	24 29	—	25 17	—	25 17	—	24 73	—
New Zealand—										
Bristol.....	23 86	—23 42	24 73	—24 29	25 17	—24 73	25 17	—24 73	24 95	—24 29
London.....	23 86	—23 42	24 73	—24 29	24 73	—24 29	24 95	—24 51	24 51	—23 86
Glasgow.....	23 64	—	24 29	—	25 17	—	25 17	—	24 73	—

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EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended July 31, 1916.

FALL WHEAT, HAY AND CLOVER AND ALFALFA.

The preliminary estimate of the average yield per acre of fall wheat in Canada for 1916 is 25.76 bushels as compared with 29.41 bushels last year, 21.41 bushels in 1914 and 23.26 bushels, the average of the six years 1910 to 1915. The harvested area of fall wheat in the five provinces of Ontario, Manitoba, Saskatchewan, Alberta and British Columbia amounts in 1916 to 1,042,200 acres, as compared with 1,208,700 acres in 1915, and the total estimated yield for this year is 26,850,000 bushels as compared with 35,551,600 bushels last year and 20,837,000 bushels in 1914. In Ontario the total estimated yield for 1916 is 18,773,000 bushels from 774,800 acres, an average yield per acre of 24.23 bushels, and in Alberta, the other large fall wheat growing province, the total yield is estimated at 7,520,000 bushels from 247,700 acres, an average of 30.36 bushels per acre. The estimated yield of hay and clover in 1916 is 14,941,000 tons from 7,974,000 acres, as compared with 10,953,000 tons from 7,875,000 acres in 1915 and 10,259,000 tons from 7,997,000 acres in 1914. The average yield per acre works out in 1916 to 1.88 ton, which is the largest on record for Canada. The total yield of 14,941,000 tons is also the largest hay harvest gathered in Canada, as well as one of the best in quality. Alfalfa shows a total yield of 166,000 tons from 89,900 acres, as compared with 261,955 tons in 1915, the average yield per acre being 1.85 ton against 2.83 tons.

CONDITION OF SPRING-SOWN CROPS.

The condition of spring-sown grain is about equal to last month, being over 80 per cent of the standard representing a full crop. On July 31, 1915, the figures were exceptionally high, being over 90 per cent, but in 1914 they were below 80 per cent. The respective percentages this year are as follows: Fall wheat 82, compared with 80 on June 30, spring wheat 89 both dates, all wheat 87 both dates, oats 83 and 86, barley 83 and 88, rye 87 and 91, peas 75 and 82. The condition of other crops on July 31 was as follows: Beans 82, buckwheat and mixed grains 83, flax 86, corn for husking 74, potatoes 84, turnips 87, mangolds 85, hay and clover 100, alfalfa 95, corn for fodder 79, sugar beets 82 and pastures 95. Converted into a standard wherein 100 represents the average yield per acre of the eight years 1908 to 1915 the condition of the principal grain crops at July 31, 1916, was as follows: Fall wheat 102.5, spring wheat 106, all wheat 105, rye 103.5, barley 101.2, oats 105, flax 105. That is to say, the yields per acre of these crops, according to their appearance on July 31,

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are expected to be above the average yields of the previous eight years by $2\frac{1}{2}$ per cent for fall wheat, 6 per cent for spring wheat, 5 per cent for all wheat, $3\frac{1}{2}$ per cent for rye, 1.2 per cent for barley, 5 per cent for oats and 5 per cent for flax. Many correspondents in Manitoba report the appearance in the wheat crops of rust due to murky atmosphere and extreme heat. They were not able to estimate the extent of the damage beyond stating that this would be serious if not checked by a change of weather.

Census and Statistics Office,
Ottawa, August 12, 1916.

ERNEST H. GODFREY,
Editor.

I. Area and Preliminary Estimate of the Yield of Fall Wheat in 1916, as compared with the Final Estimate of 1915.

Provinces	1915	1916	1915	1916	1915	1916
	acres	acres	bush. per acre	bush. per acre	bush.	bush.
Ontario.....	972,000	774,800	28.34	24.23	27,546,000	18,773,000
Manitoba.....	10,900	9,400	33.30	24.71	363,000	232,000
Saskatchewan.....	4,100	4,100	30.76	32.00	126,000	131,000
Alberta.....	215,700	247,700	33.92	30.36	7,316,000	7,520,000
British Columbia.....	6,000	6,200	33.44	31.33	200,600	194,000
Canada.....	1,208,700	1,042,200	29.41	25.76	35,551,600	26,850,000

II. Area and Preliminary Estimate of the Yield of Hay and Clover and Alfalfa in 1916, as compared with the Final Estimate of 1915.

Provinces	1915	1916	1915	1916	1915	1916
	acres	acres	tons per acre	tons per acre	tons	tons
Canada—						
Hay and clover.....	7,875,000	7,974,000	1.39	1.87	10,953,000	14,941,000
Alfalfa.....	92,685	89,900	2.83	1.85	261,955	166,000
P. E. Island—						
Hay and clover.....	198,000	199,000	1.77	1.68	351,000	334,000
Alfalfa.....	55	—	3.00	—	165	—
Nova Scotia—						
Hay and clover.....	538,000	553,000	1.78	1.92	958,000	1,062,000
Alfalfa.....	30	30	2.30	1.92	70	60
New Brunswick—						
Hay and clover.....	569,000	574,000	1.39	1.70	791,000	976,000
Alfalfa.....	140	120	2.25	1.92	320	240
Quebec—						
Hay and clover.....	2,922,000	2,985,000	1.26	1.80	3,682,000	5,373,000
Alfalfa.....	2,860	2,600	2.84	1.70	8,100	4,500
Ontario—						
Hay and clover.....	3,082,000	3,059,000	1.32	2.00	4,068,000	6,118,000
Alfalfa.....	60,000	56,000	2.72	1.80	163,000	101,000
Manitoba—						
Hay and clover.....	159,000	158,000	1.93	1.80	307,000	284,000
Alfalfa.....	4,700	4,700	2.19	2.00	10,300	9,400
Saskatchewan—						
Hay and clover.....	67,000	75,000	1.41	2.00	94,000	150,000
Alfalfa.....	1,800	1,850	1.71	2.00	3,000	3,800
Alberta—						
Hay and clover.....	173,000	196,000	1.80	1.50	311,000	294,000
Alfalfa.....	11,000	12,000	3.06	1.80	34,000	22,000
British Columbia—						
Hay and clover.....	167,000	175,000	2.34	2.00	391,000	350,000
Alfalfa.....	12,100	12,600	3.52	2.00	43,000	25,000

III. Comparative Condition of Field Crops, July 31, 1912-16.

Field crops	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.
Canada—					
Fall wheat.....	70	78	72	94	82
Spring wheat.....	83	88	77	93	89
All wheat.....	80	85	76	93	87
Oats.....	81	87	78	93	83
Barley.....	83	88	77	92	83
Rye.....	84	85	79	92	87
Peas.....	76	83	80	91	75
Beans.....	79	82	80	88	82
Buckwheat.....	77	85	81	88	83
Mixed grains.....	83	89	88	95	83
Flax.....	86	84	69	88	86
Corn for husking.....	70	82	81	82	74
Potatoes.....	87	89	82	91	84
Turnips.....	82	84	78	92	87
Mangolds, etc.....	81	84	79	89	85
Hay and clover.....	83	75	69	81	100
Alfalfa.....	84	76	70	87	95
Corn for fodder.....	73	87	83	82	79
Sugar beets.....	81	84	79	89	82
Pasture.....	84	82	71	89	95
P. E. Island—					
Spring wheat.....	95	96	100	93	95
Oats.....	92	101	100	91	99
Barley.....	92	99	96	96	98
Peas.....	89	89	95	94	93
Beans.....	80	90	90	93	92
Buckwheat.....	89	94	93	95	92
Mixed grains.....	95	101	98	97	99
Flax.....	92	97	93	100	96
Potatoes.....	94	88	96	89	98
Turnips.....	80	90	99	99	97
Mangolds, etc.....	79	91	97	97	97
Hay and clover.....	69	82	88	94	91
Corn for fodder.....	84	88	79	83	85
Sugar beets.....	75	82	78	96	93
Pasture.....	85	97	91	98	97
Nova Scotia—					
Spring wheat.....	86	95	94	90	97
Oats.....	83	97	96	94	100
Barley.....	86	95	92	91	95
Rye.....	87	95	88	97	98
Peas.....	87	90	91	96	94
Beans.....	87	82	88	91	86
Buckwheat.....	88	94	93	92	93
Mixed grains.....	87	96	93	94	99
Flax.....	88	100	100	—	85
Corn for husking.....	90	83	78	86	87
Potatoes.....	91	92	90	91	96
Turnips.....	82	90	94	95	90
Mangolds, etc.....	80	88	92	90	95
Hay and clover.....	82	91	77	106	106
Alfalfa.....	80	84	84	80	87
Corn for fodder.....	84	85	83	85	91
Sugar beet.....	81	95	91	90	95
Pasture.....	83	93	85	100	100

III. Comparative Condition of Field Crops, July 31, 1912-16—con.

Field crops	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.
New Brunswick—					
Spring wheat.....	83	94	85	89	94
Oats.....	82	95	90	89	97
Barley.....	80	91	87	89	93
Rye.....	86	65	87	—	—
Peas.....	83	90	81	92	96
Beans.....	85	81	81	85	87
Buckwheat.....	88	92	87	85	88
Mixed grains.....	86	91	88	85	97
Corn for husking.....	76	48	87	77	81
Potatoes.....	82	98	94	87	94
Turnips.....	82	92	91	92	96
Mangolds, etc.....	82	89	86	93	95
Hay and clover.....	89	80	85	90	106
Alfalfa.....	—	—	—	110	93
Corn for fodder.....	80	73	73	85	88
Sugar beets.....	81	86	84	99	92
Pasture.....	92	95	94	94	101
Quebec—					
Spring wheat.....	74	88	87	90	82
Oats.....	70	90	89	91	79
Barley.....	76	89	89	87	81
Rye.....	77	90	77	88	87
Peas.....	71	87	84	89	76
Beans.....	74	83	75	88	84
Buckwheat.....	73	90	80	83	85
Mixed grains.....	76	90	90	92	82
Flax.....	78	85	74	80	79
Corn for husking.....	69	81	79	81	81
Potatoes.....	74	92	87	90	80
Turnips.....	75	82	73	87	88
Mangolds, etc.....	73	82	76	82	87
Hay and clover.....	78	63	64	76	99
Alfalfa.....	77	76	64	81	92
Corn for fodder.....	68	85	80	83	80
Sugar beets.....	73	85	70	84	85
Pasture.....	73	77	71	77	96
Ontario—					
Fall wheat.....	67	81	72	94	81
Spring.....	80	79	81	94	78
All wheat.....	72	80	76	94	80
Oats.....	82	83	85	96	66
Barley.....	81	81	86	97	70
Rye.....	81	80	80	92	81
Peas.....	74	78	74	91	59
Beans.....	81	78	82	89	70
Buckwheat.....	75	73	74	91	72
Mixed grains.....	84	85	87	98	71
Flax.....	84	82	86	91	73
Corn for husking.....	69	84	82	83	61
Potatoes.....	86	82	84	91	63
Turnips.....	79	76	75	90	73
Mangolds, etc.....	81	80	79	90	72
Hay and clover.....	82	65	59	74	109
Alfalfa.....	84	69	70	88	98
Corn for fodder.....	73	88	86	87	70
Sugar beets.....	80	80	81	86	71
Pasture.....	77	65	60	87	84

III. Comparative Condition of Field Crops, July 31, 1912-16—con.

Field crops	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.
Manitoba—					
Fall wheat.....	86	62	68	80	85
Spring wheat.....	82	85	68	92	84
All wheat.....	83	83	68	92	84
Oats.....	85	83	62	88	87
Barley.....	85	83	62	89	83
Rye.....	95	81	69	88	92
Peas.....	—	82	58	95	95
Beans.....	—	88	65	84	85
Mixed grains.....	77	83	61	91	94
Flax.....	82	84	58	86	88
Potatoes.....	93	92	74	93	92
Turnips.....	89	88	65	89	93
Mangolds, etc.....	91	88	64	90	91
Hay and clover.....	80	83	62	67	98
Alfalfa.....	84	84	69	74	95
Corn for fodder.....	81	92	81	67	92
Pasture.....	92	88	61	94	98
Saskatchewan—					
Fall wheat.....	94	79	59	—	75
Spring wheat.....	86	89	66	92	94
All wheat.....	86	89	66	—	94
Oats.....	82	86	58	90	88
Barley.....	87	90	60	89	89
Rye.....	92	89	74	97	95
Peas.....	88	85	69	87	88
Beans.....	94	90	67	73	100
Mixed grains.....	91	91	63	90	90
Flax.....	91	84	64	90	91
Potatoes.....	94	91	70	92	95
Turnips.....	91	90	64	95	92
Mangolds, etc.....	92	89	69	92	90
Hay and clover.....	89	90	74	82	100
Alfalfa.....	85	86	73	83	93
Corn for fodder.....	83	85	69	60	93
Sugar beets.....	91	86	69	98	88
Pasture.....	94	93	71	90	101
Alberta—					
Fall wheat.....	71	64	68	95	89
Spring wheat.....	91	88	75	96	92
All wheat.....	84	82	74	96	92
Oats.....	84	88	72	95	90
Barley.....	88	91	72	94	90
Rye.....	93	92	77	98	91
Peas.....	83	77	66	94	83
Beans.....	80	91	70	90	78
Mixed grains.....	90	93	88	95	93
Flax.....	86	82	61	96	89
Potatoes.....	94	90	74	95	92
Turnips.....	91	92	75	96	93
Mangolds, etc.....	87	91	78	96	94
Hay and clover.....	100	89	91	99	89
Alfalfa.....	81	85	68	98	91
Corn for fodder.....	92	73	90	77	91
Sugar beets.....	87	92	70	93	93
Pasture.....	96	94	80	103	98

III. Comparative Condition of Field Crops, July 31, 1912-16—con.

Field crops	1912	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.	p.c.
British Columbia—					
Fall wheat.....	94	92	83	90	84
Spring wheat.....	95	90	78	93	92
All wheat.....	94	91	80	95	89
Oats.....	100	90	79	93	91
Barley.....	96	95	77	93	91
Rye.....	86	100	90	93	90
Peas.....	91	98	87	94	95
Mixed grains.....	95	90	71	90	98
Potatoes.....	97	90	84	93	90
Turnips.....	88	86	87	91	86
Mangolds, etc.....	93	95	87	96	90
Hay and clover.....	96	98	86	90	84
Alfalfa.....	105	93	99	100	82
Sugar beets.....	100	97	87	94	88
Pasture.....	101	99	77	93	94

TELEGRAPHIC CROP REPORTS.

On August 2, 1916, a special press bulletin was issued by the Census and Statistics Office giving the following report on the condition of field crops in Canada at the end of July, as summarised from telegrams received from the Dominion Experimental Farms and Stations in accordance with arrangements made between the Departments of Trade and Commerce and Agriculture:

Maritime Provinces. Prince Edward Island.—All crops have made strong growth; hay is an average crop; potatoes and roots look well. **Nova Scotia.**—Cereals have made good growth; corn and potatoes are good; turnips are fair, but mangolds poor. **New Brunswick.**—All crops have made good growth, except where damaged by June floods; hay much above the average; grain mostly headed and indicates an average crop; potatoes and roots promise well.

Quebec.—All reports agree that the hay crop is very abundant, and of good quality. Grain crops have suffered considerably from drought during the month, and apparently the harvest will be earlier than usual. Potatoes are reported as good, except from Ste. Anne de la Pocatière, where they have suffered from drought, and from Cap Rouge, where they were hurt by too much rain. Corn is reported as doing well.

Ontario.—In the peninsula (Essex Co.) a large crop of hay has been harvested in splendid shape. Wheat and barley are harvested, but are not quite a standard yield. Oats will be below average. Corn and hood crops are fair, though later than usual. In eastern Ontario crops are suffering from lack of moisture. Wheat is little grown; its condition is fair and it is beginning to ripen. Barley is poor, rather late and very uneven. Oats, the most important crop of the district, shows great divergence, some crops being far advanced, others only a few inches high. The condition is uneven and owing to the dry weather the straw will be short. About three quarters of the hay is harvested and the crop is a very good one. Roots have started well, but much depends upon the next few weeks. Corn is poor. Potatoes are healthy, but are not setting well because of the drought. The crop is likely to be light.

Manitoba.—Telegrams from Brandon and Morden report that wheat prospects have deteriorated during the first few days by an attack of rust. From Brandon it is reported that cutting will be general by August 10. Oats and barley are a heavy crop and uninjured. A heavy crop of hay was harvested during July. Corn is doing well. At Morden the weather is dry and conditions will be serious if rain does not come soon.

Saskatchewan and Alberta.—Weather conditions of July have been generally favourable, although hailstorms have done local damage. Grain crops continue to show fine promise, especially on breaking and summer fallow. Grain on stubble is not so good, and

there will be a greater difference between stubble and fallow grain than last year. In southern Alberta crops are all good to excellent, and harvesting will commence sooner than was expected a month ago. Wheat cutting is expected to begin about August 20. Hay, roots and potatoes are good.

British Columbia.—At Agassiz the weather has been cool and bad for hay, though excellent for roots; corn has suffered badly. Cereal crops are growing well; the second crop of clover is good. At Invermere cereal crops are good and are ripening fast. Field peas are exceptionally heavy; roots are looking well, except mangolds; the second alfalfa crop is coming on well. From Sidney it is reported that beneficial rains fell during the month. Autumn cereals are ripening late; spring cereals and forage crops are growing well. A portion of the oat crop is being cut for hay.

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—The weather during the first half of the month was cool and wet, producing a good growth of all crops, but interfering somewhat with haying operations. Field crops are in good condition. Potato bugs are numerous, and turnips are being injured by beetles.

Nova Scotia.—The season has been a favourable one for all crops, with sufficient moisture. Pastures are excellent, and the hay crop is exceedingly heavy and of good quality. Much damage has been done by potato bugs where the plants have not been sprayed.

New Brunswick.—The weather during July was for the most part fine and warm, and a good growth of all crops has taken place. In some districts heavy rainstorms have occurred, and crops on low lands are suffering. Hay is unusually heavy. Potatoes are not up to the average owing to damage from bugs.

Quebec.—Owing to the fine warm weather of July there is a marked improvement in the condition of all crops throughout the province. The general outlook is satisfactory, except in some parts which have suffered from drought. Few cases of damage through rust or insects have been reported. A very heavy hay crop of good quality was housed under most favourable conditions. Gardens have made good progress, especially in the southern and eastern parts of the province; there are, however, numerous complaints of potato bugs.

Ontario.—July has been hot and marked by an almost entire absence of rain, except for a few local thunderstorms. The heat caused grains to ripen too quickly with the heads but lightly filled and the straw short. At the end of the month the harvesting of fall wheat was well under way. The hay crop, which was heavy and of good quality, was harvested under ideal conditions, the continued fair weather permitting even those who were short of help to secure it safely. Pastures were good until the middle of the month, but have dried up with the extreme heat. Roots and potatoes are in poor condition, as they were planted late on wet ground, which then baked with the heat, so that it was difficult to cultivate them.

Manitoba.—During the past month all crops made rapid growth, so that harvesting is likely to commence about the usual time. The extreme heat has forced ripening of wheat and there are many complaints of heads not being properly filled. Many reports

state that rust has appeared on wheat, but that it is too early to estimate the extent of the injury. Native hay is a heavy crop, but in many places cannot be cut, as it is under water. Hail has done some slight damage locally. Fears are expressed regarding the labour situation in harvest time.

Saskatchewan.—July has been a good growing month with sufficient moisture, and grains are very little later than last year. A few cases of rust are reported, and in several districts severe hailstorms occurred. Aside from this, wheat is in good condition, and a full crop is looked for if the weather is warm and dry; so that the grains may ripen before frosts occur. Harvesting will commence about August 20, and it is feared there will be a serious shortage of labour. Prairie hay is plentiful, but in many places is so flooded that cutting will be impossible.

Alberta.—July was warm with sufficient rainfall, so that all crops made good growth. All grains are exceptionally free from disease and insect pests, the only damage suffered being from hail in some few districts. At the end of the month all things pointed to a bountiful harvest, provided early frosts do not occur, and sufficient labour is available to get in the crops.

British Columbia.—The season has been cool, and crops are somewhat later than usual. Rains interfered somewhat with the haying, so that it was not completed by July 31. Grains are in fair condition and pastures and ranges are excellent. Fruits promise a good yield.

NUMBERS OF FARM LIVE STOCK IN CANADA.

In the last issue of the Census and Statistics Monthly (Vol. 9, No. 95, page 184), the total number of cattle other than milch cows, although correctly given for each province, was by a clerical error stated as 3,826,519 for the whole of Canada instead of 3,313,519. This correction makes therefore a decrease as compared with last year of 85,636 instead of an increase of 427,634 as stated last month. The following are the estimated total numbers of each description of live stock in Canada for 1916 as compared with 1915:—

Description	1915	1916	Decrease
Horses.....	2,996,099	2,990,635	5,464
Milch cows.....	2,666,346	2,603,345	63,501
Other cattle.....	3,399,155	3,313,519	85,636
Sheep.....	2,038,662	1,965,101	73,561
Swine.....	3,111,900	2,814,672	297,228

These figures will be revised after compilation of the returns from the Census of the Northwest provinces taken during the present year.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—July has been characterised by very warm weather and little rain,—the highest temperature being 100·3, the lowest 52, and the mean 74·72, compared with a mean temperature of 68·74, and extremes of 92 and 50 for the corresponding period of 1915. The thermometer reading of 100·3 on the 30th, is slightly higher than ever recorded before since the keeping of the Farm meteorological records began in 1889. The precipitation—practically all of it registered from the 2nd to the 4th, and during a thunderstorm on the 16th—totals 1·5 inch, as against 2·12 inches for this month a year ago. The bright sunshine averages 10·08 hours a day, the figures for last year being 9·11 hours a day.

At the Experimental Farm, the getting in of the hay, which was begun towards the end of June, was finished early in July, the yield averaging about three tons per acre, some land giving over four tons per acre, and the whole being saved in first-class condition. Roots have suffered from drought; but Indian corn has made good growth. The prospects are that the oat crop will be lighter than usual.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first week of July was wet with very little sunshine. The remainder of the month has been quite bright, with frequent showers from the 22nd to the 27th. There has been an abundance of heat with sufficient moisture, so that all crops have made very strong growth. At the Station, alfalfa was cut on the 10th, and clover hay on the 18th. Very little hay was made before the 28th, and, at the close of the month, the saving of this crop is only well started; the present prospects are for an average yield. The grain crops at this Station are very heavy. Roots and potatoes are looking particularly well."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The first week in July was dark, with 0·86 of an inch of rain, which fell gradually during three days, giving the crops on dry areas much needed moisture. The following two weeks were bright and warm, with only 0·11 of an inch of precipitation, made up of light showers on two nights. This gave an excellent opportunity to harvest the hay in fine condition. From the 22nd to the 24th, 1·48 inch of rain fell, and, as this soaked into the soil gradually, it greatly benefited crops. The rest of the month has been fine except for the two last days. The total night precipitation for the month is 1·92 inch, and for the daytime 0·74 of an inch,—a total of 2·66 inches, as compared with 1·52 inch in 1915 and 1·45 inch in 1914. The mean temperature is 66·04, compared with 64 for 1915 and 62·88 for 1914. The sunshine recorded totals 205·7 hours, as compared with 215·7 hours in 1915, 238·9 hours in 1914 and 252·1 hours in 1913. This indicates considerable dull weather and much less bright sunshine than usual for this period. Reports from sections of western Nova Scotia indicate that much showery weather has prevailed during

July, making haying difficult and very backward. Conditions, however, in this section were all that one could wish for, particularly during the second and third weeks. As considerable of the rainfall has been during the nights and the days have been comparatively dry, apple scab has not developed so greatly as would have been the case had the foliage remained wet for a considerable period at a time, and, consequently, little scab has shown itself in orchards reasonably open. The unsprayed trees, as a result, will be fairly free from scab, and orchards well sprayed are showing a large percentage of clean fruit. As reported last month, the apple crop will not be larger than in 1915, and possibly will not exceed one-half million barrels; the quality, however, will be better than in 1915. Hay has yielded heavily, fully better than in 1915, which was an exceptionally good year for grass. Potatoes are giving every promise of a large crop. Roots, corn and cereals are all looking exceptionally well."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "July, for the most part, has been good growing weather. Showers have been recorded on ten different days, the precipitation totalling 2.6 inches. The rain which has fallen during the latter part of the month has been very beneficial to the crops. Cereals and flax have made excellent growth, and turnips and potatoes have come along rapidly. Mangolds, however, have not recovered from their set-back early in the season, and, consequently, there is promise of but a fair crop. Turnips for seed are making splendid growth and showing plenty of bloom. Most vegetables are doing well, an exception being beans, which are suffering from Anthracnose—while considerable Club Root is in evidence in connection with cabbage and turnips. Strawberries have been only a fair crop. The new bush fruit plantation has made splendid growth and the fruit yield promises to be very good. Upland hay is looking excellent, but on the marshes the crop does not look so well as last year, there being less clover growth than usual. The heavy run of tides and the high winds experienced on July 15 and 16, broke considerable of the dyke, and the marsh was flooded for about twelve hours, which, naturally, would tend to lessen the crop somewhat, but the injury was not serious. All classes of live stock at this Station are in good condition and doing nicely."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "July has been favourable for crop growth, with a mean temperature of 66.5, or half a degree above the 42-year average, and a precipitation of 3.96 inches against a 42-year average of 3.6 inches. There has been very satisfactory growth, except where crops were permanently injured by the June floods. Hay, grain and roots all promise well, hay throughout New Brunswick generally being heavier than for some years; but only a small portion of the latter has yet been saved, and much of it will be too old to make the choicest fodder. There have been nine rainy days and only two days bright sunshine throughout, though there have been enough broken days to bring the sunshine record up to 215.6 hours for the month, the average

for the last 42 years being 238 hours, with a record in 1914 of 261 hours. Pastures have never been better at this date than at present. The potato crop promises an average yield if weather conditions are favourable until harvest; but the area is considerably smaller than for some years. On some fields the absence of potassic manures seems to be felt, while on others the crop looks as well as it ever did at this season. Spraying is much more general than ever before. A large yield of apples seems assured."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "The weather during July has been the warmest for years,—the highest temperature recorded being 92·2, the lowest 52·4, and the mean 72·3, while the mean temperatures of the same month average 64·8 for the last four years. The sunshine recorded averages 9·22 hours a day, compared with 8·2 hours a day for the same month in 1915. The precipitation totals 1·89 inch, the rain falling almost entirely during the first week of the month, when moisture was not wanted, for the ground was still quite wet from the heavy rains of late June. From the 8th to the 31st, there have been only a few light showers, amounting to less than 0·8 of an inch of rain. Dry, warm weather, with heavy winds from the west and northwest, has characterised the last three weeks of the month. Potatoes and turnips, in particular, have suffered from the sudden change in the weather; cereals are also being affected and seem to be ripening prematurely. At the Station, the last hay was saved on the 21st, the yield averaging over two tons per acre. The fruit crop in this section is being greatly damaged by drought; European plums will probably yield only about two-thirds the usual crop. Pastures are becoming very poor, and green feed is being given the dairy herds in the fields."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "July has been warmer and brighter, and still has experienced more precipitation than the average for the same month during the past four years, the mean temperature being 70, the number of hours of sunshine 260, and the rainfall 3·96 inches, as compared with averages of 65·37 mean, 241·7 hours of sunshine, and 2·41 inches of rain for the corresponding periods of the four previous years. Most of the precipitation came during the first half of the month; and, as the highest temperatures have been recorded during the latter part, it is now getting too dry, especially for the grain, which is heading out at present. As the ground was already saturated with the excess of rain which fell during June, practically half of the precipitation of the month cannot be taken into account as being beneficial to crops. Haying is finished at the Station and the crop, which was all weighed, gave 5,728 lb. per acre. Unfortunately, there are still many farmers in the district who cut hay, especially clover, too ripe, but the most advanced of them now understand that this is not the best practice. Over one hundred broilers have been shipped from this Station to Montreal and to Quebec and sold, only with feathers removed, at from 30c. to 33c. a pound. As these chickens have been

bought by commission houses, it shows the possibilities of getting good prices for farmers who will hatch early chickens, and especially for those who have a private trade."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The weather during July has been very warm, the thermometer registering above 80 degrees on nineteen different days, and on two different days reached 90. The highest recorded during the previous July was 87, when it registered above 80 on eight different days. The lowest reading is 41, compared with 40 last year, while the mean temperature of the month is 68.35, compared with 63.79 a year ago. The precipitation amounts to 5.68 inches, against 4.89 inches last year. A large part of the rain fell on the 16th and 17th, causing great damage to hay and grain crops on the low flats, and also many washouts on the roads. The bright sunshine totals 250.5 hours, compared with 215 hours a year ago. The grain and second crop clovers are looking well and, if the frost holds off and the warm weather continues, the outlook for clover seed production will be very bright. Corn is growing very well now, considering the late date at which it was sown. Haying is very late in this section; but the hay, considerable of which has still to be cut, is turning out very well and is being saved in good condition. Drainage work at the Station continues to progress very favourably."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "July has been hot and dry, but as these are normal conditions for the season here, the temperature and precipitation are not far from average. The rainfall has been sufficient for good growth, while the heat hastened up a somewhat backward crop. Up to the 20th, prospects were excellent, but since then a severe attack of rust has come upon the wheat crop; the extent of the injury is scarcely known at the end of the month, but it is feared that it is quite serious. Oats and barley are a good crop and uninjured. A heavy yield of hay of good quality has been harvested, and corn is doing well. On the Experimental Farm, haying has been the chief operation of the month, and a large crop of good growth has been garnered. Cultivation of summer-fallows and hoed crops has also been an important feature of the farm work."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "July has been warm and bright. Rain has fallen on the 6th, 7th, 17th, 28th and 30th. Considerable foggy weather was experienced from the 20th to the 29th, but no signs of rust have been observed at this point. The wheat crop promises to be above the average; cutting is expected to commence about the 25th of August. Oats and barley should give heavy returns in this district. The hay has been saved in splendid condition; a large yield has been obtained; and second growth promises another good crop. Hoed crops are satisfactory, but the cool weather in June interfered with the growth of Indian corn, which will probably yield a little less than usual. Potatoes and garden vegetables promise to be above the average in yield and quality. Small fruits are hardly up to the average."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The moisture for April, May and June, 1915, amounted to 2.45 inches, and for the same months in 1916, to 5.33 inches. The importance of this difference is shown more in the hay than in any other class of crops. In 1915 there was no cultivated hay cut at the Experimental Station and in 1916 there are heavy crops of western rye grass and of alfalfa. From seventy acres of second-year Brome grass hay purchased from a neighbour this year, seventy-three tons have been obtained. The wet weather of July has been unfavourable for the harvesting of hay, and the end of the month finds a considerable quantity of rye grass hay uncut and rather past maturity for the best hay. The grain crops at the Experimental Station are the heaviest since 1911, and all barley sown on fallow is lodging. The best looking wheat crop is a plot of Marquis, sown on the 6th of November, 1915, a few days before the ground froze up; this lay dormant all winter and germinated early in the spring. A new experiment is under way to determine whether an inter-tilled crop is suitable as a substitute for summer-fallow, the crops used being potatoes, corn, mangolds, turnips and carrots. The land, which is part of that recently purchased by the Department, is very badly infested with wild oats. The conclusion in so far as can be seen is that unless the land is tolerably free from noxious weeds, and particularly from wild oats, the expense of cultivating the inter-tilled crop more than offsets the value of such crops. Two young high grade Clyde mares have been purchased for the Experimental Station. Up to the present there have been thirteen work horses for four quarter-sections of land, and it is found that less than four horses for a quarter-section are not sufficient to obtain maximum returns."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "July has been unusually wet, with a total precipitation of 4.11 inches. Following the heavy rains of June, there has been rapid growth of all cereals. Early sown Marquis wheat is in the late-flowering stage, but warmer and drier weather is desirable to hasten the maturity of the later crops before the season of autumn frosts. The wet weather has delayed summer-fallowing operations and has also increased the amount of tillage necessary to keep the weeds under control. At the Station, satisfactory hay crops have been harvested, and pasturage continues excellent. Fodder corn is making very slow growth, due to the wet and cool weather."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during July has been alternately cool and warm, considered in weekly units, and, as a result, the crops, which, at the beginning of the month, were a week late as compared with the previous year, are still behind to the same extent. The straw is shorter than in 1915, but the stand of all cereals is equal to that of last year. With favourable weather conditions, harvesting operations should begin during the third week in August. Live stock is making satisfactory gains, as the pastures have been excellent. There has been a serious slump in the values of beef cattle, though the price of hogs has maintained an unusually high level throughout the month."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "Crop conditions in southern Alberta are in general quite satisfactory, although, at the end of July, it is getting somewhat dry in some localities. The rains have not been uniformly distributed. While showers in the latter part of the month have improved crop prospects in certain districts, there are other localities that had plenty of moisture the early part of the month, which, at the end of the month, are beginning to show the need of rain. At the Station, the first cutting of alfalfa hay went into the stack in very good condition, which differs greatly from conditions a year ago. The yield, owing to the backward weather in May and June, has been distinctly lighter than normal. The general crops at the Station, however, are, on the whole looking quite promising."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "July on the whole, has been favourable to the growing crops, though the crops, already later than usual, are being checked in some measure by the cold nights which have been experienced towards the end of the month. The rainfall, 2.32 inches, has been insufficient, and considerable irrigation has been necessary. Crops, though a little late, are as a rule distinctly good. Grains of all kinds are looking well and ripening rapidly. The second growth of alfalfa and clover is making rapid progress. Root crops which survived the earlier cutworm depredations have made rapid development and should give good yields. At the Experimental Station, all varieties of grain look well, and the field peas show exceptional growth and are a magnificent crop."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The weather during July has been cloudy, and the precipitation, 4.67 inches, is nearly two inches greater than for the preceding month. The lowest temperature recorded is the same as in June and the highest is within two degrees of that registered then, but the mean temperature for July is nearly a degree higher. July is the usual time in which all late haying operations are finished in this portion of the province, but this year very little haying has been possible during the month. Weather conditions have been excellent for grain and fruit, and also for the growth of pasture and the second crop of clover, which is now in bloom and nearly ready for cutting. It has been too cool and damp for corn, and a light yield is generally expected. On this Farm, the crop of pea and oat hay has been harvested and a small silo filled with the same material. All the live stock on this Farm are in good condition. The milking cows are being kept on clover silage, while the young herd is at pasture. The breeding stock of hogs is in excellent condition and all feeding experiments are going well. The crop of lambs, which has been giving good returns during the season, will be weaned early in the coming month. In poultry, the young birds are developing well on range, and the first lot of broiler cockerels has been taken out. The abundant rains have made it somewhat difficult to keep the hoed crops, the garden and lawns free from weeds, but they are in very fair condition at the close of the month."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Beneficial rains have fallen during July, much improving all growing crops. Autumn wheats, oats and barley have ripened and are ready for harvest at the end of the month. The late sown spring cereals have developed well, but the early sown were too near maturity to benefit very much by the precipitation. Corn, kale, chard and roots have made satisfactory growth and promise good crops. The clover meadows from which the hay was removed in June have made a good second growth. A portion of the oats has been cut and made into hay. Orchard crops have made satisfactory development during the month. Early varieties of peaches have ripened and coloured well. All varieties of apples are well laden with well developed fruit. Apple thinning and summer pruning have been completed in those orchards where practised. Live stock is in satisfactory condition. Meat and dairy produce are selling well. Pastures are better than usual for this period of the year. The demand for all farm, garden, and orchard produce has been good, and prices realised for the same have been very satisfactory."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of July are given in the following table:—

Meteorological Record for July, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	High-est	Low-est	Mean		Possible	Actual
Ottawa, Ont.....	100.3	52.0	74.72	1.50	473	312.7
Charlottetown, P.E.I.....	86.0	48.0	64.45	4.14	476	233.4
Kentville, N.S.....	88.0	41.0	66.05	2.66	472	205.7
Nappan, N.S.....	85.0	39.0	63.14	2.60	474	217.3
Fredericton, N.B.....	93.5	40.0	66.50	3.96	475	215.6
Sto. Anne de la Pocatière, Que.....	92.2	52.4	72.30	1.89	481	280.4
Cap Rouge, Que.....	91.0	45.2	70.00	3.96	479	260.0
Lennoxville, Que.....	90.0	41.0	68.35	5.68	473	250.5
Brandon, Man.....	92.5	37.0	66.80	2.63	491	259.3
Indian Head, Sask.....	90.0	40.0	67.48	1.52	494	292.4
Rosthern, Sask.....	87.2	43.4	64.80	3.66	507	293.5
Scott, Sask.....	87.0	37.8	64.80	4.11	505	286.8
Lacombe, Alberta.....	82.8	36.1	59.53	4.31	505	229.5
Lethbridge, Alberta.....	89.0	40.0	63.30	3.33	491	335.5
Invermere, B.C.....	88.0	38.0	60.19	2.32	494	271.1
Agassiz, B.C.....	86.0	42.0	61.16	4.67	489	106.3
Sidney, Vancouver I., B.C.....	81.0	46.0	60.63	1.72	486	220.9

Ottawa, August 12, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (August 1) that the weather was everywhere cold for quite two-thirds of the month with night frosts in some localities, but that the last ten days were generally sunny and warm. Crops consequently made but little progress at first, but grew rapidly towards the end of the month. Wheat is the best of the three cereals, but is hardly an average, except in the north; it is, however, quite healthy, and distinct improvement may be recorded on the month. Barley and oats are not so good; they are often poor and a thin plant; barley has improved as compared with a month ago, but prospects for oats remain about the same. Winter oats are much better than spring-sown, and cutting of the former has commenced in early districts. Beans are the most satisfactory of the corn crops, being at present rather over average; and peas are not far short of an average. Potatoes are a very even crop throughout the country, they are healthy and vigorous, and little disease is mentioned; their yield should be quite up to the average or rather over. Turnips and swedes, with a few exceptions, have come up well, and they nearly everywhere look promising. Owing to the lateness of the season, however, the area will probably be reduced; and the shortness of labour is making it difficult to keep weeds down, and such cultivation is sometimes being neglected. Mangolds have greatly benefited by the warm weather; they are, however, so backward that it is not expected that their yield will be up to the normal. The hay harvest, in the earlier districts especially, has been protracted; and the constant showers have had their effect on the quality, which is only moderate in the case of hay secured before the middle of the month. In the last ten days, however, work proceeded rapidly, and much good hay was made in good condition. The yield, both of clover and meadow hay, is abundant, especially in the eastern counties. Apples and pears are nearly everywhere very unpromising. Plums promise a poor yield on the whole, but they are very variable, and certain localities report abundance.

Labour is still everywhere very deficient; but owing largely to the assistance of women and soldiers, the scarcity has not been felt so badly as was feared for the haymaking and fruit-picking. Turnip-hoeing has, however, been much neglected in many parts of the country.

Summarising the returns and expressing an average crop by 100, the appearance of the crops on August 1 indicated probable yields per acre which may be denoted by the following percentages: Wheat 98, barley 97, oats 95, beans 101, peas 98, potatoes 101, mangolds 96, seeds' hay 109, meadow hay 107, hops 96.

South Australia.—According to a Bulletin (No. 1 of 1916) issued by the Government Statistician of South Australia, the total area under cereals for grain, hay, fodder, etc., was 3,700,782 acres, as compared with 3,218,954 acres in 1914-15. The yield of wheat in 1915-16 was 34,134,504 bushels, an increase of 9,000,653 bushels on the previous record yield of 1909-1910. The season of 1914-15

was practically a failure as regards wheat, the yield being not more than 3,527,428 bushels. Barley yielded 1,697,670 bushels, an average per acre of 20 bushels, the total being 378,936 bushels over the previous best yield of 1,318,734 bushels in 1912-13. Oats gave a total yield of 2,134,374 bushels, an increase of 460,866 bushels over the previous record season of 1913-14.

Japan.—H. M. Ambassador at Tokio reports that according to the first official estimate of June 4, the growth of wheat, barley and rye has been somewhat interfered with, for a spell of excessively warm though dry weather caused a rapid growth of stalks and leaves. The prevalence of a somewhat low temperature, consequent upon excessive rainy weather when the plants came to the ear, and the general shortage of manures in consequence of abnormal rise in fertilisers, were further factors in reducing the crop. However, since the month of April, the weather conditions have been favourable, and the crop for the year can be estimated at 23,039,469 koku (114,-343,000 bushels), a decrease of 741,973 koku (3,682,000 bushels) or 3.1 per cent compared with the actual amount for the previous year, and an increase of 775,707 koku (3,850,000 bushels) or 3.5 per cent compared with an average year.

United States.—The Crop Reporting Board of the U. S. Department of Agriculture issued, August 8, estimates of the yield of the principal field crops with a statement of average condition on August 1, as compared with previous years, as in the following table:—]

Crop	Condition in per cent of normal				Yield per acre			Total yield in millions of bushels, tons or lb.			
	Aug- ust 1, 1915	July 1, 1916	Aug- ust 1, 1916	Aug- ust 1, ten year aver- age	1915 (final)	1916 ²	1910 to 1914 aver- age	1915 (final)	July fore- cast ³	August fore- cast ³	1910 to 1914 aver- age
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Winter wheat.....	—	—	—	—	16.2	13.8 ³	16.3	655	489	455 ³	495
Spring wheat.....	93.4	89.0	63.4	79.3	18.3	11.2	12.5	357	270	199	233
All wheat.....	—	79.9	—	—	16.9	12.9	14.8	1,012	759	654	728
Corn.....	79.5	82.0	75.3	79.7	28.2	25.6	25.9	3,055	2,866	2,777	2,732
Oats.....	91.6	86.3	81.5	80.3	37.8	31.4	30.5	1,540	1,317	1,274	1,158
Barley.....	93.8	87.9	80.0	82.3	32.0	25.1	24.6	237	206	195	186
Rye.....	—	87.0	—	—	17.2	15.3 ³	16.3	49.2	44.0	41.9 ³	37.6
Buckwheat.....	92.6	—	87.8	88.7	19.6	20.9	20.6	15.8	—	17.9	17.0
White potatoes.....	92.0	87.8	80.8	82.1	95.5	100.3	97.8	359	369	364	361
Sweet potatoes.....	85.5	90.4	85.9	84.8	103.3	96.5	93.4	74.3	73.9	71.0	57.1
Flax.....	91.2	90.3	84.0	82.4	10.1	8.9	7.6	13.8	14.5	14.1	18.7
Rice.....	90.0	92.7	92.2	87.9	36.1	37.6	33.3	28.9	34.2	34.2	24.4
Hay.....	89.0	93.4	95.5	84.9 ¹	1.68	1.61	1.34	85.2	—	84.6	66.2
Sugar beets.....	93.4	85.7	88.2	90.1	10.7	10.7	10.8	6.51	7.28	7.57	5.30
Tobacco.....	79.7	87.6	84.4	79.3	775.1	855.8	823.4	1,061	1,191	1,197	992
Cotton.....	75.4	81.1	72.3	78.5	170.3	173.4	192.1	11.2 ⁴	14.3 ⁴	12.9 ⁴	14.3 ⁴

¹ 8-year average.² Interpreted from condition reports.³ Preliminary estimate.⁴ Bales.

The areas of the above crops total 308,930,000 acres, compared with 311,717,000 acres in 1915 and 301,258,000 acres in 1914.

The amount of oats remaining on farms August 1 is estimated at 7.4 per cent of last year's crop, or about 11,398,000 bushels, as compared with 55,607,000 bushels on August 1, 1915, and 66,646,000 bushels the average of stocks on August 1 for the five years 1910-1914.

Live Stock in France.—The Journal Officiel of July 21 published the results of a census of live stock taken on July 1, 1916. According to this census the numbers of each description were as follows, as compared with the numbers on December 31, 1915, which are placed within brackets: Horses 2,317,205 (2,156,424); mules 102,969 (143,561); asses 316,559 (324,250); cattle 12,723,946 (12,514,414); sheep 12,079,211 (12,379,124); swine 4,448,366 (4,915,780); goats 1,230,238.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

Cereals in Northern Hemisphere.—The Bulletin of Agriculture and Commercial Statistics for July gives estimates of this year's production of wheat, rye, barley and oats, with comparative figures of the previous year, as in the following table:

Area and Yield of Wheat, Rye, Barley and Oats in Countries of the Northern Hemisphere, 1915 and 1916.

Countries	1915	1916	Per cent of area of 1915	1915	1916	Per cent of yield of 1915
	000 acres	000 acres	p. c.	000 bush.	000 bush.	p. c.
Wheat—						
Spain.....	10,037	10,071	100.3	139,299	152,921	109.8
Italy.....	12,502	11,762	94.1	170,542	191,067	112.0
Switzerland.....	114	122	107.1	3,957	4,306	108.8
United States { (a).....	42,013	33,020	78.6	655,056	489,008	74.7
(b).....	19,445	17,851	91.8	356,466	270,004	75.7
British India.....	32,475	30,143	92.8	376,730	318,005	84.4
Japan.....	1,250	1,280	102.4	25,799	24,446	94.8
Rye—						
Spain.....	1,820	1,856	101.9	26,102	31,437	120.4
Italy.....	294	297	100.8	4,362	5,512	126.4
Switzerland.....	66	70	105.2	2,059	2,374	115.3
United States.....	3,153	2,729	86.6	49,190	44,000	89.4
Barley—						
Spain.....	3,786	4,035	106.6	82,764	84,373	101.9
Italy.....	608	608	100.0	11,051	11,023	99.8
Switzerland.....	16	18	109.2	588	661	112.5
United States.....	7,395	7,757	104.9	237,004	204,996	86.5
Japan.....	3,239	3,109	96.0	100,863	99,819	99.0
Oats—						
Spain.....	1,403	1,391	99.2	34,776	32,892	94.6
Italy.....	1,208	1,137	94.1	34,772	29,594	92.0
Switzerland.....	92	101	109.9	5,278	6,153	116.6
United States.....	40,781	40,600	99.6	1,449,756	1,239,532	85.5

(a) Winter wheat. (b) Spring wheat.

Statistics of Live Stock in Norway.—The number of available animals in Norway according to statistics of September 30, 1915, compared with September 30, 1914, are reported as follows—the figures of 1914 being placed within round brackets: Horses 186,217 (182,432); cattle 1,120,517 (1,146,274); sheep 1,329,559 (1,326,850); goats 240,303 (236,805); swine 208,522 (228,117).

FIELD CROPS OF THE UNITED KINGDOM, 1915.

Vol. I, Part II, of the Agricultural Statistics of England and Wales [Cd. 8,300] gives the final returns of the acreage and produce of field crops in the United Kingdom for the year 1915. The figures, which are exclusive of the Channel Islands and the Isle of Man, are as follows:

Crops	1914	1915	1914	1915	1914	1915	Average of the ten years 1905-14
	acres	acres	bush.	bush.	bush. per acre	bush. per acre	bush. per acre
Wheat.....	1,904,932	2,333,354	62,432,328	73,914,840	32.77	31.68	32.35
Barley.....	1,871,166	1,522,646	64,525,424	46,897,952	34.48	30.80	34.38
Oats.....	3,877,955	4,159,274	165,308,296	178,467,160	42.63	42.91	42.12
Beans.....	291,730	264,069	8,960,624	7,393,240	30.72	28.00	30.52
Peas.....	129,993	98,572	2,992,304	2,402,704	23.02	24.38	26.39
Potatoes.....	1,197,008	1,202,259	279,121,098	281,502,293	233.33	234.08	213.92
Turnips and swedes.....	1,749,918	1,615,066	903,308,186	912,093,754	516.32	564.82	543.57
Mangolds.....	514,863	497,740	355,522,384	362,002,629	690.67	727.25	724.64
Hay ¹	2,902,902	2,837,030	4,716,235	5,069,335	1.62	1.79	1.79
Hay ²	6,489,885	6,393,365	9,175,662	8,873,302	1.41	1.39	1.58
Hops.....	36,661	34,744	568,129	285,162	15.50	8.21	10.90

¹Clover, sainfoin, etc. ²Permanent grass.

NOTE.—The ton = 2000 lb. and the cwt. = 100 lb.

The average yield of wheat in England and Wales in 1915 was 31.20 bushels per acre, a bushel less than in 1914 and four-fifths of a bushel below the decennial average 1905-14. But owing to the large increase in the acreage the total production in these two countries, viz. 67,717,928 bushels, was 9.2 million bushels more than in 1914 and 12 million bushels above the decennial mean. Barley showed a considerable reduction, and was by far the smallest crop recorded since the produce returns were first collected in 1884. The yield per acre, 29.41 bushels was $3\frac{3}{4}$ bushels under average, and, apart from 1893, the lowest yet recorded. The total production of oats was 83,095,256 bushels, an increase of 6,640,000 bushels, as compared with 1914. The yield per acre, 39.80 bushels was one-fifth of a bushel better than in 1914, but two-fifths of a bushel below the ten-year average. The weights per bushel of the three principal grain crops were, for England and Wales, as follows: Wheat 62.2 lb., barley 53.5 lb. and oats 39.2 lb.

BRITISH IMPORTS OF BUTTER AND CHEESE.

Messrs. Weddel and Co.'s 22nd Annual Review of the Imported Dairy Produce Trade for the year ended June 30, 1916, states that the year was abnormal in many respects, but notably because for the first time it was demonstrated that the world's supplies of butter and cheese are altogether inadequate to meet the world's demand. Prices in the United Kingdom, and practically in all countries, were the highest on record. In the London market Danish butter touched 209s., New Zealand 170s., and Australian 164s. per cwt. New Zealand cheese made up to 114s. and Canadian up to 116s. per cwt. The quantity of butter imported into the United Kingdom was 148,351 long tons, or 41,939 tons below 1915, and was thus the smallest import since 1896. Without doubt the European war has been the direct cause of this, rather than any unsatisfactory climatic conditions in the various exporting countries. Among the contributory causes were the large withdrawal of workers from pastoral pursuits in nearly every European country, the killing of large numbers of milking cows, the increased difficulty in securing freights from far off lands, and the deviation of regular supplies from the ordinary channels to meet the sudden and extensive shortages in Germany, Austria and elsewhere. In most of the belligerent countries the governments requisitioned supplies for the use of their armies, and thus further reduced the volume for consumption among the civil populations. Since the outbreak of war there has not been time to develop old or to organise new sources of production. Experimental shipments, however, have been made with success from India, South Africa and California; and from these fresh sources, appreciable quantities may be expected in a few years. There appears to be a general consensus of opinion that after the war some of the old centres of supply of dairy produce will be permanently closed, and that new ones must be found to replace them. Russia may not continue to supply Germany, who will probably substitute Danish, Dutch and Swedish butter for Russian. A healthy public opinion appears to be growing in favour of fostering the production of more dairy produce in the United Kingdom and in the oversea countries of the British Empire.

Butter.—In no year since the importing of butter into the United Kingdom became an established trade was there such a large decrease in arrivals from all sources as in the twelve months ended June 30, 1916. From Table I it will be seen that the import was unusually limited, being 42,039 tons, or 22 per cent, less than for the previous twelve months, and 74,439 tons, or 33·4 per cent, less than the highest import hitherto reached, which occurred in 1911, when it amounted to 222,790 tons.

Until the outbreak of war the exports of butter from the continent to Great Britain had never failed to quite the same extent as in the past year. In 1914-15 these exports were 7,966 tons below those of the previous year, but for 1915-16 there was a further reduction of 44,413 tons. It is not possible yet to ascertain how much of that shortage from neutral countries has been transferred to our enemies.

From British official figures of imports into the United Kingdom it is possible, however, to obtain an approximately close estimate of the amount of butter diverted to Germany from this market in the two years ended June 30, 1915, and 1916. During these years Sweden sent only 10,891 tons against 33,996 in the two years preceding the outbreak of war, Denmark only 136,920 tons against 171,481 tons and Holland 8,092 tons against 14,156 tons. These three reductions in exports to the United Kingdom in 1915 and 1916 amounted to 63,730 tons. There is thus sufficient *prima facie* evidence that Germany has received a large proportion,—probably the bulk of this deficit.

Owing to transport difficulties, Russia, in 1915-16, was unable to ship the usual amount of Siberian until very late in the autumn. Of the 41,723 tons imported, 31,489 arrived in September, October and November, against 5,179 tons for these months in 1914-15. The receipts in 1916 have been thus far practically nil, and there is no immediate prospect of shipments being resumed from this important source of supply.

The total receipts from Australia in the year ended June 30, 1914, were 26,076 tons, while for the next twelve months they were 21,848 tons. For the year just ended, owing altogether to droughty conditions, they fell to 6,363 tons. This reduction of 15,485 tons caused the total import to be the lowest since 1893, with the exception of 1903, when it was only 1,053 tons. New Zealand sent to the United Kingdom 18,371 tons last year, or 451 tons more than the previous year, and is one of the few countries which maintained its export to this market.

Table I shows the imports of butter into the United Kingdom in long tons by principal countries for the seven years ended June 30, 1916.

I. British Imports of Butter by Principal Countries, 1910-16.

Countries whence imported	1910	1911	1912	1913	1914	1915	1916
	tons	tons	tons	tons	tons	tons	tons
Canada.....	1,162	776	2,997	—	41	443	1,188
Australia.....	28,770	44,395	33,677	26,414	26,076	21,848	6,363
New Zealand.....	16,705	15,852	16,183	13,416	16,609	17,920	18,371
Total British.....	46,637	61,023	52,857	39,830	42,726	40,211	25,972
Argentina.....	2,924	932	2,603	4,400	2,358	4,314	5,791
Denmark.....	84,632	88,379	80,398	82,546	88,935	82,258	54,662
France.....	20,212	14,665	8,333	13,167	11,328	17,651	12,748
Holland.....	8,270	6,272	5,337	6,584	7,572	7,452	640
Norway.....	1,210	1,295	1,615	1,211	778	2,580	1,087
Russia.....	29,426	30,201	30,757	35,194	41,056	26,537	41,723
Sweden.....	15,352	18,671	17,123	16,000	17,996	7,993	2,898
Other countries.....	2,301	1,352	1,172	378	665	1,394	2,880
Total foreign.....	164,327	161,767	147,338	159,480	170,688	150,179	122,429
Grand total.....	210,964	222,790	200,195	199,310	213,414	190,390	148,351

Table II shows the average wholesale London top prices per long cwt. of salt butter of choicest quality for the seven years ended 1916.

II. Average Prices of Butter Imported into the United Kingdom, 1910-16.

Description	1910	1911	1912	1913	1914	1915	1916
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Australian.....	111 9	105 6	121 9	112 1	111 9	131 5	153 3
New Zealand.....	115 5	109 1	125 8	117 4	116 3	136 5	161 3
Danish, Swedish.....	122 2	116 8	132 2	127 3	125 2	143 8	173 2
Siberian.....	109 4	103 6	119 10	109 1	107 0	126 2	133 1
French.....	117 10	119 0	138 4	125 6	125 2	133 3	153 4

Cheese.—The volume of cheese of all kinds imported in the past two years increased over the previous two years by 22,275 tons, or 9·4 per cent. For the year ended June 30, 1916, the quantity imported was 127,246 tons, being 4,074 tons below 1915, when the receipts amounted to 131,320 tons—the largest import since 1904. The average receipts for the ten years prior to 1916 was 121,980 tons, so that the imports of the year just ended exceeded the ten years average by 5,266 tons. During the past two years the United States supplied 34,385 tons against 6,011 tons during the ten years prior to the war. Canada sent in the two years of war 5,346 tons more than in the previous two years,—but this is less than one-sixth of the increase from the United States in the same period. These two countries combined have shipped to the United Kingdom during the war 166,918 tons, or 64·5 per cent of the total supplies. New Zealand in 1906 shipped 5,870 tons, and during the past nine years steadily increased her shipments until in 1913-14 they reached 33,856 tons—the Dominion's highest record. The 1915 exports fell off by 1,341 tons and increased again by only 48 tons in 1916. Holland, whose exports to the United Kingdom in the three years 1913-14-15 were 14,044 tons, 14,882 tons and 14,940 tons respectively, has scarcely sent any cheese this year, her contribution being only 1,870 tons. Doubtless the difference—13,070—went to Germany.

The total receipts of cheese from British Empire sources for the past ten years were 975,163 tons against 241,829 from foreign sources, or 80·1 per cent from British and 19·9 per cent from foreign countries. Ten years ago 79·1 per cent were British and 20·9 per cent foreign; which shows a remarkably small change. This is explained by Canada having sent 20,338 tons less in 1916 than in 1907, while New Zealand in the same period has increased her shipments by 23,966 tons.

Tables III and IV give the British imports in long tons and the average prices per long cwt. of imported cheese for the seven years ended June 30, 1916.

III. British Imports of Cheese, 1910-16.

Countries whence imported	1910	1911	1912	1913	1914	1915	1916
	tons	tons	tons	tons	tons	tons	tons
Canada.....	79,661	76,457	72,690	66,424	60,763	62,192	70,341
Australia.....	207	617	93	238	1,067	1,048	-
New Zealand.....	22,651	20,256	24,993	29,489	33,856	32,515	32,563
Total British.....	102,519	97,330	97,776	96,151	95,686	95,755	102,904
Holland.....	12,564	11,284	11,137	14,044	14,882	14,940	1,870
Italy.....	4,169	4,092	3,957	4,897	5,455	4,599	2,397
Switzerland.....	585	547	612	606	641	263	325
United States.....	1,700	7,045	2,470	842	1,169	15,108	19,279
Other countries.....	1,287	1,166	887	856	1,062	657	471
Total foreign.....	20,305	24,134	19,063	21,245	23,209	35,565	24,342
Grand total.....	122,824	121,464	116,839	117,396	118,895	131,320	127,246

IV. Average Wholesale London top prices of Cheddar Cheese, 1910-16.

(Per long cwt.)

Cheese	1910	1911	1912	1913	1914	1915	1916
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Canadian.....	60 6	59 8	71 5	64 3	68 3	83 8	94 0
New Zealand.....	58 9	59 1	69 10	62 6	66 0	84 7	93 7

Canadian Cheddar cheese well maintained its high character. Quebec Cheddar showed considerable improvement, some of it now approaching in quality much of the choicest eastern Ontario.

IRRIGATION AND ALFALFA IN THE THOMPSON VALLEYS, B.C.

By C. E. LAWRENCE, Crop Reporting Correspondent, Kamloops, B.C.

Alfalfa is a very old crop in the Kamloops district. That well known pioneer, John T. Edwards, seeded down about 15 acres in the North Thompson Valley more than forty years ago, and it has never been reseeded since. The remarkable thing is that the plant now is just as vigorous, and the crop as heavy, as in the early years of its growth. There is a cut bank in this field, and by digging at the foot of it, good sized roots are found thirty feet below the surface of the upper end.

This field is irrigated three times, in April for the first crop, and again as soon as that crop has been stacked, and the third time as soon as the second crop is off the ground. By the end of September the third growth will be three feet high. The season is then too far advanced to make hay, but it makes splendid grazing until snow falls, usually the second week in December. This pasturage is

available for either dairy or beef cattle, but with the advancement of the former industry, the greater part of it will be made into silage for feeding during the first three months of the year when grazing to any extent is out of the question.

These results of six tons to the acre in the first two crops followed by at least two months of good grazing, can only be obtained, in the semi-arid belt, by irrigation. Just the right quantity of water at the right time, and turning it off at the right time, is the science of irrigation. The fertility of the soil is largely maintained by the silt in the early water, and the bright sunshine does the rest, giving heart to the fodder, which is not lost even when the stems show too much fibre through cutting having been unduly delayed, or the crop over cured before stacking. Even in this unsatisfactory condition, dairy cows will clean up their ration with evident relish.

A great deal of alfalfa is being grown in the Thompson Valleys now, and unfortunately the Russian thistle has found a congenial home there too. One large rancher states that so far as his experience goes, alfalfa is the only remedy for it. Making three cuttings of alfalfa during the season is death to any thistle that has found a footing amongst it. But of course this does not prevent the pest flourishing on the railway embankments and the open ranges. The rounds of the mounted weed inspector and the fining of half a dozen ranchers and farmers in a district of a hundred square miles make a brave show on paper, but it is no real hindrance to the growth of the Russian thistle. If the authorities would get after the thistle itself and make the expense a charge upon each individual district, everybody would be on the *qui vive* to exterminate all within his reach, and would prod up his neighbours to do the same. "There will be no results until our pockets are touched", said one candid rancher, "the plea with everybody is that it is no good for me to spend my time on the work while my neighbour neglects his duty."

Hence the pest is spreading in every direction. Alfalfa may be the remedy where grown as permanent pasture or hay land, but other crops are also necessary, and in them the thistle looks like getting the best of what so far has been only a half hearted fight against it.

THE WEATHER DURING JULY.

The Dominion Meteorological Service reports that the mean temperature was above the average in all parts of Canada, exclusive of British Columbia and northwestern Alberta and eastern Nova Scotia. The strongest contrast lay between western Ontario, where the positive departure ranged between 5° and 8°, and the interior of British Columbia, where the negative departure was equally large. The large positive departure in Ontario diminished gradually eastward, until in southern New Brunswick and eastern Nova Scotia the monthly mean was either just normal or slightly below. Along the Upper Pacific Coast, in the Yukon, western Alberta, and from the Georgian Bay to the Gulf, the rainfall was, in amount, con-

siderably less than the July average. In the peninsula of Ontario and in the lower Ottawa Valley, the deficiency reached the proportions of a drought, relieved in scattered localities by thunderstorms. In many districts of Ontario the total fall for the month amounted to less than half of an inch. In southern New Brunswick, Prince Edward Island, the district of Kenora, western Manitoba, southwestern Saskatchewan and the greater part of the Fraser Valley the normal rainfall was exceeded. Barkerville, Swift Current and Kenora reported unusually large amounts, at the latter place no less than twelve days with thunderstorms having been recorded.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William,

Grain and Grade	July 1		July 8		July 15		July 22		July 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.....	1 10½	— 1 11½	1 12	— 1 14½	1 14½	— 1 17½	1 15½	— 1 19½	1 20½	— 1 26½
No. 2 Nor.....	1 09	— 1 10	1 10½	— 1 13½	1 12½	— 1 15½	1 13½	— 1 17½	1 18	— 1 24½
No. 3 Nor.....	1 05½	— 1 06½	1 07½	— 1 10	1 09½	— 1 12½	1 10½	— 1 13½	1 13½	— 1 20
No. 4.....	0 99½	— 1 01	1 01½	— 1 04½	1 04	— 1 06½	1 05	— 1 09½	1 10½	— 1 16½
No. 5.....	0 94½	— 0 95½	0 95½	— 0 98½	0 97½	— 1 00½	0 99	— 1 03	1 05½	—
No. 6.....	0 90½	— 0 91½	0 91½	— 0 94½	0 94½	— 0 97½	0 96½	—	1 01½	—
Feed.....	0 85½	— 0 86½	0 85½	— 0 89½	0 90½	— 0 93½	0 92½	—	—	—
Oats—										
No. 2 C.W.....	0 46½	— 0 46½	0 44	— 0 45½	0 44½	— 0 45½	0 43½	— 0 45½	0 44½	— 0 44½
No. 3 C.W.....	0 45½	— 0 46½	0 43½	— 0 45	0 43½	— 0 44½	0 43	— 0 44½	0 44½	— 0 44½
No. 1 Feed Ex.....	0 44½	— 0 45½	0 43	— 0 44½	0 43½	— 0 44½	0 42½	— 0 44½	0 43	— 0 43½
No. 2 Feed ".....	0 43½	— 0 44½	0 43	— 0 43½	0 43½	— 0 44½	0 43½	— 0 44½	0 43½	— 0 43½
No. 2 Feed.....	0 42½	— 0 42½	0 41½	— 0 42½	0 41½	— 0 43½	0 41½	— 0 43	0 42½	— 0 42½
Barley—										
No. 3 C.W.....	0 68½	— 0 70½	0 71	— 0 73½	0 74	— 0 75½	0 75	— 0 75½	0 72	— 0 75
No. 4 C.W.....	0 64	— 0 66	0 67	— 0 69½	0 70	— 0 71½	0 71	— 0 71½	0 67	— 0 71½
Rejected.....	0 59½	— 0 61½	0 62	— 0 63½	0 64	— 0 65	0 63½	— 0 64½	0 60	— 0 61
Feed.....	0 59½	— 0 61½	0 62	— 0 63½	0 64	— 0 65	0 63½	— 0 64½	0 60	— 0 61
Flax—										
No. 1 N.W.C.....	1 57	— 1 58½	1 58½	— 1 68	1 72½	— 1 77	1 69½	— 1 74	1 74½	— 1 84
No. 2 C.W.....	1 54	— 1 55½	1 55½	— 1 65	1 69½	— 1 74	1 66½	— 1 71	1 71½	— 1 81

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	April		May		June		July	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 16	-1 30½	1 22	-1 24	1 06	-1 14	1 09	-1 36½
Chicago.....	1 17	-1 25½	1 22½	-1 22½	1 01½	-1 07½	1 04	-1 28½
New York (f.o.b. afloat).....	1 25½	-1 35½	1 29	-1 31½	1 13½	-1 14½	1 13½	-1 35½
Corn, No. 2, Mixed—								
St. Louis.....	0 73½	-0 76	0 76	-	0 70	-0 70½	0 75½	-0 82½
New York (f.o.b. afloat).....	0 83½	-0 86½	0 86	-0 86½	0 79½	-0 90½	0 88	-0 93½
Corn, No. 2—								
Chicago.....	0 74½	-0 79	0 77½	-0 78	0 69½	-0 78½	0 78	-0 84½
Oats, No. 2—								
St. Louis.....	0 42½	-0 45	0 43½	-	0 37	-0 41	0 38	-0 41½
Chicago.....	0 44½	-0 47	0 45½	-0 46	0 37½	-0 41½	0 38½	-0 42
Rye, No. 2—								
Chicago.....	0 94	-0 97½	0 97	-0 97½	0 97	-0 99½	0 94	-1 01

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	July 3		July 10		July 17		July 24		July 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	1 50½	-1 53½	1 56	-1 59	1 56	-1 59	1 65	-1 68	1 82½	-1 85½
Canadian No. 2.....	-	-	1 53½	-1 56	1 53½	-1 56	1 62	-1 65	1 79½	-1 82½
Canadian No. 3.....	-	-	-	-	-	-	1 59	-1 62	1 77	-1 79½
American spring.....	1 47	-1 50½	1 53½	-1 59	1 53½	-1 59	1 68	-1 71	1 77	-1 79½
American best winter...	1 47	-1 50½	1 47	-1 50½	1 47	-1 50½	-	-	-	-
American poor winter...	1 35½	-1 38½	1 35½	-1 38½	1 35½	-1 38½	-	-	-	-
American hard winter (old).....	-	-	-	-	-	-	1 41½	-1 53½	1 59	-1 62
American hard winter (new).....	-	-	-	-	-	-	1 53½	-1 59	1 68	-1 71
Californian.....	1 60½	-1 63½	1 60½	-1 63½	1 60½	-1 63½	1 66½	-1 69½	1 72½	-1 74½
Argentine.....	1 50½	-1 53½	1 56	-1 59	1 56	-1 59	1 65	-1 68	1 71	-1 74
Australian.....	1 64½	-1 70	1 76½	-1 79½	1 76½	-1 79½	1 76½	-1 82½	1 82½	-1 88½
Oats (per bush.)—										
Canadian.....	0 84	-0 86½	0 85½	-0 88	0 88	-0 90½	0 88	-0 90½	0 89½	-0 91½
American.....	0 81½	-0 82½	0 81½	-0 82½	0 82½	-0 85½	0 82½	-0 85½	0 84	-0 86½
Chilian.....	0 90	-0 90½	0 90	-0 90½	0 90½	-0 93	0 90½	-0 93	0 91½	-0 94½
Flour (per 280 lb.)—										
Canadian good.....	10 45	-10 69	10 45	-10 69	10 21	-10 45	10 45	-10 69	10 69	-10 94
Canadian first bakers'...	10 21	-10 45	10 21	-10 45	9 97	-10 21	10 21	-10 45	10 45	-10 69
Canadian common.....	9 49	-9 74	9 49	-9 74	9 25	-9 49	9 49	-9 74	9 74	-9 97
American spring, good...	10 69	-10 94	10 69	-10 94	10 45	-10 69	10 69	-10 94	10 94	-11 18
American spring, common	9 74	-9 97	9 74	-9 97	9 49	-9 74	9 74	-9 97	9 97	-10 21
American winter, good...	10 45	-10 69	10 45	-10 69	10 21	-10 45	10 45	-10 69	10 69	-10 94
American winter, common.....	9 97	-10 21	9 97	-10 21	9 74	-9 97	9 97	-10 21	10 21	-10 45
American winter, inferior	9 25	-9 49	9 25	-9 49	9 00	-9 25	9 25	-9 49	9 49	-9 74
Californian.....	10 69	-10 94	9 74	-10 69	9 49	-9 97	10 21	-10 45	10 45	-11 18
Australian.....	9 25	-9 49	9 25	-9 49	9 25	-9 49	9 97	-10 21	10 21	-10 69
Japanese.....	8 76	-9 00	8 76	-9 00	8 76	-9 00	9 25	-9 49	9 49	-9 97

LIVERPOOL.

Description	July 4		July 11		July 18		July 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1.....	1 57	—1 57½	1 61½	—1 64½	1 67½	—1 68½	1 72½	—1 73½
Nor. Man. No. 2.....	1 55½	—1 57	1 60½	—1 61½	1 66½	—1 67½	1 71½	—1 72
Hard winter No. 2.....	1 47½	—1 49½	—	—	1 66	—1 66½	1 71½	—1 72
Red winter No. 2.....	—	—	1 55½	—1 57	—	—	1 76½	—1 77½
Australian.....	1 67½	—	1 71½	—1 72½	—	—	1 86½	—
Oats (per bush.)—								
Chilian white.....	0 88½	—0 90	0 88½	—0 91½	0 87½	—0 90	—	—
Canadian.....	0 83½	—0 84½	0 85	—0 86	0 86	—0 86½	0 85	—0 86
Flour (per 280 lb.)—								
Canada spring patents.....	9 86	—10 09	9 97	—10 21	10 45	—10 69	10 94	—11 18
American spring patents.....	9 86	—10 09	9 97	—10 21	10 45	—10 69	10 69	—10 94
American soft winter patents.....	9 74	—9 97	9 86	—9 97	10 33	—10 57	10 69	—10 94
Kansas patents.....	9 74	—9 97	9 86	—9 97	10 33	—10 57	10 69	—10 94
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	9 86	—9 97	9 86	—9 97	9 86	—9 97	9 86	—9 97
Canadian middle cut.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61
Canadian fine cut.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61
Canadian pinhead.....	9 49	—9 61	9 49	—9 61	9 49	—9 61	9 49	—9 61

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
July 1.....	46 3	1 407	49 1	1 433	30 10	0 818
" 8.....	46 3	1 407	45 6	1 329	30 8	0 813
" 15.....	48 11	1 488	47 5	1 385	31 6	0 835
" 22.....	51 6	1 566	48 8	1 421	32 3	0 855
" 29.....	53 5	1 625	47 2	1 377	32 5	0 860
Average.....	49 3	1 499	47 7	1 389	31 6	0 836

V. Average Prices of Imported Meats at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.)

Description and Market	July 5		July 12		July 19		July 26	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	—	—	—	—	18 76	16 21	—	—
Edinburgh.....	19 30	17 20	18 30	15 70	17 70	16 21	17 20	15 20
Argentine chilled—								
Birmingham.....	—	—	19 26	17 23	19 26	16 21	19 77	15 21
Leeds.....	18 76	16 73	18 76	15 72	19 01	14 70	18 76	14 51
Liverpool.....	18 76	16 21	18 25	15 21	19 77	15 72	18 25	14 19
London.....	18 76	16 21	19 01	15 96	18 76	15 21	20 28	14 70
Manchester.....	18 76	16 21	18 25	15 21	19 77	15 72	18 25	14 19
Dundee.....	—	17 20	18 80	16 70	19 30	16 20	18 80	—
Edinburgh.....	18 80	16 70	19 05	15 95	20 30	15 20	20 30	15 20
Australian frozen—								
Liverpool.....	18 25	16 21	—	—	—	—	—	—
Manchester.....	18 25	16 21	—	—	—	—	—	—

GREEN BACON (per cwt. of 100 lb.)

Description and Market	July 5		July 12		July 19		July 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol.....	21 22	—20 22	21 22	—20 22	22 10	—21 22	22 98	—22 10
Liverpool.....	21 22	—20 00	21 22	—20 00	21 88	—20 88	22 32	—21 44
London.....	21 66	—20 88	22 54	—21 22	22 54	—21 22	22 54	—21 66
Glasgow.....	20 88	—	21 22	—	22 54	—22 10	22 54	—
Canadian Cumberland cut—								
Liverpool.....	—	—	—	—	—	—	20 22	—18 91
Danish sides—								
Bristol.....	24 29	—23 42	24 51	—23 64	24 51	—23 64	25 17	—24 29
Liverpool.....	24 51	—23 64	24 51	—23 64	24 51	—23 86	24 73	—24 08
London.....	23 86	—22 98	24 20	—23 42	24 29	—23 42	24 73	—23 86
Glasgow.....	23 42	—	23 64	—	23 64	—	24 08	—

GREEN HAMS (per cwt. of 100 lb.)

Description and Market	July 5		July 12		July 19		July 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—								
Bristol.....	21 66	—20 88	21 66	—20 88	21 66	—20 88	22 10	—21 22
Liverpool.....	21 66	—20 88	21 66	—20 88	21 66	—20 88	21 66	—20 88
London.....	21 66	—20 88	21 44	—20 88	21 66	—20 88	21 66	—20 88
American long cut—								
Bristol.....	19 56	—18 91	19 56	—18 91	19 56	—18 91	20 22	—19 56
Liverpool.....	19 56	—18 91	19 56	—18 80	20 00	—18 80	20 22	—19 35
London.....	20 00	—19 13	20 00	—19 13	20 00	—19 13	20 22	—19 13
Glasgow.....	19 78	—19 35	20 44	—19 78	20 00	—19 78	20 66	—20 22
American short cut—								
Bristol.....	20 00	—19 13	20 22	—19 56	20 22	—19 56	20 66	—20 00
Liverpool.....	20 22	—19 35	20 22	—19 35	20 44	—19 56	20 88	—20 22
London.....	19 78	—18 91	19 56	—18 69	19 78	—18 69	19 78	—18 69
Glasgow.....	19 35	—18 91	20 00	—19 56	19 78	—19 56	20 44	—20 00

CHEESE (per cwt. of 100 lb.)

	\$ c. \$ c.		\$ c. \$ c.		\$ c. \$ c.		\$ c. \$ c.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian ¹ —								
Bristol.....	20 88	—20 44	20 44	—19 78	19 56	—19 13	20 22	—19 56
Liverpool.....	20 88	—20 22	20 22	—19 78	19 24	—18 80	19 78	—19 13
London.....	21 22	—20 44	20 44	—20 00	18 69	—17 81	19 56	—19 13
Glasgow.....	19 56	—19 13	19 13	—18 69	18 47	—18 24	—	—
New Zealand ² —								
Bristol.....	22 54	—22 10	21 66	—21 22	20 44	—20 00	20 44	—20 00
London.....	21 66	—20 88	20 88	—20 44	19 13	—18 24	20 00	—19 56
Glasgow.....	19 13	—	20 88	—20 44	18 69	—18 24	—	—

¹ New. ² Old.

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended August 31, 1916.

This month the Census and Statistics Office publishes the first or preliminary estimate of the yield of the principal grain crops of Canada in 1916 (wheat, rye, barley, oats and flaxseed), as well as a report on the condition of all field crops at the end of August.

EFFECTS OF RUST DURING AUGUST.

Correspondents report that grain crops in Manitoba and Saskatchewan, which were highly promising at the end of July, have been so seriously affected by rust and hot winds during August that large areas sown will either fail to produce any crop at all, or have been cut green; whilst the yield of grain from producing areas will be very low, both in quantity and grade. Whilst the whole of Manitoba and Saskatchewan is badly affected by rust, the conditions are distinctly worse in the southern than they are in the northern parts of these provinces. In Alberta, rust, though present to a certain extent, has not proved destructive, and the grain crops continue promising. Frosts, however, of August 11 and again late in the month did considerable damage. In Ontario and Quebec, grain yields have been greatly reduced by drought in August; but in the Maritime Provinces and in British Columbia the condition of the grain crops has continued to be quite favourable.

YIELD OF PRINCIPAL CEREALS, 1916.

It is estimated from the reports of correspondents that, of the areas sown, about 13·7 per cent of spring wheat, 8 per cent of oats, 5 per cent of barley and 1·8 per cent of flax will fail to produce any crop of grain. Of the areas sown, however, 3 per cent of wheat, 5 per cent of oats and a small area of barley have been cut for green feed, or turned into hay. These percentages represent deductions from the areas sown of 1,432,300 acres of spring wheat, 849,000 acres of oats and 69,100 acres of barley. It is consequently estimated that the total yield of wheat this year will be 168,811,000 bushels from a harvested area of 10,085,300 acres, as compared with 376,303,600 bushels from 12,986,400 acres last year, and 161,280,000 bushels from 10,293,900 acres in 1914. The average yield per acre is $16\frac{2}{3}$ bushels, as compared with 29 bushels last year and 15·67 bushels in 1914. The estimate for oats is a total yield of 341,602,000 bushels from 9,795,000 acres, as against 520,103,000 bushels from 11,365,000 acres in 1915 and 313,078,000 bushels from 10,061,500 acres in 1914, the average per acre being 34·88 bushels in 1916,

45.76 bushels in 1915 and 31.12 bushels in 1914. For rye, the estimate is 1,990,800 bushels from 101,420 acres, as compared with 2,394,100 bushels from 112,300 acres in 1915, and 2,016,800 bushels from 111,280 acres in 1914, the yields per acre being 19.60 bushels in 1916, 21.32 bushels in 1915 and 18.12 bushels in 1914. Barley yields 34,408,000 bushels from 1,328,800 acres, as against 53,331,300 bushels from 1,509,350 acres in 1915, and 36,201,000 bushels from 1,495,600 acres in 1914, the yields per acre being 25.89, 35.33 and 24.21 bushels respectively. The flaxseed estimate is for 8,625,300 bushels from 710,000 acres, an average of 12.15 bushels per acre. For the three Northwest Provinces the total estimated yields are: for wheat, 145,466,000 bushels, for oats, 243,114,000 bushels, for barley, 24,502,000 bushels, for rye, 601,000 bushels and for flax, 8,572,000 bushels. The average yields per acre of wheat are: in Manitoba $10\frac{1}{2}$, Saskatchewan 16 and Alberta $24\frac{1}{4}$ bushels per acre.

CONDITION OF FIELD CROPS.

At the end of August, the condition of field crops, expressed in percentage of a standard representing a full crop, was as follows:—Spring wheat 69, oats 74, barley 73, rye 80, peas 68, corn for husking 67, potatoes 72, alfalfa 94, corn for fodder 77, pasture 86, hay and clover 103. All other crops ranged between 75 and 78. In Manitoba the condition of spring wheat was marked down to 37 per cent, as against 85 per cent, and in Saskatchewan to 61 per cent, as against 94 per cent at the end of July. The percentage of 37 for Manitoba on August 31 is the lowest on record since the present crop-reporting system began in 1908.

Census and Statistics Office,
Ottawa, September 14, 1916.

ERNEST H. GODFREY,
Editor.

I. Estimate of Areas either totally Unproductive or Producing Crops that were cut green, 1916.

Field crops	Area sown	Total loss		Cut green		Area to be harvested
	acres	p.c.	acres	p.c.	acres	acres
Canada—						
Spring wheat.....	10,475,400	10.68	1,119,400	3.00	312,900	9,043,100
Oats.....	10,644,000	3.00	321,000	5.00	528,000	9,795,000
Barley.....	1,397,900	4.72	66,100	0.21	3,000	1,328,800
Flax.....	723,000	1.80	13,000	—	—	710,000
Quebec—						
Spring wheat.....	70,000	3½	2,400	—	—	67,600
Oats.....	1,308,000	7	92,000	6	78,000	1,138,000
Barley.....	81,000	4½	3,600	—	—	77,400
Ontario—						
Spring wheat.....	101,000	3½	4,000	—	—	97,000
Oats.....	2,465,000	—	—	2½	55,000	2,410,000
Barley.....	368,000	7½	28,000	—	—	340,000
Manitoba—						
Spring wheat.....	2,953,000	17	502,000	4	118,000	2,333,000
Oats.....	1,470,000	2½	37,000	4½	70,000	1,363,000
Barley.....	494,000	3½	19,000	—	—	475,000

I. Estimate of Areas either totally Unproductive or Producing Crops that were cut green, 1916—con.

Field crops	Area sown	Total loss		Cut green		Area to be harvested
	acres	p.c.	acres	p.c.	acres	acres
Saskatchewan—						
Spring wheat.....	5,913,000	9	532,000	2½	133,000	5,248,000
Oats.....	2,935,000	4	117,000	5½	161,000	2,657,000
Barley.....	272,000	3½	9,500	—	—	262,500
Flax.....	619,000	2	12,000	—	—	607,000
Alberta—						
Spring wheat.....	1,366,000	5½	79,000	4½	61,000	1,226,000
Oats.....	1,878,000	4	75,000	8	150,000	1,653,000
Barley.....	170,000	3½	6,000	2	3,000	161,000
Flax.....	72,000	1½	1,000	—	—	71,000
British Columbia—						
Spring wheat.....	10,500	—	—	8½	900	9,600
Oats.....	75,000	—	—	19	14,000	61,000

II. Preliminary Estimate of the Yield of Wheat, Oats, Barley, Rye and Flax, August 31, 1916, as compared with Final Estimate of 1915.

Field crops	1915	1916¹	1915	1916	1915	1916
	acres	acres	bush. per ac.	bush. per ac.	bush.	bush.
Canada—						
Fall wheat.....	1,208,700	1,042,200	29.41	25.76	35,551,600	26,850,000
Spring wheat.....	11,777,700	9,043,100	28.93	15.70	340,752,000	141,901,000
All wheat.....	12,986,400	10,085,300	28.88	16.74	376,303,600	168,811,000
Oats.....	11,365,000	9,795,000	45.76	34.88	520,103,000	341,602,000
Barley.....	1,509,350	1,328,800	35.33	25.89	53,331,300	34,408,000
Rye.....	112,300	101,420	21.32	19.60	2,394,100	1,990,800
Flax.....	806,600	710,000	13.18	12.15	10,628,000	8,625,300
P. E. Island—						
Spring wheat.....	34,400	34,500	19.00	18.74	653,600	647,000
Oats.....	196,000	190,000	34.86	37.29	6,832,500	7,421,000
Barley.....	3,700	3,600	28.88	31.00	106,800	112,000
Nova Scotia—						
Spring wheat.....	13,300	13,400	18.57	20.90	247,000	280,000
Oats.....	112,000	116,000	31.14	35.68	3,487,700	4,139,000
Barley.....	4,900	4,700	26.20	29.32	128,400	138,000
Rye.....	300	320	15.00	18.00	4,500	5,800
New Brunswick—						
Spring wheat.....	14,000	14,000	19.09	28.03	267,000	392,000
Oats.....	201,000	198,000	27.66	33.05	5,559,600	6,544,000
Barley.....	2,100	1,900	22.96	26.07	48,000	50,000
Quebec—						
Spring wheat.....	71,000	67,600	19.88	16.64	1,411,000	1,125,000
Oats.....	1,400,000	1,138,000	30.13	15.80	42,182,000	17,980,000
Barley.....	85,000	77,400	26.53	25.81	2,255,000	1,998,000
Rye.....	8,700	8,300	16.71	22.81	145,000	189,000
Flax.....	600	500	11.89	10.50	7,000	5,300
Ontario—						
Fall wheat.....	972,000	774,800	28.34	24.23	27,546,000	18,773,000
Spring wheat.....	121,000	97,000	22.36	16.70	2,706,000	1,620,000
All wheat.....	1,093,000	871,800	27.67	23.39	30,252,000	20,393,000
Oats.....	3,095,000	2,410,000	39.68	24.44	122,810,000	58,000,000
Barley.....	449,000	340,000	34.23	22.07	15,369,000	7,504,000
Rye.....	78,000	69,000	19.88	17.32	1,551,000	1,195,000
Flax.....	5,000	4,500	12.38	10.64	62,000	48,000

8454—1½

¹ Harvested acreage, see Table I.

II. Preliminary Estimate of the Yield of Wheat, Oats, Barley, Rye and Flax, August 31, 1916, as compared with Final Estimate of 1915.—con.

Field crops	1915	1916 ¹	1915	1916	1915	1916
	acres	acres	bush. perac.	bush. perac.	bush.	bush.
Manitoba—						
Fall wheat.....	10,900	9,400	33.30	24.71	363,000	232,000
Spring wheat.....	3,332,000	2,333,000	28.83	10.50	96,062,000	24,497,000
All wheat.....	3,342,900	2,342,400	28.84	10.56	96,425,000	24,729,000
Oats.....	1,441,000	1,363,000	48.21	39.07	69,471,000	53,252,000
Barley.....	490,000	475,000	36.25	24.54	17,763,000	11,657,000
Rye.....	5,800	6,200	26.74	24.59	155,000	152,000
Flax.....	34,000	27,000	11.00	11.50	374,000	311,000
Saskatchewan—						
Fall wheat.....	4,100	4,100	30.76	32.00	126,000	131,000
Spring wheat.....	6,834,000	5,248,000	28.54	16.00	195,042,000	83,968,000
All wheat.....	6,838,100	5,252,100	28.54	16.01	195,168,000	84,099,000
Oats.....	2,937,000	2,657,000	53.67	42.36	157,628,600	112,551,000
Barley.....	287,000	262,500	36.83	29.60	10,570,200	7,770,000
Rye.....	2,700	3,200	28.00	25.87	75,600	83,000
Flax.....	697,000	607,000	13.00	12.04	9,061,000	7,308,000
Alberta—						
Fall wheat.....	215,700	247,700	33.92	30.36	7,316,000	7,520,000
Spring wheat.....	1,348,000	1,226,000	32.67	23.75	44,039,000	29,118,000
All wheat.....	1,563,700	1,473,700	32.84	24.25	51,355,000	36,638,000
Oats.....	1,912,000	1,653,000	56.35	46.77	107,741,000	77,311,000
Barley.....	185,000	161,000	37.75	31.52	6,984,000	5,075,000
Rye.....	16,800	14,400	28.61	25.42	463,000	366,000
Flax.....	70,000	71,000	16.05	13.42	1,124,000	953,000
British Columbia—						
Fall wheat.....	6,000	6,200	33.44	31.33	200,600	194,000
Spring wheat.....	10,000	9,600	32.43	32.67	324,400	314,000
All wheat.....	16,000	15,800	32.80	32.15	525,000	508,000
Oats.....	71,000	61,000	61.84	57.45	4,390,600	3,504,000
Barley.....	2,650	2,700	40.36	38.63	106,900	104,000

¹Harvested acreage, see Table I.

III. Preliminary Estimate of the Area and Yield of Wheat, Oats, Barley, Rye and Flax in the Northwest Provinces, August 31, 1916, compared with 1915.

Field crops	1915	1916	1915	1916
	acres	acres	bush.	bush.
Fall wheat.....	230,700	261,200	7,805,000	7,883,000
Spring wheat.....	11,514,000	8,807,000	335,143,000	137,583,000
All wheat.....	11,744,700	9,068,200	342,948,000	145,466,000
Oats.....	6,290,000	5,673,000	334,840,600	243,114,000
Barley.....	962,000	898,500	35,317,200	24,502,000
Rye.....	25,300	23,800	693,600	601,000
Flax.....	801,000	705,000	10,559,000	8,572,000

IV. Comparative Condition of Field Crops, August 31, 1913-16.

NOTE—100=Standard or full crop.

Field crops	1913	1914	1915	1916	Field crops	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada—					New Brunswick—con.				
Spring wheat.....	88	75	93	69	Buckwheat.....	89	93	81	84
Oats.....	88	76	92	74	Mixed grains.....	91	91	92	93
Barley.....	87	74	92	73	Potatoes.....	102	93	81	84
Rye.....	80	79	91	80	Turnips.....	93	85	92	89
Peas.....	81	74	81	68	Mangolds, carrots, etc.....	85	89	92	90
Beans.....	79	82	81	75	Alfalfa.....	90	—	—	62
Buckwheat.....	78	80	81	75	Corn for fodder....	78	74	88	88
Mixed grains.....	89	87	92	75	Sugar beets.....	90	89	89	98
Flax.....	85	63	85	76	Pasture.....	86	84	95	88
Corn for husking....	80	78	79	67	Hay and clover....	85	88	93	115
Potatoes.....	86	76	82	72	Quebec—				
Turnips.....	84	78	88	77	Spring wheat.....	90	86	90	75
Mangolds, carrots, etc.....	84	78	88	78	Oats.....	90	89	90	69
Alfalfa.....	76	72	89	94	Barley.....	89	87	91	73
Corn for fodder....	80	85	83	77	Rye.....	83	78	89	76
Sugar beets.....	81	79	87	76	Peas.....	84	78	85	67
Pasture.....	81	67	89	80	Beans.....	79	76	81	80
Hay and clover....	79	71	71	103	Buckwheat.....	81	76	75	78
P. E. Island—					Mixed grains.....	91	87	91	76
Spring wheat.....	97	100	98	78	Flax.....	91	71	79	73
Oats.....	95	101	97	90	Corn for husking....	80	75	79	76
Barley.....	96	96	95	93	Potatoes.....	88	84	80	65
Peas.....	96	95	93	88	Turnips.....	83	79	85	77
Beans.....	85	94	92	84	Mangolds, carrots, etc.....	82	78	82	77
Buckwheat.....	90	95	93	90	Alfalfa.....	71	70	80	92
Mixed grains.....	98	100	101	95	Corn for fodder....	72	83	83	82
Flax.....	94	88	100	94	Sugar beets.....	83	80	88	80
Potatoes.....	87	100	86	96	Pasture.....	70	70	73	87
Turnips.....	87	98	95	87	Hay and clover....	75	73	75	103
Mangolds, carrots, etc	68	95	97	93	Ontario—				
Alfalfa.....	80	80	103	100	Spring wheat.....	81	80	94	68
Corn for fodder....	83	86	85	88	Oats.....	83	84	89	63
Sugar beets.....	86	92	90	88	Barley.....	81	83	91	60
Pasture.....	84	90	94	85	Rye.....	77	80	91	74
Hay and clover....	88	93	101	95	Peas.....	74	66	77	55
Nova Scotia—					Beans.....	75	81	72	61
Spring wheat.....	94	97	92	95	Buckwheat.....	71	74	83	62
Oats.....	94	94	95	95	Mixed grains.....	85	86	91	60
Barley.....	91	94	94	93	Flax.....	81	81	85	64
Rye.....	86	89	85	93	Corn for husking....	80	81	81	50
Peas.....	86	93	92	91	Potatoes.....	75	83	78	38
Beans.....	80	92	86	86	Turnips.....	76	81	87	55
Buckwheat.....	78	95	91	89	Mangolds, carrots, etc.....	79	82	90	61
Mixed grains.....	91	99	96	98	Alfalfa.....	71	71	91	97
Flax.....	88	100	88	100	Corn for fodder....	83	89	89	64
Potatoes.....	84	99	85	94	Sugar beets.....	77	82	90	59
Turnips.....	85	96	96	90	Pasture.....	73	56	97	66
Mangolds, carrots, etc.....	82	96	92	88	Hay and clover....	68	60	78	108
Alfalfa.....	94	88	79	105	Manitoba—				
Corn for fodder....	83	89	92	91	Spring wheat.....	85	62	94	37
Sugar beets.....	81	93	93	91	Oats.....	83	55	89	73
Pasture.....	77	87	98	91	Barley.....	82	51	91	64
Hay and clover....	95	79	107	107	Rye.....	76	72	94	87
New Brunswick—					Peas.....	100	59	85	58
Spring wheat.....	92	93	89	88	Beans.....	100	68	—	72
Oats.....	92	95	92	90	Mixed grains.....	90	48	90	98
Barley.....	93	91	92	88	Flax.....	83	64	81	70
Rye.....	77	—	85	100	Potatoes.....	91	70	77	84
Peas.....	85	88	87	89	Turnips.....	88	62	73	86
Beans.....	78	86	78	76					

IV. Comparative Condition of Field Crops, August 31, 1913-16.—con.

Field crops	1913	1914	1915	1916	Field crops	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Manitoba—con.					Alberta—con.				
Mangolds, carrots,					Rye.....	89	78	97	87
etc.....	93	55	73	89	Peas.....	86	65	88	82
Alfalfa.....	87	73	74	94	Beans.....	84	67	91	88
Corn for fodder...	94	79	52	96	Mixed grains.....	95	78	93	81
Sugar beets.....	96	69	63	87	Flax.....	86	58	95	80
Pasture.....	91	60	66	92	Potatoes.....	93	72	95	85
Hay and clover...	82	62	64	101	Turnips.....	92	71	96	91
Saskatchewan—					Mangolds, carrots,				
Spring wheat.....	90	59	93	61	etc.....	93	73	98	93
Oats.....	88	50	90	79	Alfalfa.....	90	77	98	84
Barley.....	90	48	92	81	Corn for fodder...	97	75	93	89
Rye.....	85	69	93	92	Sugar beets.....	89	73	96	100
Peas.....	87	57	96	69	Pasture.....	95	82	98	106
Beans.....	92	72	100	43	Hay and clover...	91	80	99	89
Mixed grains.....	92	59	96	89	British Columbia—				
Flax.....	83	53	88	81	Spring wheat.....	90	83	92	90
Potatoes.....	90	43	86	90	Oats.....	94	82	90	93
Turnips.....	94	44	87	88	Barley.....	94	90	92	89
Mangolds, carrots,					Rye.....	94	90	96	79
etc.....	95	44	86	92	Peas.....	95	89	83	95
Alfalfa.....	87	71	83	96	Mixed grains.....	93	73	92	90
Corn for fodder...	89	46	60	88	Potatoes.....	87	78	83	87
Sugar beets.....	98	45	79	90	Turnips.....	85	79	85	84
Pasture.....	94	63	82	96	Mangolds, carrots,				
Hay and clover...	91	78	79	99	etc.....	94	77	64	88
Alberta—					Alfalfa.....	89	97	95	87
Spring wheat.....	91	75	98	78	Sugar beets.....	91	81	94	86
Oats.....	89	70	100	79	Pasture.....	90	64	64	80
Barley.....	92	69	98	77	Hay and clover...	98	89	90	86

TELEGRAPHIC CROP REPORTS.

On September 5th, 1916, the following special press bulletin was issued by the Census and Statistics Office on the condition of field crops in Canada at the end of August, as summarized from telegrams received from the Dominion Experimental Farms and Stations in accordance with arrangements made between the Departments of Trade and Commerce and Agriculture:

Maritime Provinces.—Prince Edward Island—All grain, except wheat, which has suffered from blight and insects, will yield above average; roots, potatoes and vegetables most promising; fruit, a light crop.

Nova Scotia—Grain ripening rapidly and promising a good yield; hay gathered in excellent condition. At Kentville, roots suffered from dry weather; corn unusually good. At Amherst, roots and corn have made fair growth.

New Brunswick—August, with more heat and less rain than usual, has been very favourable for crops; oats partly harvested promise well; hay much above average; potatoes, unfavourably affected by heat, will not give average yield; roots growing well and corn the best crop for years.

Quebec—Drought has caused premature ripening of grain and reduction of yield; roots too have suffered and potatoes are poor; at Rimouski, rains have benefited potatoes and vegetables, and the hay crop is the best in years.

Eastern Ontario—A heavy crop of hay has been gathered, and in some parts there were two cuttings. Roots have suffered from lack of rain. Grain is nearly all ripe and is threshing out a light crop owing to drought; pastures are poor from the same cause; and potatoes are likely to be a poor crop.

Prairie Provinces: Manitoba.—From Brandon it is reported that the Manitoba wheat crop is about half the normal yield and practically all low grades; oats and barley are an average crop. Cutting is practically completed and threshing has begun. Fodder corn is a good crop; there is no injury from frost. **Saskatchewan.**—The weather during August has been unfavourable for grain, and damage to wheat by rust is reported from Indian Head, Maple Creek, Gull Lake, Eston, Prelate, Rosthern and Scott, reducing the yield and grade. Frost is reported from points in the Moosejaw, Saskatoon and Battleford districts. Threshing is beginning in the first week of September. At Scott, in the Battleford district, the harvest was delayed by cool weather, and cutting has only just commenced. Hailstorms did much injury early in the month. Late crops of wheat in low land were badly frozen on the 11th. Yields of wheat that have escaped frost and rust will be satisfactory. **Alberta.**—MUNSON: Cutting not general until first week in September. Some wheat crops show effects of frost on August 10. CARMANGAY: Crops good if they can be secured before frost. Hood crops looking fine, but are later than last year. LETHBRIDGE: Harvest over a week later than last year. Cutting general; no damage to wheat from frost, no appreciable damage from rust. LACOMBE: Three degrees of frost, August 10, damaged much grain over area of 150 square miles, certain localities immune. Harvesting of barley is general and wheat cutting has begun. A further ten days of good weather required to render safe crops that are so far uninjured.

British Columbia.—AGASSIZ: An exceptionally bright, fine month is reported, with excellent weather for grain harvest and for making a record crop of hay. Corn prospects have improved, and mangold crops are growing exceptionally well. INVERMERE: Weather conditions favourable for grain harvest and second cuttings of clover and alfalfa. Corn backward; pulse crops good. SUMMERLAND: Weather hot and dry, nearly all grain harvested, hay harvested in good condition, apple crop equal to last year and very good in quality. SIDNEY: Weather conditions dry, grains harvested, threshing commenced and yield good of autumn grain and peas, second crop of red clover and third crop of alfalfa harvested, corn and chard growing well, orchard crops ripening and promise well.

CROP REPORTS FROM THE PROVINCES.

(Summarized from correspondents' reports of August 31, 1916.)

Prince Edward Island.—Hay and clover is an excellent crop and has been safely secured. Wheat has suffered somewhat from blight and insects, but all grains promise a good average yield, with harvesting earlier than usual. Potatoes have suffered somewhat from beetles and dry weather, but will give a fair yield. Roots are promising.

Nova Scotia.—By the end of August the heavy hay crop was stored in good condition. Harvesting was well under way, as the hot, dry weather has hastened the ripening of all grains, which, on this account, are likely to yield more lightly than usual. Pastures were beginning to suffer from lack of rain. Potatoes suffered to some extent from blight, which, however, was too late to do very serious damage; so that a good yield is looked for. The fruit crop is said to be light.

New Brunswick.—Crops in general make a good showing, hay yielding particularly well. Grains ripened earlier than usual as a result of the heat, and harvesting had begun at the end of the month. Potatoes and roots look promising, but pastures have suffered from lack of rain.

Quebec.—In all parts of the province the crops have suffered from excessive heat and lack of rain. The grain did not fill out well, and the yield is light, with short straw. Serious damage is also reported from rust. A large percentage of oats was cut for fodder, which was gathered in good condition, as the weather was favourable for curing it. Corn improved during the month, and if not hurt by frost will be a good crop. Potatoes suffered from want of rain; they are small and few in a hill. Pastures are in good condition.

Ontario.—The crops on undrained clay land are very poor, while on naturally dry and on tiled land results will be somewhat better, though much below the average. While the cold, wet spring followed by the long-continued drought is largely responsible for the serious shortage in grain and root crops, the scarcity of labour is partly to blame, as the seed went in on poorly prepared land, and root crops suffered from lack of proper cultivation. With the exception of hay, which, fortunately, was an unusually abundant crop, feed of all kinds will be scarce and dear. Potatoes everywhere are very poor; but late varieties may improve if rain comes. The same applies to corn and roots. The prospect for a large acreage of fall wheat is poor, as the ground is baked too hard for ploughing.

Manitoba.—Conditions, which at the end of July gave promise of excellent crops, were entirely changed during August by severe attacks of rust. Large areas sown to wheat will either not be cut at all or will be cut for feed only. Both the yield and grade of wheat will be very low. The general state of things is summed up by one correspondent, who states that "extreme heat for a few days at the critical time with wheat just before and at heading, caused it to rust; as a consequence it did not fill, and much will be unfit for milling and only fit for poor feed." Another correspondent writes: "The wet spring produced a soft, shallow-rooted wheat plant that was not able to withstand the strain of the excessive heat of the last three weeks of July and early August. The accompanying misty weather favoured the spread of rust fungi, which completed the destruction. Many fields will be fire-guarded and burned as they stand."

Saskatchewan.—What promised at the end of July to be a splendid wheat crop has deteriorated very seriously owing to damage from black and red rust, caused by the hot, humid weather. The later sown wheat suffered especially, but reports agree that it is impossible to give any reliable estimate of the extent of the damage until threshing is completed. Farmers hesitate as to whether they will burn the badly affected areas or go to the expense of harvesting. In places the wheat has been cut and stacked for feed. In some parts of northern Saskatchewan rust appeared too late to cause serious damage and the crops remain good. Frosts on or about the 11th August did damage in some places.

Alberta.—The cold, wet weather of the month has delayed the maturing of crops, and at the close of the month only barley cutting was general; wheat and oats only beginning. Frosts on the nights of the 10th and 11th and also towards the end of the month greatly injured grain crops in the northern part of the province. Several correspondents report the appearance of rust, but state that it has caused no appreciable damage. Potatoes have suffered from rains and frost. Hay is a fair crop.

British Columbia.—Crops on unirrigated lands suffered to some extent from the hot, dry weather, but a fairly good yield is looked for. Hay was an excellent crop, and was housed in good condition. Harvesting and threshing were in progress at the end of the month.

STOCKS OF WHEAT, BARLEY, AND OATS IN FARMERS' HANDS, AUGUST 31, 1916.

With a view of enabling estimates to be compiled as to the supplies of grain in Canada at the end of the crop year on August 31, 1916, the Census and Statistics Office issued on August 18 to all its crop-reporting correspondents and to the postmasters of Manitoba, Saskatchewan, and Alberta circulars requesting them to state, after such local inquiries as they might conveniently be able to make, their estimate of the percentage of the 1915 crops of wheat, barley and oats which on August 31, 1916, still remained in farmers' hands within their respective districts.

Under ordinary circumstances the proportion of the previous year's crops remaining over at this date is small, but there were indications that owing to the exceptionally abundant harvest of 1915 there might this year still be a considerable surplus.

The inquiry was well responded to, and the detailed results are given in the following table:—

Field crops	Total production in 1915	In farmers' hands, August 31, 1916		Field crops	Total production in 1915	In farmers' hands, August 31, 1916	
		bush.	p.c.			bush.	p.c.
Canada—				Ontario—			
Wheat.....	376,303,600	3.19	11,997,500	Wheat.....	30,252,000	7.75	2,345,000
Barley.....	53,331,300	3.33	1,779,430	Barley.....	15,369,000	5.38	827,000
Oats.....	520,103,000	7.61	39,584,300	Oats.....	122,810,000	10.00	12,810,000
P. E. Island—				Manitoba—			
Wheat.....	653,600	3.25	21,200	Wheat.....	96,425,000	2.00	2,015,000
Barley.....	106,800	0.32	340	Barley.....	17,763,000	2.50	456,500
Oats.....	6,832,500	2.25	153,700	Oats.....	69,471,000	5.00	3,474,000
Nova Scotia—				Saskatchewan			
Wheat.....	247,000	1.50	3,700	Wheat.....	195,168,000	3.00	5,855,000
Barley.....	128,400	0.71	900	Barley.....	10,570,200	2.00	211,000
Oats.....	3,487,700	3.00	104,600	Oats.....	157,628,600	7.25	11,428,000
N. Brunswick—				Alberta—			
Wheat.....	267,000	1.00	2,700	Wheat.....	51,355,000	3.33	1,710,000
Barley.....	48,000	0.29	140	Barley.....	6,984,000	3.25	227,000
Oats.....	5,559,600	2.50	139,000	Oats.....	107,741,000	8.25	8,889,000
Quebec—				B. Columbia—			
Wheat.....	1,411,000	3.00	42,300	Wheat.....	525,000	0.50	2,600
Barley.....	2,255,000	2.50	56,400	Barley.....	106,900	0.14	150
Oats.....	42,182,000	6.00	2,531,000	Oats.....	4,390,600	1.25	55,000

From this table it will be noticed that out of a total crop in 1915 of 376,303,600 bushels of wheat the estimated surplus in farmers' hands on August 31, 1916, was a little over 3 per cent, or 11,997,500 bushels. Of the barley crop of 53,331,300 bushels, the surplus percentage was about $3\frac{1}{4}$ per cent, or 1,779,430 bushels, and of oats 7.61 per cent, or 39,584,300 bushels, remained over of the crop of 520,103,000 bushels. In 1914 a similar inquiry showed that, of the abundant harvest of 1913, 0.94 per cent of wheat, or 2,177,400

bushels, 2.04 per cent of barley, or 987,500 bushels, and 3.57 per cent of oats, or 14,450,800 bushels remained in farmers' hands on August 31, 1914, out of crops in 1913 amounting to 231,717,000 bushels of wheat, 48,319,000 bushels of barley, and 404,669,000 bushels of oats. Both the proportions and the total quantities remaining over on August 31, 1916, were, therefore, considerably in excess of the surpluses shown on August 31, 1914.

On September 1, 1916, the quantities of wheat, barley, and oats in the elevators, as given in the Weekly Bulletin for September 11 of the Department of Trade and Commerce, were as follows:—Wheat 15,035,428 bushels, barley 1,220,132 bushels, oats 11,021,096 bushels. These quantities added to the stocks in farmers' hands, as given in the above table, make the estimated "carry over" into the crop year of 1916-17 for each crop in round figures as follows: Wheat, 27,033,000 bushels; barley, 2,999,500 bushels, and oats, 50,605,000 bushels.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—August has been very dry and warm, much more so than for several years. The highest temperature recorded is 97.8, the lowest 44, and the mean 70.25, compared with extremes of 86 and 38 and a mean temperature of 61.07 a year ago. The rainfall, 1.73 inch, distributed over thirteen days, is comparatively light, the total for the same period in 1915 being 7.09 inches, when rain fell on seventeen days. The bright sunshine of the month averages 8.89 hours a day, against a daily average of 5.88 hours in August, 1915.

At the Experimental Farm, the second cutting of hay has been saved, giving nearly one and one-half ton per acre, in addition to upwards of three tons per acre from the same land earlier in the season. The oat crop has been harvested and threshed during the month,—the return being about 45 bushels per acre, which is considerably less than usual. During the latter part of August, the hoed crops have made fair growth and, although prospects have improved, the yield is likely to be below the average for corn, roots and potatoes.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "Light showers of rain fell occasionally during the first week of August, followed by a period of very dry weather, which extended to the 28th, when a very welcome soaking rain was experienced. Only three light showers occurred during the dry spell, and while these were apparently sufficient for potatoes and hoed crops, the grain suffered, as it ripened very quickly and did not fill quite as well as if it had had more moisture. Fully one-half of the grain crops ripened and were cut during the month. Oats and barley will yield above the average. Wheat has suffered somewhat from blight and insects, and will not give the yield that it promised earlier in the

season. Roots, potatoes and vegetables are most promising. Fruit will be a light crop, though it is sizing up well, and will yield considerably more than last year. A number of very successful farmers' excursions came to the Station during the month. The display of flowers and models from this Station at the fourth annual flower show, which was held in Charlottetown, August 30 and 31, was very much appreciated. The show itself was much ahead of any former one both in quantity and quality of exhibits."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The temperature during August has been higher than usual, the mean being 64.9, as compared with 63.8 in 1915 and 63 degrees in 1914. The rainfall has been light, amounting to 0.86 of an inch, more than half of which fell in a short time on the 25th, doing much good to the crops. The showers outside of this one have been light and have been of little benefit to the growing crops. The month has been unusually bright, the hours of sunshine totalling 221.2, as compared with 168.3 hours in 1915 and 211.1 hours in 1914. Owing to the drought and high temperature, with much bright weather, roots and potatoes have suffered greatly, and the yield, particularly of potatoes, will, as a consequence, be light. Late planted potatoes have been affected much less than the early planted, and will probably be a fair crop. On the other hand, early planted mangolds and turnips suffered a good deal less than the later planted. The grain crop has ripened prematurely, all varieties ripening pretty well at one time; this no doubt will materially lessen the yield of all grains. The dry weather did not greatly affect the corn crop, which is unusually good. Conditions have been favourable for finishing hay, which was more or less delayed by dark weather in July. Owing to the dry spell, pasturage on the dyked areas will not be so good as anticipated earlier in the season. While the total apple crop will not be much larger than in 1915 (being estimated around 500,000 barrels), the quality is better, and the quantity of marketable fruit will be greater."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "The weather during August has been exceptionally favourable. A few light showers experienced during the month have been very beneficial, especially to the root crops. The precipitation totals 1.7 inch, and the sunshine 247.3 hours. Probably this has been one of the best seasons for the curing and storing of hay that has been experienced for some time, and practically all hay from this district has been stored in excellent condition, which, coupled with the good yield, is most encouraging to farmers. Both grain and root crops have done exceptionally well during August, and the prospects are that a good return will be obtained from the grain and that fair crops of roots will be harvested if good weather conditions continue. The larger percentage of the plot grain was cut during the last ten days; it has ripened up very evenly and the heads are filling most satisfactorily; but from some other sections there are reports that the grain is not filling as well as had been expected. Feeds of all kinds remain

very high on the market, with the exception of hay, and there has been very little movement in the hay market up to the present time. There is a ready market for all classes of vegetables. Most satisfactory progress is being made in clearing new land at this Farm, some twenty odd acres having been stumped, chopped and piled up to date. All live stock at the Experimental Farm is in good condition and doing nicely. The season has been only fair for honey production; consequently the return will be only an average one."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "The weather during August has been most favourable for all crops except potatoes. The average mean temperature is 2.1 degrees higher than last year and 3.1 degrees above the average for the last forty-two years. The precipitation totals 1.59 inch, against a 42-year average of 4 inches. For all crops requiring heat it has been the best month for many years. Corn is consequently especially good, and grain has ripened well. Most soils had an abundance of moisture to carry crops through. Potatoes developed much more fungous trouble than is the case when cooler weather prevails, and this will reduce the yield somewhat. The month has been very favourable for hay harvesting, while a good deal of grain has been safely housed or threshed. Both hay and grain are large crops, and while potatoes are likely to yield somewhat below the average, roots promise pretty well. Pastures have kept up well, considering the dry weather, and live stock generally is in good condition."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "The temperatures recorded during August range slightly higher than usual, the highest being 89.2, the lowest 39.4, and the mean 65, compared with a mean temperature of 63.4 in 1915. The precipitation totals three-quarters of an inch, distributed over four days. Conditions have not been favourable for cereal and forage crops. The drought which prevailed during the last three weeks of July has continued throughout August and has been conducive to the premature ripening of most of the cereals. The potato crop in this section is reported to be, as a rule, very light; potatoes sown on dry, sandy land are almost a failure. At the Experimental Station the whole cereal crop was threshed by the 29th, about a fortnight earlier than usual, the yield averaging about fifteen per cent less than last year. Field roots are coming on fairly well despite the persistent drought. Vegetables have suffered considerable damage from want of moisture. Many springs and brooks, which ordinarily furnish a good supply of water, have dried out, and cattle in the fields have to be supplied with water from some distance."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "August has been warmer, drier, and brighter than the average of the corresponding period of the past four years, the figures for 1916 being: mean temperature 66.34, precipitation 2.76 inches and sunshine 223.2 hours, compared with averages for August of the four previous years of mean 61.61, precipitation 5 inches and sunshine 187.4 hours. The drought came too late to affect the yield of hay,

which was nearly three tons per acre for the whole crop at the Experimental Station, but it certainly did lower the feeding capacity of pastures. Some of the early sown oats have been threshed, the yield being better than anticipated, though reports from the district are to the contrary.

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The weather during August has been very warm, the highest temperature recorded being 91, compared with 85 last year; the lowest 40, compared with 30 a year ago. The mean temperature of the month is 64.67, while for 1915 it was 63.11. The precipitation totals 3.91 inches, compared with 3.47 inches last year, and the bright sunshine 227.3 hours, against 176.5 hours in the previous year. The hot weather experienced has been very favourable for corn, which has grown remarkably well during the past few weeks; but unfavourable for cereal crops, as the warm days and hot sunshine ripened grain so quickly that it has not filled well. Harvesting is now well under way, but, on account of the wet, cold spring, and the hot weather during August, the yield of grain will be considerably below the average in this part of the country. The potato crop in this district is very poor."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "August has been about normal as regards temperature and rainfall. Except for damage by high winds, it has been favourable for harvesting. Cutting is practically completed throughout Manitoba, and threshing is being commenced. The attack of rust, which had begun to develop in July, reached disastrous proportions early in August. The wheat crop is almost ruined in the greater part of the province; both yield and quality are very badly reduced. Late oats and barley are also somewhat affected. On the Experimental Farm, cutting has been entirely completed and threshing is nearly through. Yields of wheat are from one-quarter to one-third normal, oats about one-half, and barley about two-thirds normal crop."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "August has been warm, with 1.18 inch of precipitation. Severe hail storms visited this district on the 2nd, doing great damage to crops in the southern part of the township. Warm, damp weather early in the month developed rust to a serious extent. Early wheat will be fair in yield and quality, but late maturing crops are badly damaged and in many cases are not being cut. Barley is only fair, being reduced in yield and quality through rust. Oats are a good crop throughout the district. Ninety per cent of the wheat is now in stook. Some late oats have still to be cut. Threshing will be general by September 4th. The work on the Experimental Farm has included putting fallows in shape, cutting and threshing grain, cutting second crop of hay, putting in cement work for poultry administration building, and caring for lawns and gardens. Cutting commenced on August 7th with fall rye. Prelude wheat was cut on the 8th, and harvesting became general by the 19th. Threshing commenced on the 24th, and field lots should be through by September

2nd. Marquis wheat yielded as high as 43 bushels per acre on fallow and 28 bushels per acre on stubble, oats as high as 100 bushels and barley 50 bushels per acre. Potatoes, fodder corn and roots promise good yields."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports : " The outstanding feature during August was a hailstorm on the 3rd, which, reports from various points indicate, originated west of the Alberta-Saskatchewan border line and passed irregularly northeast across this province to Manitoba. At Rosthern the path was approximately six miles wide. The storm lasted ten minutes, and in that time every bit of grain crop in its path was totally destroyed. Not a stem of grain remained standing on the Experimental Station. Some of the crop was beaten so flat into the ground that nothing was left in the way of immediate ploughing. In other places the straw was badly tangled with the heads beaten into the ground. A portion of this could be mowed and raked and hauled away, but some of it had to be raked, then mowed, and then raked again. The vegetable and flower gardens were almost totally destroyed, and the north-west side of the trees and shrubs badly barked with the hail. The shrubs and trees, too, were very much depleted of leaves, which has given them an autumn appearance. The storm destroyed almost everything of experimental value for the season. There were fifty lights of glass broken in the buildings at the Station."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports : " The weather during August has been cool, with harvesting late, cutting only commencing at the end of the month. Early in the month hailstorms did much damage in a number of districts. Frost on the 11th seriously injured late wheat on low land; and the flax crop is also showing the effects of frost injury. Damage from rust is also reported in some districts. Crops that have escaped injury will give satisfactory yields. At the Station an excellent barley crop has been harvested, while a number of plots of wheat and oats have been cut. Fodder corn will give a light return, but field roots give promise of good yields. The vegetable garden is unusually productive, due to the abundant supply of moisture. Warmer and drier weather is necessary to hasten the ripening of cereals."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports : " Cold, wet weather during August has delayed the maturing of all crops, and, at the close of the month, barley cutting alone had become general; only occasional fields of wheat and oats have so far been cut in this section of Alberta. Fully ten days more of comparatively warm weather will be required before the harvest is general. A frost of three degrees on the night of the 10th has been responsible for extensive damage over a large area of country. Frozen samples have been received at this office from many sections. Reports, however, indicate that there are areas in almost every locality which have escaped damage, and present indications are that there will be good seed available in most districts. At present prices, wheat grading only feed will command as high or higher a figure than the average price for No. 1; so that the cash return, while likely to be

much less than was anticipated, will probably be equal to the average crop when sold at average prices. Live stock is doing well and prices are satisfactory. Hogs at country points during the past month have been bringing as high as \$11.25 per 100 lb. live weight."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The mean temperature for August is 60, as compared with 66.5 a year ago. There have been ten rainy days, and 2.97 inches of precipitation have been recorded, being just two inches more than for the corresponding period of last year. This cooler weather, combined with the greater moisture, resulted in delaying harvest until fully a week later than last season. At the end of the month, grain cutting is general in southern Alberta, and, although in some localities quite a little has been done, still, on the whole, not more than five to ten per cent of the wheat has been harvested. Traces of rust have been observed in some localities, but in no case has it been severe enough to cause appreciable damage. In the main wheat growing areas of the province no damage resulted from frost during August. At the Station, the grain has ripened rapidly and by the end of the month fully two-thirds of the harvest is completed."

Invermere, B. C.—G. E. Parham, Superintendent, reports: "The weather conditions have been favourable during August. Rain has come at opportune times, 1.82 inch falling on the 17th and 18th. Cereals have been cut and in most cases harvested. Heavy second cuts of clover and alfalfa are now being made. Root crops are good. The honey yield promises to be exceptionally heavy. One hive at this Station has already produced 200 lb. of honey. The Windermere District Fall Fair, held on the Experimental Station grounds on the 29th and 30th, brought together a large number of people, and the exhibits of live stock, vegetables, flowers and farm produce were highly commended by the judges. Great interest was shown in the butter-making competition, which took place during the afternoon of the 30th."

Agassiz, B. C.—P. H. Moore, Superintendent, reports: "The weather during August has been the best experienced here so far during 1916. July was wet and cloudy, favourable for certain kinds of crop growth, but quite the reverse for others, particularly haying operations. August, however, has been almost all that could be desired. There was fine weather for making the second crop of hay; the heat improved the corn prospects over one hundred per cent, and was beneficial for all other crop growth, the ground being full of moisture. All the main crop at the Farm has been harvested and the greater portion of it housed. Considerable threshing has been done in the district. The second crop of clover hay was harvested in good condition. There is at the close of the month an excellent third crop of clover and grass, which will be used for pasture. All live stock on the Experimental Farm is in good condition. The milking cows have been kept in the stable and yards during the summer, feeding on clover silage, and will be allowed to go to pasture on the third crop of clover during September. A few of the two-year-old heifers freshened during the month, and the greater portion will

follow during September. The first litters of fall pigs have come, giving excellent results. The lamb stock has all been weaned and the ewes are in good form for the coming breeding season. The earliest pullets have been taken from the range and are being prepared for the laying season. All poultry is in good condition. The season has been rather a poor one in the apiary, but there is considerable honey coming in at the close of the month from the late clover bloom."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Dry, warm weather continued throughout August, ripening all grain crops and making favourable conditions for their harvesting. By the close of the month all autumn cereals and a large percentage of spring cereals have been cut and stacked. Threshing has become general, and reports of yields are very favourable, spring wheats yielding as high as 38 bushels per acre. Live stock is in good condition and prices received for animal products are satisfactory. Corn and roots have grown well and promise good yields. The second crop of red clover and the third crop of alfalfa have been harvested, both giving over one ton per acre of dry hay. The potato yield will be short. The orchard fruits have developed satisfactorily and promise good yields, especially apples and pears. All truck or vegetable crops, excepting those on which the Root Maggot preys, have been abundant. The injury caused by aphids has been less this season than last. The rainfall recorded during the month amounts to only 0.32 of an inch."

The records of temperature, precipitation, and sunshine at the several Experimental Farms and Stations for the month of August are given in the following table:—

Meteorological Record for August, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	High-est	Low-est	Mean		Possible	Actual
Ottawa, Ont.	97.8	44.0	70.25	1.73	436	275.6
Charlottetown, P.E.I.	81.0	42.0	65.55	1.79	436	251.7
Kentville, N.S.	87.0	43.0	64.90	0.86	435	221.2
Nappan, N.S.	85.0	37.0	63.76	1.70	437	247.3
Fredericton, N.B.	92.5	40.0	66.10	1.59	437	235.4
Ste. Anne de la Pocatière, Que.	89.2	39.4	65.00	0.75	440	237.2
Cap Rouge, Que.	89.0	45.2	66.34	2.76	437	223.2
Lennoxville, Que.	91.0	40.0	64.67	3.91	436	227.3
Brandon, Man.	97.0	33.5	60.10	2.22	447	260.6
Indian Head, Sask.	90.0	33.0	59.90	1.18	448	272.2
Rosthern, Sask.	82.3	30.2	58.50	2.45	446	284.1
Scott, Sask.	83.0	30.2	57.20	3.87	446	254.0
Lacombe, Alberta.	82.8	28.9	55.20	5.22	455	253.0
Lethbridge, Alberta.	84.0	35.2	60.00	2.97	446	306.4
Invermere, B.C.	84.0	37.0	59.45	2.01	449	269.0
Agassiz, B.C.	95.0	42.0	64.64	0.98	445	227.3
Sidney, Vancouver I., B.C.	85.0	47.0	61.80	0.32	444	306.0

Ottawa, September 15, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (September 1) that the weather of August was generally favourable for nearly all crops. Fine and hot weather during the first fortnight helped to ripen the grain, while the rain during the last fortnight was badly wanted by the roots and pastures. Although the rain, which was heavy in some parts of England, delayed the harvesting operations, few reports of damage to the grain were received, while in some districts it was welcomed as a useful check to the grain, which was ripening rather too rapidly. Harvesting of grain made good progress in the south of England, except at the end of the month, and a commencement had been made in most parts, but comparatively little had been carried. Wheat shows scarcely any change during the month. Barley improved on the whole, but the quality may have been somewhat damaged by the wet. Oats are the poorest of the three cereals, though winter oats are good. All three grain crops are best in the north and in Wales. In the east, and also in the southwest, some damage is reported from the wet, and some grain has sprouted. Beans maintain their promise to be over average, but peas have fallen off somewhat. Prospects for potatoes are satisfactory, indications pointing to the yield being just over average. Little disease is reported as yet, except in the southwest. Apples and pears are both very small crops. Summarizing the returns, and expressing an average crop by 100, the condition of the crops on September 1 indicated probable yields which may be denoted by the following percentages: Wheat 97, barley 99, oats 95, beans 101, peas 97, potatoes 101, turnips and swedes 99, mangolds 97, hops 94.

France.—The Journal Officiel of August 13, published a report on the condition of crops on August 1 from which it appears that the forecasts of wheat in the large wheat producing districts are not very favourable, the region of the Nord, comprising 11 departments having only the note 60 (fairly good), as against 75 (good) in 1915. For rye the condition is better than last year in some districts but inferior in others. For barley there is not much difference between the two years. The condition of oats is, on the whole, favourable.

Holland.—The British Board of Trade Journal of August 17 states that according to statistics issued by the Netherlands Ministry of Agriculture, Industry and Commerce, the area under flax in the Netherlands this year is 36,176 acres, as compared with 22,111 acres in 1915, 19,083 acres in 1914, 36,200 acres in 1913 and 36,390 acres in 1912. The condition of the flax crop is good in Groningen, South Holland, Zeeland and North Brabant, and fairly good in Friesland. In consequence of the many falls of rain the crop has been beaten down, as a result of which the quality of the straw will be impaired. A report in the same journal of August 10 gives the following official figures of the areas sown to crops this year: Winter wheat 131,308 acres, spring wheat 4,230 acres, oats 343,038 acres, winter barley, 47,388 acres, and spring barley 12,526 acres.

Russia.—H. M. Commercial Attaché at Petrograd reports that bad weather in May had a very unfavourable effect on the early flax sowings, more particularly in the governments of Yaroslav, Tver and Smolensk. Owing chiefly to scarcity of labour—women, in the absence of men, being engaged mostly in the grain fields—the area sown shows a considerable decrease almost everywhere, amounting to from 20 to 25 per cent. An official report on the condition of cereals in Russia on June 15–28 states that cold weather and lack of rain in May interfered with the development of winter cereals, and the growth of spring cereals was somewhat retarded. Winter wheat promises a yield above the average, and its condition is good almost everywhere. In the extreme south conditions were not quite satisfactory. The condition of rye was in general above the average. Rain at the beginning of June improved spring cereals considerably, and generally speaking their condition is satisfactory. Broomhall's Corn Trade News of August 29 states that some recent reports have mentioned unseasonable weather in the central region, but that, taking the country as a whole, the harvest is a good one, and the reserves already held have been appreciably increased.

United States.—The Crop Reporting Board of the United States Department of Agriculture issued (September 8) estimates of the yield of the principal field crops, with statement of condition as follows:

Crops	Area	Per cent of 1915	Yield per acre			Yield in millions of bushels			
			1915	1916 ¹	Average 1910-14	1915	Aug. forecast 1916 ¹	Sept. forecast 1916 ¹	Average 1910-14
	000 acres	p.c.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Winter wheat.....	—	—	16.2	13.8 ²	16.3	655	455 ²	455 ²	495
Spring wheat.....	17,851	91.8	18.3	8.8	12.5	357	199	156	233
All wheat.....	50,871	84.9	16.9	12.0	14.8	1,012	654	611	738
Corn.....	108,620	100.3	28.2	24.9	25.9	3,055	2,777	2,710	2,732
Oats.....	40,599	99.6	37.8	30.3	30.5	1,540	1,274	1,231	1,158
Barley.....	7,757	104.9	32.0	23.8	24.6	237	195	184	186
Rye.....	2,729	95.6	17.2	15.3 ²	16.3	49.2	41.9 ²	41.9 ²	37.6
Buckwheat.....	819	101.7	19.6	19.3	20.6	15.8	17.1	15.8	17.0
White potatoes.....	3,632	96.6	95.5	87.7	97.8	359	364	318	361
Sweet potatoes.....	736	102.4	103.3	94.2	93.4	74.3	71.0	69.3	57.1
Flax.....	1,591	116.4	10.1	9.4	7.6	13.8	14.1	14.9	18.7
Hay (tame).....	52,504	103.2	ton	ton	ton	tons	tons	tons	tons
			1.68	1.64 ²	1.34	85.2	84.6	86.2 ²	66.2
Tobacco.....	1,398	102.2	lb.	lb.	lb.	lb.	lb.	lb.	lb.
			775.1	875.0	823.4	1,061	1,197	1,224	992

¹Interpreted from condition reports.

²Preliminary estimate.

It will be noted that the condition of spring wheat in the United States on September 1 was only 48.6 per cent of the standard, as compared with 63.4 per cent on August 1, 1916, 94.6 per cent on September 1, 1915, and 77.5 per cent the ten year average on September 1. The average yield per acre for spring wheat is given as 8.8 bushels, as compared with 18.3 bushels last year and 12.5 bushels, the five year average for 1910-14.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The following table, showing the area and estimated production of wheat, rye, barley and oats in 1916, compared with 1915, in countries of the northern hemisphere, is taken from the August issue of the Bulletin of Agricultural and Commercial Statistics:—

Area and Production of Wheat, Rye, Barley and Oats in 1916, compared with 1915.

Countries	Harvested 1915	Harvest of 1916		Harvested 1915	Estimates for 1916	
		Total figures	compared with 1915		Total figures	compared with 1915
	000 acres	000 acres	p.c.	000 bush.	000 bush.	p.c.
Wheat—						
Spain.....	10,037	10,071	100.3	139,299	152,921	109.8
Italy.....	12,502	11,762	94.1	170,542	191,067	112.0
Switzerland.....	114	124	109.0	3,957	4,053	102.4
United States (a).....	42,013	33,020	78.6	655,056	455,007	69.5
United States (b).....	19,445	17,851	91.8	356,466	199,003	55.8
British India.....	32,475	30,143	92.8	376,730	318,005	84.4
Japan.....	1,250	1,280	102.4	25,799	24,444	94.8
Tunis.....	1,112	—	—	11,023	7,165	65.0
Rye—						
Spain.....	1,820	1,856	101.9	26,102	31,437	120.4
Italy.....	294	297	100.8	4,362	5,512	120.4
Switzerland.....	66	71	107.4	2,059	2,165	105.2
United States.....	3,153	2,729	86.6	49,190	41,900	85.2
Barley—						
Spain.....	3,786	4,035	106.6	82,764	84,373	101.9
Italy.....	608	608	100.0	11,051	11,023	99.8
Switzerland.....	16	18	109.2	588	629	107.0
United States.....	7,395	7,757	104.9	237,004	194,996	82.3
Japan.....	3,239	3,109	96.0	100,863	99,821	99.0
Tunis.....	1,038	—	—	11,482	6,889	60.0
Oats—						
Spain.....	1,403	1,391	99.2	34,776	32,892	94.6
Italy.....	1,208	1,137	94.1	29,594	27,234	92.0
Switzerland.....	92	103	112.1	5,278	6,393	121.1
United States.....	40,781	40,600	99.6	1,449,756	1,199,062	82.7
Tunis.....	148	—	—	3,242	1,945	60.0

(a) Winter wheat. (b) Spring wheat.

Uruguay.—The following are the estimated yields in bushels of crops in 1915-16:—Wheat 9,867,000 (3,596,000), barley, 115,000 (40,000), oats 2,149,000 (878,000), flaxseed 391,000 (588,000). The quantities in brackets are the yields of 1914-15.

PRICES OF CANADIAN COMMODITIES, 1915.

The Annual Report for 1915 on Wholesale Prices in Canada has been issued by the Department of Labour. It is edited by Mr. C. W. Bolton, M.A., in succession to Mr. R. H. Coats, who was responsible for the five preceding reports. In the following statement is given the monthly movement of prices during 1915 in four agricultural groups and in all commodities:—

I. Monthly Movement of Prices Shown by Index Numbers in 1914 and 1915.

(Average prices 1890-1899=100.)

Month	Group I Grains and fodder		Group II Animals and meats		Group III Dairy products		Group V (a) Fruits and vegetables		All com- modities	
	1914	1915	1914	1915	1914	1915	1914	1915	1914	1915
January.....	140.9	191.7	194.2	177.9	179.9	177.5	125.2	115.1	136.5	138.9
February.....	142.8	210.9	193.8	176.5	169.6	173.4	127.8	117.1	136.6	142.5
March.....	145.8	209.3	196.2	181.0	162.9	163.1	130.4	116.2	137.0	145.4
April.....	145.4	204.0	194.8	185.4	148.6	160.7	136.8	114.7	136.7	146.4
May.....	149.8	200.2	193.1	195.2	129.5	147.0	144.4	116.2	136.3	147.4
June.....	151.3	188.3	196.6	193.6	129.6	142.2	131.6	118.6	135.3	147.4
July.....	150.4	191.2	195.7	195.0	131.3	141.2	131.2	103.5	134.6	150.2
August.....	161.3	179.4	199.9	201.3	140.5	141.6	116.7	111.4	136.3	151.5
September.....	169.9	159.5	200.1	186.2	147.1	149.5	123.7	114.0	141.3	150.3
October.....	167.1	161.1	187.6	187.3	162.6	172.1	111.6	122.2	138.7	152.4
November.....	175.9	170.0	177.9	184.9	171.5	180.6	111.3	180.6	137.5	158.7
December.....	178.5	173.3	174.2	188.3	180.1	189.6	114.2	156.6	137.6	161.1
For the year.....	156.5	186.9	192.3	187.2	154.4	161.4	118.1	110.7	136.1	148.0

The index numbers of some of the principal agricultural products, apart from their respective groups, are given for the three years 1913-1915, as follows:—

II. Index Numbers of Prices of Principal Agricultural Products, 1913-15.

(Average Prices 1890-1899=100.)

Products	1913	1914	1915	Products	1913	1914	1915
p. c.	p. c.	p. c.			p. c.	p. c.	p. c.
Wheat No. 1, northern...	114.1	129.5	166.0	Apples.....	129.7	140.0	140.7
Wheat No. 2, white Ontario.....	120.9	135.2	160.0	Cattle, western prime..	184.1	189.2	193.4
Flour, straight rollers.....	118.5	127.9	154.1	Cattle, butchers' choice steers.....	182.8	216.8	209.0
Flour, strong bakers.....	108.1	118.9	147.8	Beef, dressed hind qrs.	230.0	270.7	256.3
Flour, winter wheat pat.....	111.8	121.6	147.8	Beef, dressed fore qrs.	190.0	244.6	220.3
Flour, Man. 1st pat.....	115.2	128.8	155.7	Veal, dressed.....	176.0	210.2	172.8
Oats, No. 2, white western.....	111.7	141.4	176.7	Mutton, dressed.....	128.5	137.4	150.2
Oats, white Ontario.....	123.7	147.6	172.8	Hogs, selects.....	187.8	173.0	176.7
Oatmeal.....	123.9	149.0	177.1	Hogs, dressed.....	207.3	190.9	187.0
Barley, western.....	140.6	165.3	210.8	Bacon, dressed.....	183.7	172.5	178.3
Barley, No. 2 Ontario.....	135.3	148.8	164.8	Hams.....	171.1	164.4	152.7
Corn, No. 3 yellow.....	151.7	172.1	180.8	Pork.....	182.3	177.6	167.8
Peas, No. 2 Ontario.....	181.2	200.1	308.9	Fowls.....	165.3	181.4	198.1
Rye, No. 2 Ontario.....	123.9	139.6	201.6	Turkeys.....	211.2	222.2	216.8
Hay, Montreal.....	145.6	180.2	209.1	Butter, creamery solids	132.6	126.1	143.3
Hay, Toronto.....	132.6	150.5	172.4	Butter, dairy prints....	145.1	134.8	159.4
Straw.....	149.2	142.4	129.7	Cheese, western coloured.....	131.8	146.5	160.0
Flaxseed.....	108.0	124.8	156.5	Eggs, storage.....	176.6	192.7	187.9
Flax fibre.....	130.7	131.3	228.0	Milk at Montreal.....	143.0	149.4	148.2
Potatoes, Montreal.....	122.2	143.7	118.3	Milk at Toronto.....	149.2	151.6	151.4
Potatoes, Toronto.....	154.6	174.6	148.9	Wool, Ontario washed..	120.8	146.5	189.4
Turnips.....	106.2	132.7	99.9	Wool, Ontario unwashed.....	141.4	170.9	240.8

The rise in prices in 1915 brought the general level of wholesale prices in Canada much above any point previously indicated since 1890 by the Department's index number, which includes 272 articles, and possibly higher than at any time during the past century, though prices were very high at times between 1850 and 1872, during the Crimean War, the American Civil War and the Franco-Prussian War. The index number of all commodities for the year was 148, as against 136.1 in 1914; but in December, 1915, the number rose to 161.1.

THE WEATHER DURING AUGUST.

The Dominion Meteorological Office reports that the temperature was above the average over the Dominion, except in Alberta, Saskatchewan and the greater portion of Manitoba, and in a few isolated localities on the Nova Scotian coast. In Ontario and Quebec the positive departure was very marked, amounting generally to from 3° to 4°, and increasing over a large area of the peninsula of Ontario to 6°. The mean temperature of 72° at Toronto gave the city the warmest August on record since observations have been taken, which is from 1843. In the western provinces the negative departures varied from 1° to 4°. There was a very marked lack of rainfall throughout the Dominion, except in a few districts, these being the Lake Superior region, the extreme northern portions of Manitoba and Alberta, and at a few points in the southern parts of Alberta, Saskatchewan, and very locally at Lake Erie. British Columbia suffered severely from drought, as did nearly all the country from Lake Huron to the Maritime Provinces. Many parts of Manitoba were also very dry.

Georgian Bay Canal.—An Interim Report has been published by the Georgian Bay Canal Commission, who were appointed on March 18, 1914, to inquire into and report upon the commercial feasibility and national advantages of the proposed canal from the Georgian Bay to Montreal. The report, which has been prepared by Mr. W. Sanford Evans, Chairman of the Commission, is a statistical examination of certain general conditions of transportation bearing on the economic problem of the canal. It is illustrated by 24 diagrams on total traffic, grain shipments, wheat in elevators, freight cars, labour employed in grain traffic, wheat exports, ocean freight rates, banking statistics, etc., and it contains also an Appendix of 39 tables respecting the same subjects. The report itself, which is largely an explanation of the diagrams, consists of the following chapters: Introductory statement; freight traffic to and from Lake Superior; number, capacity, and nationality of vessels; load factors; total traffic by principal commodities; traffic to and from Lake Michigan; future development of traffic; the routing of export wheat; ocean freight rates in 1915; bank returns in Canada.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William.

Grain and Grade	Aug. 5		Aug. 12		Aug. 19		Aug. 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 25½	— 1 39	1 37½	— 1 52½	1 44½	— 1 55½	1 57½	— 1 61½
No. 2 Nor.....	1 23½	— 1 36½	1 35½	— 1 49½	1 42½	— 1 52½	1 55½	— 1 59½
No. 3 Nor.....	1 18½	— 1 32½	1 31½	— 1 45½	1 37	— 1 48	1 51½	— 1 55½
No. 4.....	1 14½	— 1 28½	1 27½	— 1 41½	1 29½	— 1 41½	1 44½	— 1 48½
No. 5.....	1 09½	— 1 22½	1 21½	— 1 35½	1 25½	— 1 36½	1 38½	— 1 42½
No. 6.....	1 01½	— 1 13	—	1 23½	1 14½	— 1 23½	1 28½	— 1 32½
Feed.....	0 97½	— 1 07½	—	1 18½	1 09½	— 1 18½	1 21½	— 1 25½
Oats—								
No. 2 C.W.....	0 44½	— 0 48½	0 48½	— 0 50½	0 48½	— 0 50½	0 50½	— 0 51½
No. 3 C.W.....	0 43	— 0 47½	0 47½	— 0 49½	0 46½	— 0 49½	0 49½	— 0 51½
No. 1 Feed Ex.....	0 42½	— 0 47½	0 47½	— 0 49½	0 46½	— 0 49½	0 49½	— 0 51½
No. 1 Feed.....	0 42	— 0 46½	0 47	— 0 49½	0 45½	— 0 49	0 49½	— 0 50½
No. 2 Feed.....	0 42	— 0 46½	0 46½	— 0 48½	0 45	— 0 48½	0 48½	— 0 49½
Barley—								
No. 3 C.W.....	0 72	— 0 77	0 77	— 0 81	0 78	— 0 80	0 79	— 0 92½
No. 4 C.W.....	0 67½	— 0 73	0 73	— 0 77	0 74	— 0 76	0 75	— 0 78½
Rejected.....	0 61	— 0 65	0 65	— 0 68½	0 68	— 0 70	0 69	— 0 72½
Feed.....	0 61	— 0 65	0 65	— 0 68½	0 68	— 0 70	0 69	— 0 72½
Flax—								
No. 1 N.W.C.....	1 83½	— 1 91½	1 86½	— 2 02	1 89½	— 1 97	1 91½	— 1 99½
No. 2 C.W.....	1 80½	— 1 86½	—	1 99	1 86½	— 1 93½	1 88½	— 1 96

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	May		June		July		August	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 22	— 1 24	1 06	— 1 14	1 09	— 1 36½	1 29	— 1 65
Chicago.....	1 22½	— 1 22½	1 01½	— 1 07½	1 04	— 1 28½	1 26	— 1 58½
New York (f.o.b. afloat).....	1 29	— 1 31½	1 13½	— 1 14½	1 13½	— 1 35½	1 33	— 1 66
Corn, No. 2, Mixed—								
St. Louis.....	0 76	—	0 70	— 0 76½	0 75½	— 0 82½	0 80½	— 0 87½
New York (f.o.b. afloat).....	0 86	— 0 86½	0 79½	— 0 90½	0 88	— 0 93½	0 93	— 1 01
Corn, No. 2—								
Chicago.....	0 77½	— 0 78	0 69½	— 0 78½	0 78	— 0 84½	0 82	— 0 88½
Oats, No. 2—								
St. Louis.....	0 43½	—	0 37	— 0 41	0 38	— 0 41½	0 38	— 0 48
Chicago.....	0 45½	— 0 46	0 37½	— 0 41½	0 38½	— 0 42	0 41	— 0 47
Rye, No. 2—								
Chicago.....	0 97	— 0 97½	0 97	— 0 99½	0 94	— 1 01	1 00	— 1 26½

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	Aug. 7		Aug. 14		Aug. 21		Aug. 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	1 94½	— 1 97½	2 12½	— 2 15½	2 00½	— 2 03½	2 15½	— 2 21½
“ No. 2.....	1 91½	— 1 94½	2 09½	— 2 12½	1 97½	— 2 00½	2 12½	— 2 15½
“ No. 3.....	1 88½	— 1 91½	2 06½	— 2 09½	—	—	—	—
American spring.....	—	—	2 09½	— 2 12½	2 00½	— 2 03½	2 18½	— 2 21½
“ hard winter, old.....	1 71	— 1 74	1 94½	— 1 97½	1 94½	— 1 97½	2 06½	— 2 09½
“ hard winter, new.....	1 79½	— 1 82½	1 97½	— 2 00½	1 97½	— 2 00½	2 09½	— 2 12½
“ red winter, new.....	1 79½	— 1 82½	1 97½	— 2 00½	1 97½	— 2 00½	2 06½	— 2 09½
Californian.....	1 84	— 1 86½	—	—	—	—	—	—
Argentine.....	1 82½	— 1 85½	—	—	—	—	—	—
Australian.....	1 94½	— 2 01	2 16	— 2 19	2 07	— 2 10	2 22	— 2 25
Oats (per bush.)—								
Canadian.....	0 89½	— 0 91½	0 89½	— 0 91½	0 89½	— 0 91½	0 90½	— 0 93
American.....	0 85½	— 0 88	0 85½	— 0 88	0 85½	— 0 88	0 86½	— 0 89½
Chilian.....	0 91½	— 0 94½	0 91½	— 0 94½	0 91½	— 0 94½	0 93	— 0 95½
Flour (per 280 lb.)—								
Canadian, good.....	11 18	— 11 42	12 15	— 12 41	11 91	— 12 15	12 65	— 12 89
“ first bakers.....	10 94	— 11 18	11 91	— 12 15	11 66	— 11 91	12 41	— 12 65
“ common.....	10 21	— 10 45	11 18	— 11 42	10 94	— 11 18	11 66	— 11 91
“ soft winter.....	10 21	— 10 69	11 18	— 11 36	10 94	— 11 42	11 66	— 12 15
American, spring, good.....	11 42	— 11 66	12 41	— 12 35	12 15	— 12 41	12 89	— 13 14
“ spring, common.....	10 45	— 10 69	11 42	— 11 36	11 18	— 11 42	11 91	— 12 15
“ winter, good.....	11 18	— 11 42	12 15	— 12 41	11 91	— 12 15	13 14	— 13 38
“ winter, common.....	10 69	— 10 94	11 66	— 11 91	11 42	— 11 66	12 15	— 12 41
“ winter, inferior.....	9 97	— 10 21	10 94	— 11 18	10 69	— 10 94	9 74	— 11 91
Californian.....	11 18	— 11 42	12 15	— 12 41	11 91	— 12 15	12 15	— 13 14
Australian.....	11 18	— 11 42	12 15	— 12 41	11 66	— 11 91	11 91	— 12 15
Japanese.....	10 21	— 10 69	—	—	—	—	—	—

LIVERPOOL.

Description and Market	Aug. 1		Aug. 8		Aug. 15		Aug. 22		Aug. 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1.....	1 77	— 1 77½	1 96	— 1 96½	2 00½	—	2 19	— 2 20	2 10½	— 2 11½
“ No. 2.....	—	—	—	—	—	—	2 17½	— 2 18½	2 09½	— 2 10½
“ No. 3.....	—	—	—	—	—	—	2 15½	— 2 16	—	—
Man. sample.....	—	—	1 89½	— 1 93½	1 96	— 1 98½	—	—	2 06½	—
Canadian white.....	—	—	1 94½	— 1 95½	—	—	2 22½	—	—	—
No. 2 hard winter.....	—	—	—	—	1 99½	—	—	—	2 06½	— 2 08
Durum.....	—	—	—	—	—	—	—	—	2 06½	— 2 08
Ch. white Karachi.....	—	—	—	—	—	—	—	—	2 13	— 2 14½
Australian.....	1 90½	— 1 91	2 04½	—	—	—	—	—	—	—
Oats (per bush.)—										
Chilian black.....	0 84½	—	0 84½	—	0 84½	—	—	—	0 87½	—
“ grey.....	—	—	—	—	—	—	—	—	0 82½	—
“ tawny.....	0 84½	— 0 86	0 84½	— 0 86	0 82	— 0 82½	0 80½	— 0 81½	0 79½	— 0 80½
Canadian.....	0 86	— 0 86½	0 86	— 0 86½	0 86	— 0 86½	0 85	— 0 86	0 85	— 0 86
Flour (per 180 lb.)—										
Canada spring patents.....	10 81	— 11 06	11 78	— 12 03	12 53	— 12 77	13 26	— 13 50	12 91	— 13 26
“ soft winter pat.....	10 94	— 11 18	11 91	— 12 15	12 65	— 12 89	13 26	— 13 50	13 02	— 13 26
Kansas patents.....	10 94	— 11 18	11 91	— 12 15	12 41	— 12 65	13 14	— 13 38	12 89	— 13 14
Oatmeal (per 240 lb.)—										
Canadian rolled oats.....	9 86	— 9 97	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33	10 21	— 10 33
“ middle cut.....	9 49	— 9 61	9 61	— 9 74	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ fine cut.....	9 49	— 9 61	9 61	— 9 74	9 86	— 9 97	9 86	— 9 97	9 86	— 9 97
“ pinhead.....	9 49	— 9 61	9 61	— 9 74	9 97	— 10 09	9 97	— 10 09	9 97	— 10 09

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
August 5.....	55 1	1-675	46 1	1-346	32 9	0-868
" 12.....	56 7	1-721	46 11	1-370	31 2	0-819
" 19.....	58 1	1-767	48 0	1-402	30 8	0-806
" 26.....	59 0	1-795	47 1	1-375	31 6	0-827
Average.....	57 2	1-740	47 0	1-373	31 6	0-827

V. Average Prices of Imported Meat at British Markets, 1916.

FRESH MEATS (per cwt. of 100 lb.).

Description and Market	Aug. 2		Aug. 9		Aug. 16		Aug. 23		Aug. 30	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—										
Birmingham.....	—	—	20 28	15 21	—	—	—	—	17 74	14 70
Liverpool.....	—	—	—	—	—	—	—	—	17 74	14 70
Manchester.....	—	—	—	—	—	—	—	—	17 74	14 70
Edinburgh.....	17 20	15 20	18 30	15 70	18 30	15 70	17 20	14 20	17 70	14 20
Argentine chilled—										
Birmingham.....	20 28	14 70	21 29	15 72	21 29	14 70	19 77	14 70	20 28	15 21
Leeds.....	20 28	14 70	21 29	15 21	20 78	14 70	19 77	14 19	19 77	14 70
Liverpool.....	20 28	14 19	21 80	15 72	20 78	14 70	20 28	14 19	19 77	14 70
London.....	20 28	14 19	22 30	15 74	21 29	14 70	19 77	13 94	19 77	14 70
Manchester.....	20 28	14 19	21 80	15 74	20 78	14 70	20 28	14 19	19 77	14 70
Dundee.....	—	15 70	—	—	—	—	—	—	—	—
Edinburgh.....	20 30	14 75	21 80	15 70	21 30	15 20	20 80	13 70	20 30	15 70
Australian frozen—										
Liverpool.....	—	—	—	—	—	—	—	—	15 21	—
Manchester.....	—	—	—	—	—	—	—	—	15 21	—

GREEN BACON (per cwt. of 100 lb.).

Description and Market	Aug. 2		Aug. 9		Aug. 16		Aug. 23		Aug. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—										
Bristol.....	22 98	22 32	24 29	23 42	24 29	23 64	24 29	23 42	22 98	22 32
Liverpool.....	22 76	22 10	23 42	22 76	24 08	23 42	23 42	22 76	22 76	22 10
London.....	22 98	22 10	23 42	22 54	24 29	23 42	23 42	22 54	22 98	22 10
Glasgow.....	22 98	—	23 42	—	24 73	—	26 05	25 61	25 61	—
Danish sides—										
Bristol.....	25 17	24 51	26 72	25 39	26 72	25 39	26 72	25 39	25 17	24 51
Liverpool.....	24 95	24 51	25 39	24 73	26 05	25 39	25 39	24 73	24 95	24 51
London.....	25 17	24 29	25 61	24 73	26 50	25 61	25 61	24 73	25 17	24 29
Glasgow.....	24 29	—	24 73	—	26 05	—	26 72	—	27 16	—

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended September 30, 1916.

In this report the Census and Statistics Office publishes the second or provisional annual estimate of the yield of the principal grain crops of Canada in 1916, a statement of the quality of these crops at the time of harvesting and the condition of root crops on September 30.

YIELD OF PRINCIPAL GRAIN CROPS.

In general, the reports of correspondents on September 30 confirm those of a month ago, but the average yields per acre are for most crops somewhat less. The reports also indicate that the areas estimated to be unproductive of grain are if anything larger than those already deducted; but pending further inquiries no change has been made in the harvested areas as reported last month. The results now provisionally estimated are a total yield of wheat of 159,123,000 bushels from a harvested area of 10,085,300 acres, a yield per acre of 15.78 bushels, as compared with 29 bushels last year and 15.67 bushels in 1914. The total yield of oats is now placed at 338,469,000 bushels from 9,795,000 acres, a yield per acre of 34.55 bushels, as against 45.76 bushels last year and 31.12 bushels in 1914. The yield of barley is 32,299,000 bushels from 1,328,800 acres, or 24.31 bushels per acre and of rye 2,058,500 bushels from 101,420 acres, or 20.30 bushels per acre. For the three prairie provinces the estimated yield of wheat is 138,542,000 bushels, of oats 232,409,000 bushels, of rye 659,000 bushels, of barley 22,862,000 bushels and of flaxseed 7,707,000 bushels. The yields of remaining crops are reported for the first time this year as follows: Peas 2,166,000 bushels from 150,280 acres, beans 541,400 bushels from 32,500 acres, buckwheat 6,720,000 bushels from 341,500 acres, mixed grains 10,333,000 bushels from 397,770 acres and corn for husking 6,271,000 bushels from 173,000 acres. For peas, beans, buckwheat, mixed grains and corn for husking these acreages represent the areas actually harvested after deduction from the areas sown in Ontario and Quebec of proportions estimated to have been entirely unproductive through drought.

QUALITY OF GRAIN CROPS.

Correspondents were asked to report on the quality of the grain crops at the time of harvest, as measured against a standard of 100, representing grain well headed, well filled, well saved and unaffected to any appreciable extent by frost, rust, smut, etc. The average results for the whole of Canada are as follows: Fall wheat

78, spring wheat 68, all wheat 70, oats 75, barley 72, rye 84, peas 66, beans 74, buckwheat 71, mixed grains 74, flax 76 and corn for husking 67. In Manitoba the quality of spring wheat is 44 per cent, in Saskatchewan it is 60 and in Alberta it is 73. The estimates of quality are high in the Maritime provinces and in British Columbia, the average for Canada being reduced by rust in Manitoba and Saskatchewan, and by drought in Quebec and Ontario.

CONDITION OF ROOT AND FODDER CROPS.

The condition of root and fodder crops is about the same as a month ago, the average points in percentage of a standard or full crop ranging for all Canada from 71 for potatoes and sugar beets to 77 for fodder corn.

Census and Statistics Office,
Ottawa, October 14, 1916.

ERNEST H. GODFREY,
Editor.

I. Provisional Estimate of the Yield of Cereal Crops, September 30, 1916, compared with the Final Estimate of 1915.

Field crops	1915	1916	1915	1916	1915	1916
	acres	acres	bush. per acre	bush. per acre	bush.	bush.
Canada—						
Fall wheat.....	1,208,700	1,042,200	29.41	22.54	35,551,600	23,491,000
Spring wheat.....	11,777,700	9,043,100	28.93	15.00	340,752,000	135,632,000
All wheat.....	12,986,400	10,085,300	28.98	15.78	376,303,600	159,123,000
Oats.....	11,365,000	9,795,000	45.76	34.55	520,103,000	338,469,000
Barley.....	1,509,350	1,328,800	35.33	24.31	53,331,300	32,299,000
Rye.....	112,300	101,420	21.32	20.30	2,394,100	2,058,500
Peas.....	196,210	150,280	17.73	14.41	3,478,850	2,160,000
Beans.....	43,310	32,500	16.70	16.66	723,400	541,400
Buckwheat.....	343,800	341,500	22.88	19.68	7,865,900	6,720,000
Flax.....	806,600	710,000	13.18	10.93	10,628,000	7,759,500
Mixed grains.....	466,800	397,770	37.54	25.98	17,524,100	10,333,000
Corn for husking.....	253,300	173,000	56.72	36.25	14,368,000	6,271,000
P. E. Island—						
Spring wheat.....	34,400	34,500	19.00	17.25	653,600	595,000
Oats.....	196,000	199,000	34.86	36.75	6,832,500	7,313,000
Barley.....	3,700	3,600	28.88	29.75	106,800	107,000
Peas.....	70	60	15.75	19.00	1,100	1,100
Buckwheat.....	2,600	2,500	29.00	30.00	75,400	75,000
Mixed grains.....	8,000	8,000	38.65	40.13	309,200	321,000
Nova Scotia—						
Spring wheat.....	13,300	13,400	18.57	20.80	247,000	279,000
Oats.....	112,000	116,000	31.14	37.80	3,487,700	4,385,000
Barley.....	4,900	4,700	26.20	27.50	128,400	129,000
Rye.....	300	320	15.00	23.33	4,500	7,500
Peas.....	190	180	18.66	19.00	3,550	3,600
Beans.....	840	850	17.50	16.90	14,700	14,400
Buckwheat.....	10,200	10,000	21.72	24.00	221,500	240,000
Mixed grains.....	4,100	4,100	34.16	37.00	140,000	152,000
New Brunswick—						
Spring wheat.....	14,000	14,000	19.09	18.68	267,000	262,000
Oats.....	201,000	198,000	27.66	32.41	5,559,600	6,417,000
Barley.....	2,100	1,900	22.96	27.31	48,000	52,000
Peas.....	420	400	17.08	24.85	6,700	1,000
Beans.....	270	250	21.37	23.80	5,700	6,000
Buckwheat.....	58,000	53,000	22.68	24.50	1,315,000	1,299,000
Mixed grains.....	900	870	31.50	40.50	28,400	27,000

I. Provisional Estimate of the Yield of Cereal Crops, September 30, 1916, compared with the Final Estimate of 1915.

Field crops	1915	1916	1915	1916	1915	1916
	acres	acres	bush. per acre	bush. per acre	bush.	bush.
Quebec—						
Spring wheat.....	71,000	67,600	19.88	14.54	1,411,000	983,000
Oats.....	1,400,000	1,138,000	30.13	21.60	42,182,000	24,580,000
Barley.....	85,000	77,400	26.53	19.57	2,255,000	1,515,000
Rye.....	8,700	8,300	16.71	16.58	145,000	138,000
Peas.....	24,400	21,600	16.56	14.33	404,000	310,000
Beans.....	4,700	4,400	21.89	17.41	103,000	77,000
Buckwheat.....	104,000	101,000	24.69	21.45	2,568,000	2,166,000
Flax.....	600	500	11.89	9.00	7,000	4,500
Mixed grains.....	101,000	91,000	29.67	22.90	2,997,000	2,084,000
Corn for husking.....	16,300	13,000	31.17	22.69	508,000	295,000
Ontario—						
Fall wheat.....	972,000	774,800	28.34	21.14	27,546,000	16,379,000
Spring wheat.....	121,000	97,000	22.36	16.39	2,706,000	1,590,000
All wheat.....	1,093,000	871,800	27.67	20.61	30,252,000	17,969,000
Oats.....	3,095,000	2,410,000	39.68	24.93	122,810,000	60,081,000
Barley.....	449,000	340,000	34.23	22.15	15,369,000	7,531,000
Rye.....	78,000	69,000	18.98	18.17	1,551,000	1,254,000
Peas.....	169,000	126,000	17.79	14.22	3,007,000	1,792,000
Beans.....	37,500	27,000	16.00	16.44	600,000	444,000
Buckwheat.....	109,000	175,000	21.81	16.80	3,686,000	2,940,000
Flax.....	5,000	4,500	12.38	10.75	62,000	48,000
Mixed grains.....	345,000	286,000	39.91	25.95	13,769,000	7,422,000
Corn for husking.....	237,000	160,000	58.48	37.35	13,860,000	5,976,000
Manitoba—						
Fall wheat.....	10,900	9,400	33.30	26.80	363,000	252,000
Spring wheat.....	3,332,000	2,331,000	28.83	10.50	96,062,000	24,497,000
All wheat.....	3,342,900	2,342,400	28.84	10.57	96,425,000	24,749,000
Oats.....	1,441,000	1,363,000	48.21	35.50	69,471,000	48,387,000
Barley.....	490,000	475,000	36.25	22.00	17,763,000	10,450,000
Rye.....	5,800	6,200	26.74	24.75	155,000	153,000
Flax.....	34,000	27,000	11.00	10.64	374,000	287,000
Mixed grains.....	1,550	1,400	32.50	37.33	50,000	52,000
Saskatchewan—						
Fall wheat.....	4,100	4,100	30.76	27.55	126,000	113,000
Spring wheat.....	6,834,000	5,248,000	28.54	14.87	195,042,000	78,038,000
All wheat.....	6,838,100	5,252,100	28.54	14.88	195,168,000	78,151,000
Oats.....	2,937,000	2,657,000	53.67	41.17	157,628,000	109,389,000
Barley.....	287,000	262,500	36.83	27.96	10,570,200	7,340,000
Rye.....	2,700	3,200	28.00	30.80	75,600	99,000
Peas.....	400	300	23.00	32.66	9,200	12,000
Flax.....	607,000	607,000	13.00	10.78	9,061,000	6,543,000
Mixed grains.....	1,950	2,000	30.00	46.66	58,500	93,000
Alberta—						
Fall wheat.....	215,700	247,700	33.92	26.44	7,316,000	6,549,000
Spring wheat.....	1,348,000	1,226,000	32.67	23.73	44,039,000	29,091,000
All wheat.....	1,563,700	1,473,700	32.84	24.18	51,355,000	35,642,000
Oats.....	1,912,000	1,653,000	56.35	45.15	107,741,000	74,633,000
Barley.....	185,000	161,000	37.75	31.50	6,984,000	5,072,000
Rye.....	16,800	14,400	28.61	28.29	483,000	407,000
Peas.....	430	380	20.00	16.67	8,600	6,300
Flax.....	70,000	71,000	16.05	12.35	1,124,000	877,000
Mixed grains.....	1,700	1,800	39.17	36.00	67,000	65,000
British Columbia—						
Fall wheat.....	6,000	6,200	33.44	32.00	200,600	198,000
Spring wheat.....	10,000	9,600	32.43	30.78	324,400	295,000
All wheat.....	16,000	15,800	32.80	31.20	525,000	493,000
Oats.....	71,000	61,000	61.84	53.83	4,390,600	3,284,000
Barley.....	2,650	2,700	40.36	38.12	106,900	103,000
Peas.....	1,300	1,300	29.75	30.50	38,700	40,000
Mixed grains.....	2,600	2,600	40.00	45.00	104,000	117,000

II. Comparative Quality of Cereal Crops, September 30, 1914-16.

NOTE.—100=Grain well headed, well filled, well saved and unaffected to any appreciable extent by frost, rain, smut, etc.

Field crops	Sept. 30 1914	Sept. 30 1915	Sept. 30 1916	Field crops	Sept. 30 1914	Sept. 30 1915	Sept. 30 1916
	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.
Canada—				Ontario—			
Fall wheat.....	75	91	78	Fall wheat.....	75	89	78
Spring wheat.....	81	93	68	Spring wheat.....	88	89	67
All wheat.....	78	92	70	All wheat.....	82	89	74
Oats.....	79	90	75	Oats.....	85	89	60
Barley.....	77	91	72	Barley.....	86	91	63
Rye.....	82	93	84	Rye.....	82	92	82
Peas.....	75	80	66	Peas.....	66	70	55
Beans.....	82	83	74	Beans.....	75	65	57
Buckwheat.....	81	79	71	Buckwheat.....	80	81	62
Mixed grains.....	90	91	74	Mixed grains.....	89	91	65
Flax.....	64	84	76	Flax.....	85	85	72
Corn for husking.....	81	84	67	Corn for husking.....	84	86	52
P. E. Island—				Manitoba—			
Spring wheat.....	100	93	78	Fall wheat.....	56	85	87
Oats.....	98	88	92	Spring wheat.....	73	93	44
Barley.....	95	90	91	All wheat.....	65	89	45
Peas.....	93	83	84	Oats.....	66	88	71
Beans.....	93	84	80	Barley.....	54	86	60
Buckwheat.....	88	86	87	Rye.....	65	88	90
Mixed grains.....	99	92	96	Mixed grains.....	61	98	79
Flax.....	100	97	88	Flax.....	55	69	72
Nova Scotia—				Saskatchewan—			
Spring wheat.....	94	89	90	Fall wheat.....	66	98	78
Oats.....	95	92	92	Spring wheat.....	64	96	60
Barley.....	91	89	86	All wheat.....	65	97	60
Rye.....	90	98	100	Oats.....	51	92	81
Peas.....	87	85	93	Barley.....	48	92	78
Beans.....	85	86	80	Rye.....	58	100	100
Buckwheat.....	88	84	83	Peas.....	63	94	93
Mixed grains.....	96	90	92	Beans.....	65	88	100
Flax.....	92	100	-	Flax.....	51	85	78
New Brunswick—				Alberta—			
Spring wheat.....	94	91	88	Fall wheat.....	71	94	80
Oats.....	97	89	92	Spring wheat.....	78	97	73
Barley.....	94	87	93	All wheat.....	74	96	74
Peas.....	91	86	88	Oats.....	74	89	82
Beans.....	84	83	86	Barley.....	74	91	76
Buckwheat.....	86	68	78	Rye.....	83	97	89
Mixed grains.....	93	82	93	Peas.....	59	90	72
Quebec—				Mixed grains.....	77	97	85
Spring wheat.....	90	92	72	Flax.....	65	94	82
Oats.....	92	92	70	British Columbia—			
Barley.....	90	92	71	Fall wheat.....	82	96	90
Rye.....	88	90	78	Spring wheat.....	83	92	91
Peas.....	81	85	63	All wheat.....	82	94	91
Beans.....	86	88	77	Oats.....	84	94	91
Buckwheat.....	78	78	70	Barley.....	76	90	91
Mixed grains.....	91	93	72	Rye.....	90	98	92
Flax.....	81	84	71	Peas.....	94	85	91
Corn for husking.....	79	83	74	Mixed grains.....	88	91	92

III. Comparative Condition of Fodder and Root Crops for the Months of July, August and September, 1916.

NOTE.—100=Standard or full crop.

Field crops	July 31 1916	Aug. 31 1916	Sept. 30 1916	Field crops	July 31 1916	Aug. 31 1916	Sept. 30 1916
	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.
Canada—				Ontario—			
Potatoes.....	84	72	71	Potatoes.....	63	38	37
Turnips.....	87	77	75	Turnips.....	73	55	47
Mangolds, carrots, etc.	85	78	76	Mangolds, carrots, etc.	72	61	52
Sugar beets.....	82	76	71	Sugar beets.....	71	59	49
Corn for fodder.....	79	77	77	Corn for fodder.....	70	64	62
P. E. Island—				Alfalfa.....	98	97	85
Potatoes.....	98	96	97	Manitoba—			
Turnips.....	97	87	87	Potatoes.....	92	84	85
Mangolds, carrots, etc.	97	93	92	Turnips.....	93	86	85
Sugar beets.....	93	88	81	Mangolds, carrots, etc.	91	89	87
Corn for fodder.....	85	88	93	Sugar beets.....	—	87	82
Alfalfa.....	—	100	—	Corn for fodder.....	92	96	90
Nova Scotia—				Alfalfa.....	95	94	91
Potatoes.....	96	94	70	Saskatchewan—			
Turnips.....	90	90	78	Potatoes.....	95	90	91
Mangolds, carrots, etc.	95	88	84	Turnips.....	92	88	91
Sugar beets.....	95	91	88	Mangolds, carrots, etc.	90	92	92
Corn for fodder.....	91	91	88	Sugar beets.....	88	90	89
Alfalfa.....	87	105	100	Corn for fodder.....	93	88	88
New Brunswick—				Alfalfa.....	93	96	97
Potatoes.....	94	84	79	Alberta—			
Turnips.....	96	89	85	Potatoes.....	92	85	86
Mangolds, carrots, etc.	95	90	93	Turnips.....	93	91	89
Sugar beets.....	92	98	86	Mangolds, carrots, etc.	94	93	90
Corn for fodder.....	88	88	92	Sugar beets.....	93	100	95
Alfalfa.....	93	62	—	Corn for fodder.....	91	89	94
Quebec—				Alfalfa.....	91	84	92
Potatoes.....	80	65	61	British Columbia—			
Turnips.....	88	77	76	Potatoes.....	90	87	84
Mangolds, carrots, etc.	87	77	77	Turnips.....	86	84	85
Sugar beets.....	85	80	75	Mangolds, carrots, etc.	90	88	88
Corn for fodder.....	80	82	82	Sugar beets.....	88	86	88
Alfalfa.....	92	92	77	Corn for fodder.....	—	—	82
				Alfalfa.....	82	87	88

IV. Harvested Area and Provisional Estimate of the Yield of Cereal Crops and Flax in Manitoba, Saskatchewan and Alberta, 1916.

Crops	Area	Yield per acre	Total yield
	acres	bush.	bush.
Fall wheat.....	261,200	26.47	6,914,000
Spring wheat.....	8,807,000	14.95	131,628,000
All wheat.....	9,068,200	15.23	138,542,000
Oats.....	5,673,000	40.97	232,409,000
Barley.....	898,500	25.44	22,862,000
Rye.....	23,800	27.69	659,000
Flax.....	705,000	10.93	7,707,000

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—The weather during the month has been exceptionally fine and warm, the latter half proving ideal for harvesting. Owing to the scarcity of labour not much threshing has been done. Potato digging has begun, and the crop promises to be very good, few complaints of rot having been reported.

Nova Scotia.—The warm, dry weather of the month has ripened the oats too quickly and caused a decrease in weight, but has afforded ideal conditions for the harvesting and saving of all crops. Little or no threshing has been done. Potatoes and other roots, although affected by the dry weather, will be a good crop. Lack of water is severely felt in many localities.

New Brunswick.—In northern New Brunswick the weather for the most part was dull and wet, while near the Bay of Fundy it was comparatively fine and warm. Little threshing has been done, but good returns are expected. Potatoes will be a good crop, only a small percentage showing signs of rot.

Quebec.—The weather during the month was warm with frequent rainfalls, which caused grain to suffer from dampness after being cut and delayed the taking of it in. Little threshing has been done, but as stated a month ago, the yield and quality, as a result of drought, are poor. There have been no frosts, and as a result ensilage corn has continued to grow. Nevertheless it is short in yield, and few silos are full. The wet weather has caused potatoes to rot, and they will be a poor crop.

Ontario.—Continued dry weather throughout the province has afforded favourable harvesting conditions, except in a few northern localities, where continuous rains have rotted the straw and caused the grain to sprout. Generally speaking, reports on the crops confirm those of a month ago, namely, that as a result of continued drought the yield and quality of all grains are poor. By the end of the month little threshing had been done. In some cases owing to the poor quality of the grain cattle are being turned into the fields, as pastures are drying up. Frost on the 19th and again later in the month injured corn and buckwheat and checked the further growth of roots. Potatoes are a poor crop.

Manitoba.—Although threshing has been delayed by wet weather, all reports state that rust has greatly reduced the yield and quality of all crops, rendering them light in weight and very low in grade. Some reports state that fields of wheat were not worth threshing and were stacked for feed. Oats and early sown barley were not affected to so great an extent by rust, and are giving better returns, although light in weight. Corn and roots give promise of a good crop.

Saskatchewan.—Owing to the wet weather and scarcity of labour, threshing is not very well advanced. In the southern part of the province, however, as the result of rust, wheat, especially Red Fife, is grading low, a large percentage being fit only for feed; but in the northern districts where the attack was not so extensive

the yields and quality are higher. No appreciable damage from frost to oats or barley is reported; but corn and flax are said to have suffered considerably. Potatoes are giving good yields. Practically no fall ploughing has been done.

Alberta.—In northern Alberta, owing to the cold, wet weather, very little threshing has been done, but all reports state that wheat and barley have greatly suffered from frost and hail. Oats, which were not affected by frost, are an average crop, although having been cut green, their grade is slightly lowered. In fields which were haled out in July there has been a very good aftergrowth which is being cut for green feed. In the southern part of the province much more favourable conditions prevail. Threshing is well under way, and all grain is said to be very good both as to yield and quality. Potatoes and other roots, where they have not suffered from frost, are giving good yields.

British Columbia.—The warm dry weather of the month has been very favourable for harvesting, but little threshing has been done. In many cases oats were cut green and cured as winter feed for stock. Corn, potatoes and other roots are good, both as to yield and quality.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during September, while ranging a little lower than the year before, are about the same as the average for the last six years, the highest being 83, the lowest 36, and the mean 58·83, while for the corresponding period of 1915 the extremes were 88·7 and 35, and the mean temperature 61·07. The precipitation totals 3·15 inches, distributed over seventeen different days, 0·89 of an inch falling on the 29th; while a year ago the September figures were 2·87 inches, rain falling on fifteen different days. The sunshine averages only 5·3 hours a day, against 7·24 hours a day in 1915.

At the Experimental Farm, the Indian corn has been cut and got into silo during the latter part of the month, the yield being considerably less than usual, viz., about twelve tons per acre, but the crop is of uniformly good quality. Field roots have made slow progress and promise to be a light crop. Potatoes, however, are likely to yield better than expected earlier in the season.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—“September was a remarkably fine, bright month. Light showers of rain fell on nine different days. All cereals matured very rapidly during the dry, hot weather. The grain did not fill as well as we anticipated, and considerable damage was done to the wheat by fungus diseases. A fusarium alone destroyed fully ten per cent of the heads before they matured. The grain crop was all harvested in excellent condition by the middle of the month. At the Experimental Station threshing has been completed, and the returns, though

not quite up to our expectation of August, are exceptionally good. On Rotation "A" we threshed 50 bushels of Charlottetown No. 80 barley, from Section 1, and 72 bushels of Banner oats from Section 3. These sections have an area of one acre each. The early potatoes are yielding well, the tubers being large and of excellent quality. The late potatoes, roots and corn are most promising. All vegetables have given excellent returns. A much larger proportion of garden corn and of tomatoes has ripened than in any other year since the Station was established. There is a medium crop of well-coloured fruit."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The month of September was unusually fine, and all grain was harvested in fine condition. Rain was recorded here on eight days and totalled 1.74 inch. The absence of abundant rain has very materially lessened the growth on pastures; while the after-grass on hay lands is very light. Root crops are likely to be light also on account of light rainfall. The mean temperature for the month was 58.93 degrees, as compared with 57.25 for 1915, and 57.6 for 1914. This high temperature has materially assisted in developing a corn crop of exceptional quality, which was harvested for ensilage during the last three days of the month. The sunshine recorded for the month was 174.6 hours, as compared with 194 for 1915 and 173.8 for 1914. The season throughout has been a favourable one for corn. No frosts occurred at this Station during the month. Frost damage was noticeable in some sections in the Valley after the nights of the 3rd, 10th and 19th. The grain crop on the whole has been a good one, and late-sown grain had good conditions for ripening. The weather has favoured late planted potatoes, and it would seem that a crop above the average will be harvested. A rot of the tubers in the ground is reported from some sections, particularly on the heavier soils and, as there has been very little blight, the rot is evidently due to a combination of moisture and heat conditions during the second week in September following a comparatively dry period from the middle of August to that time. The month has been favourable for gathering the Gravenstein crop of apples which have all been picked. The fruit has coloured well, is not large in size, but is reasonably free from disease. Some steers for feeding have been purchased. The large hay crop is favourable for farmers holding their unfinished beef stock, and prices generally rate about 6½ cents per pound live weight for stock for feeding."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"September has been an ideal one for harvesting, the weather being bright and clear, with but very little rain. The total precipitation during the month was only 1.64 inch, thus permitting over 90 per cent. of the grain to be harvested in excellent condition. A little more rainfall would have been very beneficial to the aftermath, the ground being so exceptionally dry that it came on very poorly on most land. The past season has been remarkably good for corn growing. The five acres at this farm were harvested during the past month and

yielded 75 tons, or 15 tons per acre. All varieties of roots and vegetables have made splendid growth during the past month, and on most fields will be a good average crop, notwithstanding the setback they got during the early part of the season. The fruit is now being harvested at this farm, and a ready market is being found, apples bringing \$2 per barrel, tree run. The crop is very light and considerable spot is in evidence. There is also a ready market for all classes of vegetables at good prices. The price of hay is somewhat lower than last year, loose hay selling at about \$10 and pressed hay on the track selling at from \$11 to \$12. The price of oats remains very high, Eastern oats selling for 62 and 63 cents, and Western oats selling from 67 to 68 cents. Potatoes are bringing a good price ranging from 60 to 70 cents per bushel. All other feed stuffs are very high, oilcake and cotton seed being the highest for some time. The work engaged in at this farm, other than harvesting and caring for stock, has included ploughing, threshing, picking fruit, repairing and remodelling old barns and clearing new land. Up to date some 35 acres have been chopped and cleared and stumped during the past season, this work being done by prisoners of war. We have also put up an exhibit at several of the fall fairs and exhibitions."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "September gave very favourable weather for harvest and crop growth. While the mean temperature was 56.8 degrees against 58 degrees in 1915, there was frost last year and none this. This average mean temperature for 42 years for September at Fredericton has been 56 degrees. There was more or less cloudy weather, the hours of sunshine totalling only 157.25 against 180 last year, and a 42-year average of 180. The precipitation was, however, below normal with 2.95 inches, the 42-year average showing 3.4 inches. There was an abundance of moisture on the Station land for potatoes, corn and roots, pastures kept up well, and live stock, consequently, is in good condition and milk-flow fairly well maintained. Corn has done better than for several years, and a number of flint varieties have ripened good seed. The potato crop is estimated at about 75 per cent of an average yield with a little less than the average acreage. In a few sections some rot has appeared, but this is not at all general, and on the Station, with over one hundred different varieties harvested, we have yet to find the first tuber showing any disease whatever."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "The temperature during September has been normal, the highest being 89.4, the lowest 35.2, and the mean 57.1; while in the corresponding period of last year, the highest was 84.2, the lowest 33.4, and the mean 55.4. The precipitation totals 3.07 inches, distributed over thirteen days. The sunshine recorded averages 4.48 hours a day compared with 6.52 hours a day in 1915. The whole precipitation of July and August totals only 2.64 inches, and the prospects were reported as most alarming about the end of August. However, the good rain of the first days of September

improved the Indian corn considerably, and a fair crop was got in during the last week. Potatoes give promise of a much better crop than was expected in August; roots have made almost phenomenal growth of late, and good crops of these are now assured. A reduced crop of European plums has been marketed at a much better price than usual. Apples are promising an average crop, but the price is a little lower than last year. A good deal of ploughing and of early fall cultivating has been done during the month at the Station, and eight thousand feet of drains have been laid during the month."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "September has been warmer, drier, and duller than the average for the corresponding month during the past four years, the figures being, mean temperature 57·1, precipitation 3·22 inches, and sunshine 142·1 hours, while the average for this period of the four previous years was mean temperature 55·2, precipitation 4·39 inches, and sunshine 159·9 hours. There has been no frost yet, and the most tender plants have not suffered. The rain came at intervals, and slowly, so that it represents so much water stored for next year. Farmers of the district have finished cutting oats, and a large proportion of the potatoes has been lifted to be immediately sold at the high prices which rule at present. At the Experimental Station, all the grain has been harvested and threshed, corn has been cut and put in the silo, and a good deal of ploughing has been done. An exhibit was made at the Lotbinière, Champlain and Portneuf county fairs, whose directors have spoken in great praise of the Department's help to the success of their exhibitions."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The precipitation during September amounts to 5·64 inches, while a year ago it aggregated only 2·70 inches. The highest temperature recorded is 80, the lowest 32, and the mean of the month is 55·41, compared with 89 and 24 and a mean of 57·18 for the corresponding period in 1915. The bright sunshine totals 133·2 hours, against 179·4 hours a year ago. The grain at this Station has been harvested and threshed. The cereal crop in the district is not up to the average. September has been very favourable for the late corn, as there was no frost until the very last of the month, and then a good part of the corn was harvested and in silo. The potato crop is very late, with a light yield and quite a large amount of rotted tubers. A number of farmers in this district are cutting clover for seed production. During the month considerable work in grading and clearing land has been conducted at this Station, while drainage operations have also gone on very successfully."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "The weather for September was about normal for the season. Threshing became general throughout Manitoba early in the month, but scarcity of labour and interruptions by showers have delayed progress. Crops are turning out very light, though occasional fields are better than the general run. On the Experimental Farm, threshing was completed early in the month, the corn crop was cut and stored

in the silo, the mangold crop harvested and a start made at fall ploughing."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The weather from September 1st to 9th was ideal for harvesting operations. On the morning of the 10th, rain commenced and continued for eighteen hours, constituting what is probably one of the heaviest downpours this district has ever experienced. All low-lying land was flooded and in many places stooks are at present standing out in the water. On the Experimental Farm threshing was completed on the 9th, the yield and quality being very good considering the unfavourable weather experienced during the filling season. A great deal of damage from rust is evident throughout this district, but wherever the crop was well advanced before this disease appeared, the yield and quality are fair. The work on the Experimental Farm has included threshing, cultivating and harrowing fallows, ploughing stubble, spreading manure, taking up vegetables and potatoes and caring for the stock and poultry."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The weather for the month of September was very changeable. Sharp frosts occurred on several dates, destroying garden vegetables, and wheat in this district also suffered. Frequent showers prevented threshing. At the end of the month most of the grain is in stook. A great deal of fall ploughing has been done on the Experimental Station under somewhat adverse conditions, owing to the heavy stubble and rank growth, after the crop was hauled out during the summer, leaving the soil very dry. A sheep barn, 24 feet by 68 feet, has just been completed. Our flock now numbers 177 head."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "Rainy weather from the 2nd to the 6th delayed harvest operations in the early part of September, and a second wet spell from the 25th to the 30th prevented threshing. At the end of the month most of the crop in northwestern Saskatchewan is in the stook with a number of wheat fields left uncut on account of the damage resulting from the frost in early August. This frost was followed by several days' rain, which undoubtedly materially increased the damage. A killing frost was experienced on the 14th, destroying flowers and tender vegetables, and late crops of oats were also injured. At the Station, a number of fields and plots have been threshed, wheat on the new land yielding 40 bushels per acre, and on spring and fall ploughing 26 bushels, and oats on fall ploughing, 60 bushels per acre. Barley has given good returns. An excellent crop of vegetables has been harvested. Potatoes are uniformly large and of good quality."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The precipitation during September totals a little over three inches, and is the heaviest yet recorded here for this period. The excessive rainfall has interfered seriously with farming operations, and in many cases the land has been so wet as to make it impossible to run a binder on the fields. Only a small proportion of the threshing—and that consisting chiefly of barley—has been finished yet.

Cattle are coming to the market from grass in excellent condition, and, notwithstanding the increasing supply, the market is strengthening and gives indication of being able to continue to absorb the offerings at even higher prices. Hogs, which have been commanding a phenomenal price during the entire month, have weakened a little toward its close, but are likely to come back and reach even higher levels, as the supply in the country is considerably less than two years ago, when Alberta marketed its big hog crop."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The first fall frost occurred on the 14th, and there was a killing frost on the 28th. The month of September was marked by rather excessive precipitation, which delayed harvesting and threshing operations. The latter was not general in the Lethbridge district at the end of the month, but had been over half completed on the Station, where the yields so far have been excellent, though less than last year."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The weather conditions have been very favourable for the harvesting of all grain crops, and, at the Experimental Station, cereal grain crops in the rotation experiments and cereal test plots have been harvested and threshed. A frost of five degrees on the night of the 14th checked the growth of corn, tomatoes and most of the garden annuals. The yields of wheat, oats and barley in this district are good. Heavy crops of alfalfa and clover have been cured under favourable climatic conditions. The honey returns for the season are exceptionally good; one colony at the Experimental Station has collected three hundred pounds of honey. At the Experimental Station cereal grain crops in the rotation experiments and cereal test plots have been harvested and threshed."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The weather during September has been reasonably fine and, although there was not very much precipitation, there was much cloudy and foggy weather. The mean temperature for the month was considerably lower than August, but frost was not recorded and at the end of the month corn and other tender plants were still perfectly green. Corn has ripened up appreciably, and the crop prospects are reasonably good. Mangolds have continued to grow well during the month. The latest harvest in this section has been made and most of the threshing completed. The potato harvest is well under way. All the live stock on the Farm is in good condition, and has been pasturing during the latter part of the month on the third crop of clover. The sheep flock is in first-class condition and the lamb finishing experiments are about completed. The hog stock is in reasonably good condition. The demand for pure-bred breeding stock is good. In the poultry yards the pullets are beginning to lay, and the price of eggs is rising."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The dry, warm and bright weather of September was ideal for the autumn fairs of the agricultural societies, the grain threshing, the orchard fruit harvests and hay and straw baling.

The soil has been dry, and ploughing difficult, consequently a smaller area of autumn grains has been sown. Threshing operations, which have been completed, gave larger returns than had been expected. The quality of orchard fruit is excellent and the yield a good one; and the prices have been satisfactory. Of the forage crops, corn for ensilage, chard and alfalfa have made most satisfactory growth. Root crops suffered somewhat from the lack of rain. A number of silos were filled during the month. Pastures have been short and dry, making it necessary to feed green corn. The live stock throughout the Island is in good condition, and prices have been satisfactory for sheep and dairy stock."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of September are given in the following table:—

Meteorological Record for September, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Pre- cipitation in inches	Hours of Sunshine	
	Highest	Lowest	Mean		Possible	Actual
Ottawa, Ont.....	83.0	36.9	58.83	3.15	376	159.2
Charlottetown, P.E.I.....	79.0	39.0	59.23	2.02	376	188.6
Kentville, N.S.....	84.0	35.0	58.93	1.74	376	174.6
Nappan, N.S.....	80.0	31.0	57.63	1.64	376	170.8
Fredericton, N.B.....	81.5	33.5	56.80	2.95	376	157.3
Ste. Anne de la Pocatière, Que.....	89.4	35.2	57.10	3.07	377	143.6
Cap Rouge, Que.....	77.0	32.2	57.10	3.22	376	142.1
Lennoxville, Que.....	80.0	32.0	55.40	5.64	376	133.2
Brandon, Man.....	81.5	22.0	52.10	2.39	378	177.1
Indian Head, Sask.....	80.0	24.0	49.70	3.72	375	171.4
Rosthern, Sask.....	74.0	22.0	49.60	0.68	378	183.0
Scott, Sask.....	78.3	20.2	47.73	1.66	378	138.7
Lacombe, Alberta.....	76.8	23.4	48.00	3.06	375	176.0
Lethbridge, Alberta.....	78.0	24.0	53.00	4.70	378	208.0
Invermere, B.C.....	77.0	24.0	49.66	1.15	379	192.2
Agassiz, B.C.....	83.0	35.0	58.48	1.68	378	142.3
Sidney, Vancouver Is., B.C.....	72.0	39.0	55.90	0.66	377	195.4

Ottawa, October 14, 1916.

FRANK T. SHUTT,
Assistant Director Dominion Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (October 1) that September was generally favourable to agriculture throughout the country. The first few days were rainy, but the subsequent dry weather, if cold and dull, enabled good progress to be made with the grain harvest, which was nearly all completed, except in hilly districts, by the end of the month. The harvest was, however, rather protracted, largely owing to the break in the weather at the beginning of the month, and reports as to the condition of the crop when harvested

vary a good deal; in the east more especially the reports are less satisfactory. The potato yield is estimated at some 3 per cent below average, the deterioration being chiefly due to the spread of disease in some of the eastern and northern counties, as well as in the extreme southwest. Little autumn cultivation has been possible, owing to the lateness of the harvest; and this work is backward with few exceptions. By the end of the month, however, ploughing of stubbles was beginning with good prospects of satisfactory progress, as conditions of weather and soil were generally favourable. Labour is still very short, and harvest wages have been high. The scarcity has, however, not seriously hindered the in-getting of the harvest, as help from soldiers and women was very generally obtainable, but here and there harvest operations were somewhat protracted from this cause.

Ireland.—The acreage returns of the Irish Department of Agriculture show that for 1916, 76,438 acres were sown to wheat as compared with 86,530 acres in 1915, a decrease of 10,092 acres, or 11·7 p.c. The area under oats was 1,071,593 acres, as compared with 1,088,664 acres, a decrease of 17,071 acres. Barley and bere show an increase of 8,477 acres, the area being 150,063 acres in 1916 against 141,586 acres in 1915. Potatoes occupied 586,308 acres in 1916, as against 594,467 acres in 1915, a decrease of 8,159 acres, or 1·4 p.c. Turnips also decreased by 2,308 acres, from 265,122 acres in 1915 to 262,804 acres in 1916. All descriptions of live stock except mules and jennets show an increase. The numbers for 1916 are as follows, with the figures of 1915 placed within brackets: Horses 598,978 (560,917), mules and jennets 28,352 (28,923), asses 230,013 (227,422), cattle 4,970,441 (4,843,795), sheep 3,763,705 (3,600,067), swine 1,290,289 (1,205,249), goats 293,390 (242,571), poultry 26,472,753 (26,088,807). The area under hay was returned as 2,406,247 acres, a decrease of 89,682 acres, and of pasture as 12,439,209 acres, an increase of 86,585 acres. The total produce of hay was reported on September 29 as 5,325,432 tons, compared with 5,096,772 tons in 1915.

Russia.—According to the Board of Trade Journal of September 28, 1916, H.M. Commercial Attaché at Petrograd reports the publication in Petrograd on August 24/September 6 of the following official statement respecting the chief Russian grain crops this year: "Excluding the regions under temporary occupation by the enemy and those within the immediate zone of military operations, the yield in general promises to be above the average for winter grain, while for spring grain it will not be so satisfactory, giving only an average crop. In the lake region the crops are above the average. In the central governments, both for winter and spring grains, they are above the average, and in parts excellent. In the central Volga region the crop promises to be near the average of late years, though here and there, in places, not fully satisfactory. In the Trans-Volga governments it is average or nearly so. In the Dnieper region it is average. In the southern steppe region the winter grain crop is somewhat above the average, and spring grain about average. In the Dnieper-Don region spring grains are not so favourable as winter grains, but are not below average. In the Volga-Don region the yield of winter grain is above average

and spring grain average, though here and there below average. In the Caucasus both winter and spring grains are in general below the average.

United States.—The Monthly Crop Report for October of the United States Department of Agriculture gives the following estimates of the acreage, condition and yield of the principal field crops of the United States for 1916 with comparative figures of condition and yield:

Crops	Area		Condition		Yield per acre		Total yield	
	1916	Per cent of 1915	Oct. 1, 1916	Ten year average	1915	1916 indicated	1915 final estimate	Oct. 1 1916 indicated
	000 acres	p.c.	p.c.	p.c.	bush.	bush.	000 bush.	000 bush.
Corn.....	108,620	100.3	71.5	77.0	28.2	25.0	3,054,535	2,717,932
Winter wheat.....	33,020	81.6	—	—	16.2	13.8 ¹	655,045	454,706 ¹
Spring wheat.....	17,851	91.8	—	—	18.3	8.6 ¹	356,460	152,851 ¹
All wheat.....	50,871	84.9	—	—	16.9	11.9 ¹	1,011,505	607,557 ¹
Oats.....	40,599	99.6	—	—	37.8	30.3	1,540,362	1,229,182 ¹
Barley.....	7,757	104.9	—	—	32.0	23.7 ¹	237,009	183,536 ¹
Rye.....	2,727	95.6	—	—	17.2	15.3 ¹	49,190	41,884 ¹
Buckwheat.....	810	101.7	67.0	81.0	19.6	17.0	15,769	13,942
White potatoes.....	3,632	96.6	62.6	74.6	95.5	82.8	359,103	300,563
Sweet potatoes.....	736	102.4	79.2	81.8	103.3	92.1	74,295	67,794
Flax.....	1,591	116.4	86.2	76.9	10.1	9.7	13,845	15,411
Rice.....	883	110.0	91.5	85.7	36.1	37.6	28,947	33,160
					lb.	lb.	lb.	lb.
Tobacco.....	1,398	102.2	85.6	81.8	775.1	860.4	1,060,587	1,203,077
							bales	bales
Cotton.....	35,994 ²	112.1	56.3	67.2	170.3	156.3	11,192	11,637
					tons	tons	tons	tons
Hay (tame).....	52,504	103.2	—	—	1.68	1.64 ¹	85,225	86,155 ¹
Hay (wild).....	16,809	99.4	—	—	1.27	1.19 ¹	21,491	20,070 ¹
Sugar beets.....	769 ²	115.7	86.3	89.7	10.7	9.8	6,511	7,510

¹ Preliminary estimate.

² Planted acreage.

In the above table the yields given for wheat, oats, barley, rye and hay represent the preliminary estimates of the Department; for the other crops the yields are as indicated by the condition of the crops on October 1. The total yield of wheat is given as 607,557,000 bushels as against 1,011,505 bushels, the final estimate of 1915. The oat crop is placed at 1,229,182,000 bushels compared with 1,540,362,000 last year. Potatoes are estimated at 300,563,000 bushels against 359,103,000 bushels last year.

The prices in cents per bushel of the principal cereals on October 1, 1916, as compared with 1915, are as follows, the prices of last year being placed within brackets: Wheat \$1.363 (90.9), corn 82.3 (70.5), oats 44.5 (34.5), barley 76.5 (46.8), rye 104.1 (81.7), buckwheat 90.4 (73.7), potatoes \$1.12 (48.8), flax \$1.992 (\$1.481), hay per ton \$10.36 (\$10.69)

INTERNATIONAL INSTITUTE OF AGRICULTURE.

According to the September issue of the Bulletin of Agricultural and Commercial Statistics the production of wheat, rye, barley and oats for the present year, as compared with last year and with the annual average of the five years 1909-1913 in certain countries of the northern hemisphere is as follows:

Crops and number of countries	1916 provisional	1915 final	Average 1909-13	Per cent of 1915	Per cent of aver- age
	000 bush.	000 bush.	000 bush.	p.c.	p.c.
Wheat (10).....	1,526,026	2,186,345	1,648,033	69.8	92.6
Rye (5).....	83,201	84,325	72,091	98.7	115.4
Barley (9).....	476,580	540,721	473,718	88.1	100.6
Oats (8).....	1,723,549	2,203,225	1,613,040	78.2	106.8

In the above statement are included only those countries that have reported on their production of this year. It will be observed that the yields are lower than last year by 30.2 p.c. for wheat, 1.3 p.c. for rye, 11.9 p.c. for barley and 21.8 p.c. for oats, whilst if compared with the five year average, they are 7.4 p.c. less for wheat, 15.4 p.c. more for rye, 0.6 p.c. more for barley and 6.8 p.c. more for oats.

Field Crops of England and Wales, 1916.—The annual preliminary statement issued by the Board of Agriculture on August 29 shows that the areas sown this year to wheat, barley and oats are as follows: Wheat 1,912,120 acres; barley 1,331,750 acres; oats 2,084,850 acres. As compared with 1915 wheat shows a decrease of 11.9 p.c., barley an increase of 8.1 p.c. and oats a decrease of 0.2 per cent.

DISTRIBUTION AND EXPORTABLE SURPLUS OF

CANADIAN WHEAT, 1915 AND 1916.

In the Census and Statistics Monthly of October 1915 (Vol. 8, No. 86, p. 255) calculations were published showing that the estimated surplus of wheat available for exportation was 228,132,200 bushels out of the total production of 1915 then provisionally placed at 336,258,000 bushels. The final estimate of yield proved to be 376,303,600 bushels, and in the issue of January 1916 (Vol. 9, No. 89, p. 29) the surplus available for export was estimated at 264,173,200 bushels.

It is now possible to calculate more closely the actual distribution and surplus exported of the large wheat crop of 1915 from data available at the end of the crop year ended August 31, 1916, as shown in Table I.

I. Distribution and Exportable Surplus of Wheat Crop of 1915.

	Bushels	Bushels
Quantity in Elevators, September 3, 1915, (Weekly Bulletin September 13, 1915).....		1,063,795
Merchantable Wheat of 1915 Crop (Census and Statistics Monthly, April, 1916 p. 110).....		358,281,000
Imports of Wheat and Flour during year ended August 31, 1916....		282,401
		359,627,196
Retained for seeding crop of 1916, 11,576,000 acres at 1.75 bushel per acre.....	20,258,000	
Retained for food: population of 8 millions at 6.25 bushels per capita.....	50,000,000	70,258,000
		289,369,196
Exports of Wheat and Flour during crop year ended August 31, 1916.....		289,794,162
Difference.....		424,966

Not included in Table I is the "carry over" from the crop year of 1915-16 of 27 million bushels, as estimated in the last issue of the Census and Statistics Monthly (Vol. 9, No. 97, pp. 241-2). This quantity added to the difference of 425,000 bushels makes the total not accounted for to be 27,425,000 bushels, or 7 per cent of the crop. It is not more than might be represented by a floating balance in country elevators, flour mills and retail establishments.

For the season of 1916 the total wheat crop is provisionally placed at 159,123,000 bushels (see page 258), and the following calculation in Table II shows the exportable surplus estimated to be available during the crop year ending August 31, 1917:

II. Estimate of Exportable Surplus of Wheat Crop of 1916.

	Bushels	Bushels
Carry over from 1915-16 (Census and Statistics Monthly, September 1916, p. 242).....		27,033,000
Allowance for Imports, say.....		250,000
Crop of 1916 (Provisional estimate p. 258).....		159,123,000
		186,406,000
Loss in cleaning and for grain not of merchantable quality (10 per cent).....	15,912,300	
Retained for seeding crop of 1917, say 12 million acres at 1.75 bushel per acre.....	21,000,000	
Retained for food: population of 8 millions at 6.25 bushels per capita.....	50,000,000	86,912,300
Balance available for export.....		99,493,700

These calculations indicate, therefore, that according to present data, the exportable surplus of wheat during the crop year ending August 31, 1917, will be about 99½ million bushels.

URBAN POPULATION OF THE PRAIRIE PROVINCES, 1916.

The preliminary count of the population of cities, towns and villages in Manitoba, Saskatchewan and Alberta with a population of 1,500 or over present or past, as shown by the census taken in June last, has been compiled, and the results are given in the accompanying table. This count is not from the final compilation, and is therefore subject to revision, though it is not expected that material changes will be made.

Winnipeg, the largest city in the middle west, increased its population from 136,035 in 1911 to 162,999 in 1916, being a gain of 26,964 or nearly 20 per cent in five years. For the ten years 1906 to 1916, Winnipeg shows an increase of 72,846, or more than 80 per cent.

In Saskatchewan, Regina leads with 26,105. Both Saskatoon and Moosejaw show material gains since 1911.

In Alberta, the city of Calgary still stands first with a population of 56,302, followed by Edmonton with 53,794. Of the population of the latter, 12,420 represents that of the former city of Strathcona, now municipally part of the provincial capital. In 1911 Strathcona had a population of 5,579 and in 1906 one of 1,550.

**Population of Urban Municipalities of 1,500 and Over, 1901,
1906, 1911 and 1916.**

Cities, Towns, etc.	1901	1906	1911	1916
MANITOBA.				
Cities—				
Winnipeg.....	42,340	90,153	136,035	162,999
Brandon.....	5,620	10,408	13,839	15,225
St. Boniface.....	2,019	5,119	7,483	11,022
Towns—				
Minnedosa.....	1,052	1,299	1,483	1,831
Souris.....	839	1,413	1,854	1,845
Virten.....	901	1,471	1,550	1,618
Dauphin.....	1,135	1,670	2,815	3,200
Neepawa.....	1,418	1,895	1,864	1,854
Portage la Prairie.....	3,901	5,106	5,892	5,860
Selkirk.....	2,188	2,701	2,977	3,399
Transcona.....	—	—	—	3,357
SASKATCHEWAN				
Cities—				
Moosejaw.....	1,558	6,249	13,823	16,889
North Battleford.....	—	824	2,105	3,145
Prince Albert.....	1,785	3,005	6,254	6,436
Regina.....	2,249	6,169	30,213	26,105
Saskatoon.....	113	3,011	12,004	21,054
Swift Current.....	121	554	1,852	3,181
Weyburn.....	113	966	2,210	3,054
Towns—				
Melville.....	—	—	1,816	2,100
Estevan.....	141	877	1,981	2,140
Yorkton.....	700	1,363	2,309	3,144

Population of Urban Municipalities of 1,500 and Over, 1901, 1906, 1911 and 1916—con.

Cities, towns, etc.	1901	1906	1911	1916
ALBERTA				
Cities—				
Calgary.....	4,392	12,747	43,704	56,302
Edmonton.....	2,626	11,167	24,900	53,794 ¹
Lethbridge.....	2,072	2,313	8,050	9,437
Medicine Hat.....	1,570	3,020	5,608	9,269
Red Deer.....	323	1,418	2,118	2,203
Wetaskiwin.....	550	1,652	2,411	2,048
Towns—				
Coleman.....	—	915	1,557	1,559
Macleod.....	796	1,144	1,844	1,811
Camrose.....	—	412	1,586	1,692
Castor.....	—	—	1,659	755
Raymond.....	—	1,568	1,465	1,206
Village—				
Banff.....	271	—	937	1,520

¹Includes Edmonton South (Stratheona) with a population of 12,420.

THE WEATHER DURING SEPTEMBER.

The Dominion Meteorological Service reports that the temperature nowhere differed much from the average. Over Alberta and the extreme western part of Saskatchewan it was from average to 2° above; in Quebec and in nearly all portions of the Maritime provinces it was also from average to 2° above, whereas over the large remaining portion of the Dominion, it was from average to 2° below. In British Columbia the rainfall was above the average in Vancouver Island and in the northern portion of the province; elsewhere it was below. In the western provinces it was above the average, except locally, especially in northern Alberta and in the Qu'Appelle Valley. In Ontario the average was well exceeded, except over the country to the southward of the Georgian Bay district, and eastward to Prince Edward county. In Quebec it was more than the average throughout the province, whereas in the Maritime provinces it was everywhere below the average.

SUGGESTIONS BY CROP CORRESPONDENTS.

Wild Oats.—Instead of burying, which is too often relied on, encourage growth, and when the surface has moisture, use a clear working plough, and skim as shallow as possible consistent with good work. Where stubble and grass are present, the packer is better than the harrow to close up all air spaces. The first aim is to get the weed to grow. It is courting future trouble to attempt its extinction by burial.—ALEX. METHVEN, Saltcoats, Sask.

Transplanting of Vegetables and Flowers.—I always do my transplanting during a gentle rain after midday, unless I am reasonably sure that it will not clear up and the sun shine before night. My loss last year was less than two per cent. Out of 500 cabbage plants, I lost only five in transplanting.—E. J. BELL, Craveth Corners, Alberta.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	Sept. 2		Sept. 9		Sept. 16		Sept. 23		Sept. 30	
Wheat—	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
No. 1 Nor....	1 50½	— 1 57½	1 61½	— 1 64½	1 56½	— 1 61½	1 57	— 1 64½	1 61½	— 1 66½
No. 2 Nor....	1 50	— 1 55½	1 58½	— 1 62½	1 55½	— 1 59½	1 54	— 1 60½	1 58½	— 1 62½
No. 3 Nor....	1 46	— 1 50½	1 55½	— 1 59½	1 52½	— 1 53½	1 51½	— 1 58½	1 54½	— 1 60½
No. 4.....	1 37½	— 1 43½	1 48½	— 1 52½	1 44½	— 1 50½	1 45½	— 1 53½	1 47½	— 1 54½
No. 5.....	1 32½	— 1 38½	1 40½	— 1 45½	1 35½	— 1 41½	1 36½	— 1 44½	1 41½	— 1 46½
No. 6.....	1 22½	— 1 26½	1 17	— 1 21½	1 14½	— 1 17½	1 17½	— 1 31½	1 34½	— 1 34½
Feed.....	1 15½	— 1 19½	1 11	— 1 14½	0 96½	— 1 03½	0 97½	— 1 10½	1 04½	— 1 12½
Oats—										
No. 2 C. W....	0 49½	— 0 50½	0 51½	— 0 51½	0 49½	— 0 50½	0 50½	— 0 54½	0 53	— 0 54½
No. 3 C. W....	0 49	— 0 49½	0 50½	— 0 50½	0 48½	— 0 49½	0 49½	— 0 53½	0 52½	— 0 54½
No. 1 Feed Ex	0 49	— 0 49½	0 50½	— 0 50½	0 48½	— 0 49½	0 49½	— 0 53½	0 52½	— 0 54
No. 1 Feed....	0 48	— 0 48½	0 49½	— 0 50½	0 48½	— 0 49½	0 48½	— 0 53½	0 52	— 0 53½
No. 2 Feed....	0 47½	— 0 48½	0 49½	— 0 50	0 47½	— 0 48½	0 48½	— 0 52½	0 51½	— 0 53
Barley—										
No. 3 C. W....	0 80	— 0 86½	0 85	— 0 86	0 85	— 0 88	0 86½	— 0 89	0 90	— 0 92½
No. 4 C. W....	0 76	— 0 82½	0 82	— 0 83	0 81	— 0 84	0 80	— 0 83	0 85	— 0 87½
Rejected.....	0 70	— 0 76½	0 76½	—	0 76	— 0 77½	0 73	— 0 77	0 78	— 0 80
Feed.....	0 70	— 0 76½	0 76½	—	0 76	— 0 77½	0 73	— 0 77	0 78	— 0 80
Flax—										
No. 1 N.W.C.	1 84½	— 1 91½	1 84	— 1 88½	1 86½	— 1 91½	1 87½	— 1 98	1 95½	— 2 11½
No. 2 C. W....	1 81½	— 1 88½	1 81	— 1 85½	1 83½	— 1 88½	1 84½	— 1 95	1 92½	— 2 08½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	June		July		August		September	
Wheat, Red Winter, No. 2—	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
St. Louis.....	1 06	— 1 14	1 09	— 1 36½	1 29	— 1 65	1 47	— 1 48
Chicago.....	1 01½	— 1 07½	1 04	— 1 28½	1 26	— 1 58½	1 40½	— 1 43½
New York (f.o.b. afloat)....	1 11½	— 1 21½	1 13½	— 1 35½	1 33	— 1 66	1 52	— 1 58½
Corn, No. 2 mixed—								
St. Louis.....	0 70	— 0 76½	0 75½	— 0 82½	0 80½	— 0 87½	0 84½	—
New York (f.o.b. afloat) ...	0 79½	— 0 90½	0 88	— 0 93½	0 93	— 1 01	1 00½	— 1 01½
Corn, No. 2—								
Chicago.....	0 69½	— 0 78½	0 78	— 0 84½	0 82	— 0 88½	0 85½	— 0 86½
Oats, No. 2—								
St. Louis.....	0 37	— 0 41	0 38	— 0 41½	0 38	— 0 48	0 45	— 0 45½
Chicago.....	0 37½	— 0 41½	0 38½	— 0 42	0 41	— 0 47	0 44½	— 0 45½
Rye, No. 2—								
Chicago.....	0 97	— 0 99½	0 94	— 1 01	1 00	— 1 26½	1 15	— 1 15½

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	Sept. 4		Sept. 11		Sept. 18		Sept. 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bushel)—								
Canadian No. 1.....	2 15½	2 21½	2 21½	2 24½	2 15½	2 18½	2 09½	2 12½
“ No. 2.....	2 12½	2 15½	2 15½	2 18½	2 09½	2 12½	—	—
American spring.....	2 18½	2 21½	2 24½	2 27½	2 18½	2 21½	2 12½	2 15½
“ hard winter old.....	2 06½	2 09½	2 12½	2 15½	2 06½	2 09½	2 06½	2 09½
“ hard winter new.....	2 06½	2 09½	2 12½	2 15½	2 06½	2 09½	2 06½	2 09½
“ red winter, new.....	2 03½	2 06½	2 09½	2 12½	2 09½	2 12½	2 03½	2 06½
Californian.....	2 13½	2 16	2 16	2 19	2 16	2 19	—	—
Bluestem.....	2 10½	2 13½	2 13½	2 16	2 13½	2 16	—	—
Walla.....	2 07½	2 10½	2 10½	2 13½	2 10½	2 13½	—	—
Argentine.....	2 12½	2 15½	2 18½	2 21½	—	—	—	—
Indian.....	2 16½	2 19½	—	—	—	—	—	—
Australian.....	2 19	2 22	2 25	2 28	2 22	2 25	2 16	2 19
Oats (per bushel)—								
Canadian.....	0 90½	0 93	0 90½	0 93	0 90½	0 93	0 90½	0 93
American.....	0 86½	0 89½	0 86½	0 89½	0 82½	0 85½	0 82½	0 85½
Chilian.....	0 93	0 95½	0 93	0 95½	0 90½	0 93	0 90½	0 93
Flour (per 280 lb.)—								
Canadian, good.....	12 41	12 65	12 89	13 14	12 65	12 89	12 65	12 89
“ first baker's.....	12 15	12 41	12 65	12 89	12 41	12 65	12 41	12 65
“ common.....	11 42	11 66	11 91	12 15	11 66	11 91	11 66	11 91
“ soft winter.....	11 42	11 91	11 91	12 41	11 66	12 15	11 66	12 15
American, spring, good.....	12 65	12 89	13 14	13 38	12 89	13 14	12 89	13 14
“ spring, common.....	11 66	11 91	12 15	12 41	11 91	12 15	11 91	12 15
“ winter, good.....	12 89	13 14	13 38	13 62	13 38	13 62	12 89	13 14
“ winter, common.....	11 91	12 15	12 41	12 65	12 41	12 65	12 41	12 65
“ winter, inferior.....	9 49	11 66	9 97	12 15	9 97	12 15	11 91	12 15
Californian.....	12 41	13 38	12 15	13 62	12 15	13 62	12 15	13 62
Australian.....	11 91	12 15	12 15	12 41	12 15	12 41	12 15	12 41

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
July 1.....	46 3	1 407	49 1	1 433	30 10	0 818
“ 8.....	46 3	1 407	45 6	1 329	30 8	0 813
“ 15.....	48 11	1 488	47 5	1 385	31 6	0 835
“ 22.....	51 6	1 566	48 8	1 421	32 3	0 855
“ 29.....	53 5	1 625	47 2	1 377	32 5	0 860
Average.....	49 3	1 499	47 7	1 389	31 6	0 836
August 5.....	55 1	1 675	46 1	1 346	32 9	0 868
“ 12.....	56 7	1 721	46 11	1 370	31 2	0 819
“ 19.....	58 1	1 767	48 0	1 402	30 8	0 806
“ 26.....	59 0	1 795	47 1	1 375	31 6	0 827
Average.....	57 2	1 740	47 0	1 373	31 6	0 827
Sept. 2.....	59 4	1 802	48 5	1 414	30 5	0 805
“ 9.....	59 3	1 800	51 7	1 506	31 1	0 823
“ 16.....	59 11	1 820	52 6	1 533	30 9	0 814
“ 23.....	59 4	1 802	53 3	1 555	30 9	0 814
“ 30.....	58 10	1 787	51 1	1 577	31 1	0 823
Average.....	59 4	1 802	52 0	1 516	30 10	0 817

IV. Average Prices of British-grown Grain, 1916.

LIVERPOOL.

Description	Sept. 5		Sept. 12		Sept. 19		Sept. 26	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bushel)—								
Nor. Man. No. 1.....	2 14½	2 14½	2 17½	2 18½	2 09½	2 09½	2 13½	2 14½
“ No. 2.....	2 13	2 13½	2 16½	2 17½	—	—	—	—
“ No. 3.....	2 11½	2 12½	2 14½	2 15	—	—	2 08½	2 09½
Man. sample.....	2 09½	—	2 10½	2 17½	—	—	2 04½	2 11½
No. 2 hard winter.....	—	—	2 13	2 13½	2 02	2 02½	2 01	2 01½
Durum.....	—	—	2 08	—	—	—	2 02½	2 03½
Australian.....	2 26½	—	—	—	—	—	—	—
Oats (per bushel)—								
Chilian black.....	0 82½	0 84½	—	—	—	—	0 82½	0 84½
“ grey.....	—	—	0 79½	0 80½	0 81½	0 82	—	—
“ tawny.....	0 79½	0 80½	0 79½	0 81½	0 80½	0 81½	0 82½	0 84½
Canadian.....	0 84½	0 85	0 84½	0 85	0 86	0 86½	0 86½	0 87½
Flour (per 280 lb.)—								
Canada spring patents.....	15 01	13 26	13 01	13 26	13 01	13 26	13 01	13 26
Amer. soft winter patents.....	13 01	13 26	13 01	13 26	13 01	13 26	13 01	13 26
Kansas patents.....	12 89	13 14	12 89	13 14	12 89	13 14	12 89	13 14
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	10 21	10 33	10 21	10 33	10 21	10 33	10 21	10 33
“ middle cut.....	9 86	9 97	9 86	9 97	9 86	9 97	10 09	10 21
“ fine cut.....	9 86	9 97	9 86	9 97	9 86	9 97	10 09	10 21
“ pinhead.....	9 97	10 09	9 97	10 09	9 97	10 09	10 21	10 33

V. Average Prices of Imported Meats at British Markets, 1916.

Fresh Meats (per cwt. of 100 lb.)

Description and Market	Sept. 6		Sept. 13		Sept. 20		Sept. 27	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	17.74	14.70	17.23	—	—	—	17.23	15.21
Edinburgh.....	17.70	15.20	19.30	15.20	19.30	15.20	19.30	15.20
Argentine chilled—								
Birmingham.....	20.28	16.21	19.26	15.21	19.77	16.21	19.26	15.21
Leeds.....	—	—	18.76	14.95	19.33	15.72	19.26	14.95
Liverpool.....	19.77	14.19	18.76	14.70	18.76	15.21	19.26	15.21
London.....	20.28	15.72	18.25	14.70	19.77	15.72	18.76	14.70
Manchester.....	19.77	14.19	18.76	14.70	18.76	15.21	19.26	15.21
Edinburgh.....	20.03	15.95	19.30	15.20	19.30	15.20	—	—
Glasgow.....	20.30	—	20.30	14.75	—	—	—	—

GREEN BACON (per cwt. of 100 lb.).

Description and Market.	Sept. 6		Sept. 13		Sept. 29		Sept. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol.....	25 17	—24 51	24 95	—24 51	24 73	—24 29	24 73	—24 29
Liverpool.....	25 17	—24 29	24 73	—24 08	24 51	—23 86	24 51	—23 86
London.....	25 17	—24 29	25 17	—24 29	24 73	—24 29	24 73	—23 86
Glasgow.....	25 17	—24 73	25 17	—24 73	24 29	—	24 29	—
Danish sides—								
Bristol.....	27 58	—26 50	26 50	—25 83	26 05	—25 39	26 05	—25 39
Liverpool.....	27 16	—26 72	26 50	—26 05	25 83	—25 39	25 83	—25 17
London.....	27 58	—26 28	26 27	—25 17	25 83	—24 73	25 83	—24 73
Glasgow.....	26 94	—	25 83	—	25 39	—	25 39	—25 17

GREEN HAMS (per cwt. of 100 lb.).

Description and Market	Aug. 2		Aug. 9		Aug. 16		Aug. 23		Aug. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—										
Bristol.....	22 54	—21 66	22 54	—21 66	22 98	—22 10	22 54	—21 66	22 54	—21 66
London.....	22 10	—21 22	23 42	—22 54	24 73	—23 86	23 42	—22 54	22 10	—21 22
American long cut—										
Bristol.....	20 66	—20 00	21 00	—20 44	21 60	—21 00	21 00	—20 44	20 66	—20 00
Liverpool.....	21 00	—20 22	21 44	—20 88	21 88	—21 22	21 44	—20 88	21 00	—20 22
London.....	20 44	—19 56	20 88	—20 00	21 22	—20 44	20 88	—20 00	20 44	—19 56
Glasgow.....	21 22	—20 88	21 22	—20 88	22 10	—21 66	22 54	—22 10	22 54	—21 66
American short cut—										
Bristol.....	21 22	—20 44	21 66	—20 88	22 10	—21 22	21 66	—20 88	21 22	—20 44
Liverpool.....	21 55	—20 77	21 88	—21 22	22 54	—21 44	21 88	—21 22	21 55	—20 77
London.....	20 44	—19 56	21 00	—20 22	21 22	—20 44	21 00	—20 22	20 44	—19 56
Glasgow.....	21 44	—21 00	21 44	—20 88	22 10	—21 66	22 10	—21 66	22 54	—22 10

Description and Market	Sept. 6		Sept. 13		Sept. 16		Sept. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
American long cut—								
Bristol.....	22 54	—21 66	22 98	—22 10	23 42	—22 54	23 42	—22 54
Liverpool.....	23 20	—22 21	23 42	—22 32	23 42	—23 32	23 42	—22 54
London.....	23 42	—22 54	23 42	—22 54	22 98	—22 10	22 98	—22 10
Glasgow.....	23 80	—22 98	23 64	—23 42	23 86	—22 98	23 86	—22 98
American short cut—								
Bristol.....	22 76	—21 88	22 76	—21 88	22 76	—21 88	22 76	—21 88
Liverpool.....	22 98	—21 99	22 98	—22 10	22 98	—21 88	22 98	—21 99
London.....	5422	—21 66	22 98	—21 60	22 54	—21 66	22 54	—21 66
Glasgow.....	22 98	—22 54	22 98	—22 54	22 54	—22 10	22 76	—22 54

CHEESE (per cwt. of 100 lb.).

Description and Market	Aug. 2		Aug. 9		Aug. 16		Aug. 23		Aug. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—										
Bristol.....	20	22—19 56	20	44—19 78	20	88—20 22	20	44—19 78	20	22—19 56
Liverpool.....	19	67—19 02	20	44—19 78	20	88—20 22	20	44—19 78	19	67—19 02
London.....	20	00—19 13	20	88—20 44	20	88—20 22	20	88—20 44	20	00—19 13
Glasgow.....	-	-	20	22—20 00	20	88—20 44	21	66—21 22	22	54—22 10
New Zealand—										
Bristol.....	20	44—20 00	20	44—20 00	21	22—20 88	20	44—20 00	20	44—20 00
London.....	20	00—19 56	21	22—20 44	21	00—20 44	21	22—20 44	20	00—19 56
Glasgow.....	-	-	20	22—20 00	21	22—20 88	22	10—21 66	22	54 -

*Old.

Description and Market	Sept. 6		Sept. 13		Sept. 20		Sept. 27					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.				
Canadian—												
Bristol.....	22	76—22	10	23	42—22	76	23	20—22	54	23	42—22	76
Liverpool.....	22	98—22	32	23	31—22	65	23	31—22	76	23	64—22	98
London.....	22	54—22	10	22	98—25	54	23	20—22	76	23	42—22	98
Glasgow.....	22	98—22	54	22	98	—	23	42—22	98	23	64—23	42
New Zealand—												
Bristol.....	22	54—22	10	22	98—22	54	22	98—22	54	—	—	—
London.....	22	54—22	10	22	98—22	54	22	98—22	54	23	20—22	76
Glasgow.....	22	98	—	22	98	—	23	20—22	98	23	42—23	20

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EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended October 31, 1916.

This report records the yield, quality and value of the root and fodder crops of 1916, the acreage and condition at October 31 of fall wheat sown for 1917 and the progress of fall ploughing.

ROOT AND FODDER CROPS.

The total area this year under root and fodder crops, consisting of potatoes, turnips, etc., hay and clover, alfalfa, fodder corn and sugar beets, amounts to about 8,980,000 acres, which is practically the same as in 1915; but the total is made up of an increase of about 100,000 acres under hay and clover, the total area of which is nearly 8 million acres, and a decrease for each of the other relatively smaller crops. In total value, at local prices, these crops amount for 1916 to \$249,882,000, as compared with \$229,508,000 for 1915. The yield of hay and clover this year is the record one of 14,799,000 tons, an average of 1.86 ton per acre, which is the highest yield on record for this crop in Canada. The average value per ton is \$11.52, as compared with \$14.22 last year. Potatoes are again upon the whole a poor crop, this result being due to unfavourable conditions in Quebec and Ontario, where the average yield per acre is for Quebec 131 bushels, as compared with 149.66 bushels last year, and for Ontario 61 bushels, as compared with 92.66 bushels. The total estimated production of potatoes in Canada is 61,128,000 bushels, as compared with 62,604,000 bushels in 1915 and 85,672,000 bushels, the record crop of 1914.

In the Maritime Provinces the potato yield is good, being 206 bushels per acre for Prince Edward Island, 201 bushels per acre for Nova Scotia and 192 bushels per acre for New Brunswick. The average price per bushel for potatoes is 81 cents for Canada, 52 cents for Prince Edward Island, 69 cents for Nova Scotia, 84 cents for New Brunswick, 97 cents for Quebec and \$1.28 for Ontario. Fair yields of potatoes are recorded for the prairie provinces, the averages being between 170 and 177 bushels, with prices of 61 and 62 cents per bushel in Manitoba and Saskatchewan, and 53 cents in Alberta. In British Columbia the average yield per acre is 189 bushels and the price 70 cents per bushel. The quality of the tubers is between 89 and 95 per cent of the standard for the Maritime Provinces, over 90 per cent for Manitoba and Saskatchewan and 84 per cent for Alberta and British Columbia. For Quebec and Ontario the quality is 76 and 77 per cent.

The total yield of turnips and other roots is placed at 41,256,000 bushels, as compared with 64,281,000 bushels in 1915. Of fodder corn the total yield is 1,976,700 tons, against 3,429,870 tons in 1915. Alfalfa produced 261,450 tons, compared with 261,955 tons last year, and sugar beets 71,000 tons against 141,000 tons.

FALL WHEAT AND FALL PLOUGHING.

Owing to the dry condition of the soil in Ontario difficulties were experienced in the ploughing and seeding of fall wheat. By October 31 only 656,500 acres were sown, as compared with 820,600 acres in 1915, a decrease of 164,100 acres, or 20 per cent. In Alberta also there is a decrease of 36,500 acres, or 14 per cent, viz., from 260,500 acres to 224,000 acres. For all Canada the area estimated to be sown to fall wheat is 899,300 acres, as compared with 1,100,800 acres, a decrease of 201,500 acres, or 18·3 per cent. The condition of fall wheat on October 31 for all Canada is 76 per cent of the standard as compared with 88 per cent last year and 97 per cent in 1914. Of the total land in Canada intended for next year's crops 51 per cent is estimated to have been ploughed by October 31, the percentage proportions in the west being 47 for Manitoba, 28 for Saskatchewan and 21 for Alberta.

Census and Statistics Office,
Ottawa, November 16, 1916.

ERNEST H. GODFREY,
Editor.

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1915 and 1916.

Field crops	Area	Yield per acre	Total Yield	Quality	Average price	Total Value
	acres	bush.	bush.	p.c.	per bush.	
Canada—					\$	\$
Potatoes..... 1915	478,600	130·81	62,604,000	84	0·57	35,964,000
..... 1916	448,800	136·20	61,128,000	84	0·81	49,654,000
Turnips and other roots. 1915	172,700	372·21	64,281,000	90	0·26	16,560,000
..... 1916	156,200	264·12	41,256,000	86	0·41	16,761,000
		tons	tons		per ton	
Hay and clover..... 1915	7,875,000	1·39	10,953,000	52	14·22	155,807,000
..... 1916	7,974,000	1·86	14,799,000	93	11·52	170,504,000
Fodder corn..... 1915	343,400	10·00	3,429,870	86	4·96	16,999,100
..... 1916	297,100	6·65	1,976,700	78	4·92	9,725,300
Sugar beets..... 1915	18,000	7·83	141,000	—	5·50	775,500
..... 1916	15,000	4·75	71,000	78	6·20	440,000
Alfalfa..... 1915	92,665	2·83	261,955	87	12·98	3,402,000
..... 1916	89,780	2·91	261,450	92	10·70	2,797,300
P. E. Island—		bush.	bush.		per bush.	
Potatoes..... 1915	31,000	114·78	3,558,000	81	0·46	1,637,000
..... 1916	31,000	206·00	6,386,000	95	0·52	3,321,000
Turnips and other roots. 1915	7,900	449·46	3,551,000	92	0·26	923,000
..... 1916	8,000	477·00	3,816,000	96	0·28	1,068,000
		tons	tons		per ton	
Hay and clover..... 1915	198,000	1·77	351,000	96	12·18	4,275,000
..... 1916	199,000	1·70	338,000	93	11·56	3,907,000
Fodder corn..... 1915	260	13·00	3,400	91	3·00	10,200
..... 1916	250	13·00	3,300	100	2·50	8,300
Alfalfa..... 1915	55	3·00	165	—	14·00	2,300

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1915 and 1916.

Field crops	Area	Yield per acre	Total Yield	Quality	Average price	Total Value
Nova Scotia—		bush.	bush.		per bush.	
Potatoes.....1915	33,700	141.23	4,759,000	76	\$ 0.58	\$ 2,760,000
1916	34,500	201.00	6,935,000	91	0.69	4,785,000
Turnips and other roots.1915	9,200	390.02	3,598,000	89	0.34	1,223,000
1916	9,000	404.00	3,636,000	89	0.42	1,527,000
		tons	tons		per ton	
Hay and clover.....1915	538,000	1.78	958,000	94	13.33	12,770,000
1916	553,000	1.80	995,000	96	12.25	12,189,000
Fodder corn.....1915	500	4.64	2,300	93	7.00	16,000
1916	500	8.75	4,400	90	2.50	11,000
Alfalfa.....1915	30	2.30	70	80	13.00	900
1916	30	5.00	150	—	15.00	2,300
New Brunswick—		bush.	bush.		per bush.	
Potatoes.....1915	40,000	144.31	5,772,000	88	0.64	3,694,000
1916	39,000	192.00	7,488,000	89	0.84	6,290,000
Turnips and other roots.1915	8,000	320.10	2,633,000	92	0.33	869,000
1916	7,700	411.00	3,165,000	94	0.45	1,424,000
		tons	tons		per ton	
Hay and clover.....1915	569,000	1.39	791,000	92	14.00	11,074,000
1916	574,000	1.48	850,000	94	11.27	9,563,000
Fodder corn.....1915	110	7.00	770	89	2.50	1,900
1916	100	10.00	1,000	97	4.00	4,000
Alfalfa.....1915	140	2.25	320	—	12.00	3,800
Quebec—		bush.	bush.		per bush.	
Potatoes.....1915	117,000	149.66	17,510,000	86	0.55	9,631,000
1916	112,000	131.00	14,672,000	76	0.97	14,232,000
Turnips and other roots.1915	10,200	308.25	3,144,000	90	0.36	1,132,000
1916	10,000	265.00	2,650,000	88	0.48	1,272,000
		tons	tons		per ton	
Hay and clover.....1915	2,922,000	1.26	3,682,000	87	15.89	58,507,000
1916	2,985,000	1.75	5,224,000	93	11.00	57,464,000
Fodder corn.....1915	34,000	8.61	293,000	88	6.39	1,872,000
1916	31,000	8.00	248,000	86	5.75	1,426,000
Alfalfa.....1915	2,860	2.84	8,100	73	11.78	95,000
1916	2,600	2.65	7,000	87	9.50	67,000
Ontario—		bush.	bush.		per bush.	
Potatoes.....1915	155,000	92.66	14,362,000	66	0.76	10,915,000
1916	133,000	61.00	8,113,000	77	1.28	10,385,000
Turnips and other roots.1915	112,000	394.42	44,175,000	91	0.21	9,277,000
1916	97,000	211.00	20,467,000	74	0.36	7,368,000

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1915 and 1916.—con.

Field crops	Area	Yield per acre	Total Yield	Quality	Average price	Total Value
	acres	tons	tons	p.c.	per ton	\$
Ontario—con.						
Hay and clover.....1915	3,082,000	1.32	4,068,000	84	14.06	57,196,000
.....1916	3,059,000	2.00	6,118,000	95	11.90	72,804,000
Fodder corn.....1915	287,000	10.63	3,051,000	91	4.76	14,523,000
.....1916	248,000	6.50	1,612,000	64	4.80	7,738,000
Sugar beets.....1915	18,000	7.83	141,000	—	5.50	775,500
.....1916	15,000	4.75	71,000	78	6.20	440,000
Alfalfa.....1915	60,000	2.72	163,000	90	13.41	2,186,000
.....1916	56,000	3.00	168,000	94	9.75	1,638,000
		bush.	bush.		per bush.	
Manitoba—						
Potatoes.....1915	28,300	109.67	3,104,000	72	0.54	1,676,000
.....1916	28,000	170.00	4,760,000	92	0.61	2,904,000
Turnips and other roots.1915	4,300	269.01	1,157,000	84	0.35	405,000
.....1916	4,100	312.00	1,279,000	91	0.49	627,000
		tons	tons		per ton	
Hay and clover.....1915	159,000	1.93	307,000	84	9.63	2,956,000
.....1916	158,000	2.00	316,000	93	7.80	2,465,000
Fodder corn.....1915	18,000	3.36	60,000	49	8.33	500,000
.....1916	14,000	6.75	95,000	99	4.67	444,000
Alfalfa.....1915	4,700	2.19	10,300	88	11.17	115,000
.....1916	4,700	2.75	13,000	85	11.83	154,000
		bush.	bush.		per bush.	
Saskatchewan—						
Potatoes.....1915	30,300	146.15	4,428,000	85	0.49	2,170,000
.....1916	30,000	176.00	5,280,000	93	0.62	3,274,000
Turnips and other roots.1915	12,400	236.75	2,936,000	90	0.52	1,527,000
.....1916	12,200	266.00	3,245,000	88	0.57	1,850,000
Hay and clover.....1915	67,000	1.41	94,000	91	6.96	654,000
.....1916	75,000	1.97	148,000	92	5.85	866,000
Fodder corn.....1915	2,000	4.16	8,300	69	3.00	25,000
.....1916	1,800	2.75	5,000	86	6.00	30,000
Alfalfa.....1915	1,800	1.71	3,000	73	14.50	44,000
.....1916	1,850	2.85	5,300	86	10.25	54,000
		bush.	bush.		per bush.	
Alberta—						
Potatoes.....1915	27,300	188.84	5,155,000	91	0.33	1,701,000
.....1916	26,000	177.00	4,602,000	84	0.53	2,439,000
Turnips and other roots.1915	4,900	276.73	1,356,000	90	0.39	529,000
.....1916	4,500	255.00	1,148,000	92	0.61	700,000

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1915 and 1916.—con.

Field crops	Area	Yield per acre	Total Yield	Quality	Average price	Total Value
		tons	tons	p.c.	per ton	\$
Alberta—con.					\$	
Hay and clover.....1915	173,000	1.80	311,000	94	8.61	2,678,000
.....1916	196,000	1.75	343,000	84	8.62	2,957,000
Fodder corn.....1915	1,100	5.14	5,700	90	5.00	29,000
.....1916	1,000	3.50	3,500	100	9.00	32,000
Alfalfa.....1915	11,000	3.06	34,000	87	9.31	317,000
.....1916	12,000	2.65	32,000	91	10.70	342,000
		bush.	bush.		per bush.	
British Columbia—						
Potatoes.....1915	16,000	247.28	3,956,000	84	0.45	1,780,000
.....1916	15,300	189.00	2,892,000	84	0.70	2,024,000
Turnips and other roots.1915	3,800	455.61	1,731,000	87	0.39	675,000
.....1916	3,700	500.00	1,850,000	80	0.50	925,000
		tons	tons		per ton	
Hay and clover.....1915	167,000	2.34	391,000	88	14.57	5,697,000
.....1916	175,000	2.67	467,000	87	17.75	8,289,000
Fodder corn.....1915	430	12.62	5,400	98	4.00	22,000
.....1916	450	10.00	4,500	86	7.00	32,000
Alfalfa.....1915	12,100	3.52	43,000	92	14.84	638,000
.....1916	12,600	2.88	36,000	94	15.00	540,000

II. Area estimated to be sown to Fall Wheat in 1916, compared with 1915, and Condition on October 31, 1914, 1915 and 1916.

NOTE.—For condition 100=Standard or full crop.

Provinces	1915	1916	Increase (+) or decrease (—)		Condition on October 31		
					1914	1915	1916
	acres	acres	acres	p.c.	p.c.	p.c.	p.c.
Canada.....	1,100,800	899,300	—201,500	—18.30	97	88	76
Ontario.....	820,600	656,500	—164,100	—20.00	99	88	75
Manitoba.....	9,400	9,500	+ 100	+ 1.06	82	69	77
Saskatchewan.....	4,100	4,100	—	—	—	93	80
Alberta.....	260,500	224,000	— 36,500	—14.00	92	89	85
British Columbia.....	6,200	5,200	— 1,000	—16.12	96	95	86

III. Progress of Fall Ploughing, 1913-1916.

NOTE.—100=Area of land intended for next year's crop.

Provinces	1913	1914	1915	1916	Provinces	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada.....	54	71	53	51	Ontario.....	59	63	57	54
P.E. Island....	69	72	80	83	Manitoba.....	58	92	36	47
Nova Scotia....	48	51	62	50	Saskatchewan...	30	77	27	28
N. Brunswick..	56	69	73	68	Alberta.....	44	56	34	21
Quebec.....	70	75	76	69	Brit. Columbia..	49	60	61	50

IV. Percentage of Land under Summer Fallow, as compared with previous years, 1913-1915.

NOTE.—100=Area under summer fallow in the previous year.

Provinces.	1913	1914	1915	1916	Provinces	1913	1914	1915	1916
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada.....	98	99	80	92	Ontario.....	93	96	81	80
P.E. Island....	92	99	94	91	Manitoba.....	99	106	77	104
Nova Scotia....	87	95	96	86	Saskatchewan...	105	103	71	103
N. Brunswick..	95	86	90	82	Alberta.....	109	95	74	90
Quebec.....	92	92	89	84	Brit. Columbia..	100	97	91	91

PROGRESS OF SUMMER FALLOWING.

A note explanatory of the significance attached to summer fallowing in different parts of Canada was published in the Census and Statistics Monthly of November, 1915 (Vol. 8, No. 87, p. 279). From Table IV it will be noticed that in the prairie provinces the proportion of summer fallowing was high in 1916 but low in 1915, as compared in each case with the preceding year. These figures bear out what has already been reported by individual correspondents that the larger area sown to wheat in 1915 was to a considerable extent at the expense of the usual practice of summer fallowing. The resumption of the practice this year should have its effect in the improvement of yields next year.

TOBACCO CROP OF 1916.

The Tobacco Division of the Dominion Experimental Farms reports that the season of 1916 in Canada has not been favourable for the growing of the tobacco plant as a whole, the summer being rather cool. The acreage has been greatly curtailed owing to the fact that June being very cold and wet the farmers were not able in many instances to prepare the fields for the tobacco crop. While,

in general, the seed-beds were pretty good, in very many cases the seedlings had to be thrown away as they were getting too big for use. In the province of Quebec the yield will be much below the average, as it has been greatly reduced on account of the lack of drainage in many of the fields. However, on some soils provided with a good natural drainage, the crop has been pretty good, and there will be some good binders produced in the province, though in very limited quantities. In Ontario the average yield has been greatly reduced owing to the larger acreage planted in flue-cured tobacco, which, as a rule, yields much less than 1,000 lb. to the acre, while the Burley yields from 1,200 to 1,500 lb. The season has been a little late, still, as the weather conditions during the fall were very favourable for the curing, there will be some very nice tobacco put on the market. As a rule, the White Burleys will be a little shorter than usual, but they have cured a better colour than last year. As to the flue-curing tobacco, the amount produced will be pretty close to 2,000,000 lb., but owing to the unfavourable weather conditions during the growing season the proportion of really bright tobacco will be a little smaller than usual.

The following is an estimate of the acreage and yield of tobacco in Quebec and Ontario for the season of 1916, as compared with 1914 and 1915:—

	1914	1915	1916	1914	1915	1916	1914	1915	1916
Provinces									
	acres	acres	acres	lb.	lb.	lb.	lb. per acre	lb. per acre	lb. per acre
Quebec.....	4,750	4,500	2,933	5,000,000	4,050,000	3,000,000	950	900	1,023
Ontario.....	5,000	9,000	2,958	5,000,000	4,950,000	2,943,000	1,200	1,000	1,000
Total.....	9,750	13,500	5,891	10,000,000	9,000,000	5,943,000	1,128	1,000	1,000

The prices paid in Ontario for both the White Burley and the flue-cured tobacco this year have been exceptionally high, owing to the fact that the tobacco crop in Canada and in the United States for those types has been unusually short.

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—Potatoes are a large crop of good quality, except here and there, where late blight caused a shortage and rot developed. One correspondent complains that whilst there is a good demand for potatoes, farmers do not receive a fair proportion of the prices realised by shippers, who make a profit of from 80 cents to \$1 per bag. The transportation facilities, he writes, are totally inadequate, there being no schooners to speak of and the railways and steamers being crowded. Grass crops were good. Fall ploughing is well advanced.

Nova Scotia.—Potatoes yielded well, particularly where sprayed; but rot has appeared and large losses are resulting. Turnips did not yield heavily and are of poor quality. A good yield of hay was secured in excellent condition. The ground, which was hard and dry, has been softened by the late rains, so that good progress is being made with the ploughing.

New Brunswick.—The yield of potatoes is fair, but there are many complaints that rot is developing rapidly in the cellars. Turnips are small and have been injured by club root. Hay is plentiful. Ploughing is progressing favourably.

Quebec.—As a result of the drought in August and the continued wet weather of September, potatoes and other roots are very poor, both in yield and quality. Several correspondents state they are rotting in the cellars, although apparently in good condition when put in. Some attribute this to their immature condition when dug. Ensilage corn is an average crop. All prices are very high, except in the case of hay, which is everywhere very plentiful. On account of the late season and the continued wet weather of the month little fall ploughing has been done.

Ontario.—Wet weather in the early part of the season, followed by excessively dry, hot weather, is responsible for the reduced yields and inferior quality of all crops, except hay and alfalfa. Potatoes are everywhere poor and in many places a complete failure, hardly giving returns of the seed planted. Many farmers are forced to buy imported potatoes at a high price for their own use. Turnips too yielded very poorly and were further injured by the aphids. Corn yielded much below the average. Grass crops gave abundant yields of good quality, so that the shortage of roots for fodder will not be so seriously felt. Fall ploughing is backward owing to the baked condition of the soil, but late rains have improved matters and work is progressing. A smaller acreage of fall wheat is sown, as little land beside the summer fallows could be ploughed in time. The condition of the growing crop is only fair, as it has germinated unevenly and appears patchy.

Manitoba.—A great deal of rain and snow has fallen during the month, so that most of the threshing remains to be done. Ploughing has been delayed as most of the wheat is still in shock on the fields. Potatoes and roots gave good returns. Hay is abundant and of good quality. Fodder corn proved to be an excellent crop, but is not widely grown.

Saskatchewan.—Bad weather with snow and rain has everywhere delayed threshing. There is a shortage of labour, as many labourers have returned east, owing to the broken weather; so that from present appearances thousands of acres may be left standing in shock if the bad weather continues. Wild ducks and geese by thousands are eating up the grain in some districts. Not much ploughing has been done, as farmers cannot get on to the land. Potatoes suffered somewhat from frost, but yielded well on the whole. Hay, alfalfa and rye grass gave good returns.

Alberta.—Potatoes were generally fairly good, though small in size, and in places affected by scab and frost. Few roots are grown

in the province as mixed farming is not generally followed. All grasses were a good crop, and in southern Alberta feed has been good on the ranges. Threshing is late and protracted owing to the variable weather with much snow and rain. There is a shortage of labour, and machines are being worked by small crews, while the hours of daylight are short; so that work goes but slowly. Little ploughing has been done, except where wheat has been stacked, so that less fall wheat than usual has been sown.

British Columbia.—Potatoes suffered somewhat from drought and scab, and a lower yield of rather poor quality was realised. Turnips too were injured by maggots. Hay was plentiful, but was reduced in quality by wet weather at harvesting.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperature during October has averaged a little lower than for some years, the highest reading of the thermometer being 76·8, the lowest 23·6 and the mean 45·78, compared with extremes of 72·4 and 26 and a mean temperature of 49·16 for the corresponding period in 1915. The precipitation totals 2·92 inches, rain falling on fourteen different days, compared with 1·3 inch a year ago on ten days. The first snow flurries of the season occurred during the forenoon of the 17th, and a thunderstorm was experienced on the 20th. The bright sunshine of October averages 5·36 hours a day, as against 4·93 hours a day this time last year.

At the Experimental Farm, a two-acre field of potatoes, dug early in October, gave about an average crop both as regards yield and quality. Turnips and mangolds were pulled in the latter part of October, the crop being about two-thirds the usual one.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—“A very large percentage of the autumn work was completed during the favourable weather of October. The heavy rains all occurred at night, and sufficient fell on the thirteen different days to make the land mellow for ploughing and autumn cultivation. Potatoes and corn gave full crops. The percentage of rot in the early potatoes was higher than usual, but the later varieties are sound and have kept well. Mangolds were harvested about the middle of the month, yielding above the average. Pastures have remained good, and live stock at the end of the month is in excellent condition. The apple crop coloured up well, and turned out better than expected in earlier estimates. The Experimental Station put up exhibits at the Souris, Georgetown and Summerside exhibitions, held the first week in October. The attendance at these fairs was larger than usual, and the interest shown in the work of the Station was greater than ever before.”

Kentville, N.S.—W. S. Blair, Superintendent, reports:—“October opened with a heavy rain on the morning of the 1st, when 1·54 inch of rain fell, or nearly as much as the total precipitation for September; this was followed by a period of little rainfall to the

14th, after which the weather remained broken to the 22nd, 1.3 inch of rain being recorded on the 20th, and from the 23rd to the 31st it has been dry. The precipitation totals 5.38 inches. As the ground was exceptionally dry at the opening of the month, rains have aided fall ploughing very materially, excepting in very wet places. Light frosts have been recorded on seven different days, the first of the season being one degree on the 11th. The mean temperature of the month is 48.96, compared with 49.05 for the corresponding period in 1915, and 49.5 in 1914. The sunshine recorded aggregates 166 hours, compared with 171.1 hours in 1915, and 158.2 hours in 1914. Conditions have favoured the gathering of apples, potatoes and roots, which have been harvested in excellent condition. The apple crop generally is of good quality, and the prices are better than anticipated earlier in the season. Winter apples range at about \$2 per barrel tree run, that is, as gathered from the tree without sorting or packing. The potato market is good and prices have ranged from 60 cents per bushel at the beginning of the month to \$1 per bushel at its close, with prospects of a still greater advance. Steers for feeding are ranging about a half a cent per pound live weight higher than last season. Good stockers cost 6½ cents and medium grade for feeding 6 cents."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"October has been, for the greater part, fine, though the precipitation, 5.55 inches, is somewhat heavier, and the mean temperature, 46.44, somewhat lower than for the same period during 1914 and 1915. The heaviest rainfall was on the 1st, 2.45 inches being recorded. From the 14th to the 22nd, the showers were light but frequent. The rainfall, however, has been very beneficial, as the land, which had become very dry, has been put in good condition for ploughing. The season has not been very favourable for roots. Turnips are about an average crop, but mangolds have yielded a third less than usual. Most of the roots at the Experimental Farm have been harvested during the month in good condition. Prices for potatoes and turnips have been exceptionally high, 70 cents per bushel being realised for the tubers out of the field. At the Farm, some 45 acres have been ploughed during October, and about 40 acres remain to be ploughed. Good progress has also been made in clearing new land. Some 32 head of nice steers for feeding were purchased during the month. The price of steers is higher than for any previous year, good animals bringing all the way from \$6.50 to \$7.00. The quotations on lambs during the month have been exceptionally high also, running from 7½ cents to 8½ cents, and very hard to get even at those prices. The hay market remains very quiet, there being very little sold up to date. All other classes of feeds are ranging very high and oats are still advancing. The work carried on at this Farm during the month, other than caring for the live stock, poultry and bees, has included ploughing, stumping, harvesting roots, preparing the garden, pruning raspberry bushes, picking and storing apples and remodelling the old sheep barn into a bull and calf barn."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "During October there have been twenty days of sunshine and eight days of rain. The mean temperature is 45.6, against 48 last year, and an average for forty-two years of 45. The precipitation totals 3.6 inches, against 2.2 inches in 1915, and a forty-two year average of 3.9 inches. The weather could not have been improved upon for the harvesting of potatoes and roots. Farm work at the Station and generally is well advanced. Live stock has done well; pastures have been keeping up and no chilling rains nor heavy frosts have been experienced. The potato crop was about 75 per cent of an average, with some rot in certain localities. The yield on the Station farm was very good, some areas yielding up to 140 barrels per acre, and no rot was observed except in a small plot not sprayed. The benefits of spraying were clearly demonstrated, both as to yield and quality. The use of ground seaweed gave an increased yield of over fifty bushels per acre where commercial fertiliser alone was used. Root crops are very poor. There has been a heavy demand for turnips for the Boston market, shippers paying from 75 cents to \$1 per barrel of 150 lb. Grain crops are threshing out a little above the average yield. Corn everywhere has been exceptionally good. At the Station, even some of the dent varieties gave quite a proportion of ripe ears. Taking all crops into consideration and market prices, 1916 has been one of the most profitable years for farmers in the history of New Brunswick. Potatoes have reached the almost unprecedented price of \$4 per barrel of 165 lb., large shipments going to Cuba, Ontario and Montreal."

Ste. Anne de la Pocatière, Que.—Joseph Begin, Superintendent, reports: "The weather during October has been unusually cool and rainy, with five inches of snow falling on the 16th and 17th. The highest temperature recorded is 72.8, the lowest 22.2 and the mean 39.4. Rain has fallen on fourteen different days, giving a total precipitation of 5.66 inches, as against 3.61 in 1915. The bright sunshine averages 3.88 hours a day, compared with 4.2 hours a day in the corresponding period of 1915. Difficulty has been experienced in harvesting and storing potatoes and roots, on account of the frequency of rain, hail and snow about the middle of October. About half the potato crop and all roots have been harvested during the latter part of the month. Potato yields are only about 80 per cent of the average of the last five years. Mangolds and turnips are a little under the average. Still, mangolds, considering the disastrous drought of July and August, have yielded a surprising crop, especially those harvested from home-grown seed. Potatoes command the highest price ever known in the fall in this section, cars being loaded at \$1 per bushel. Live stock is going into winter quarters in good condition, and there is, in this section, an abundance of fodder."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "October has been colder, wetter, and brighter than the corresponding month, taking the average of the past four years, the figures being, respectively, 43.7 for the mean temperature, 5.42 inches for the precipitation, and 125 hours for the sunshine in 1916, and 46.1 mean,

3.82 inches rain, and 94.8 hours sunshine from 1912 to 1915. The excessive rainfall could not possibly benefit the crops of this year, whilst, with an ordinary amount of snow next winter, it will not be of any benefit for next year's crops either. The first killing frost did not occur until the 10th, which gave a chance to the corn and some of the grain which had to be sown late on account of the wet spring. In this district, ploughing has been delayed on the low and badly drained lands, on account of the frequent rains, showers occurring on fifteen different days. At the Station, all autumn work is practically finished, and all roots are in. On November 1st, ten feeding experiments are being started with horses, cattle, sheep and poultry, touching especially the economics of animal industry, such as the cost of keep of horses for a year, of rearing colts until ready to work and heifers until in milk, of wintering breeding ewes, of producing eggs during the months when they are high priced, etc."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "October has been a very favourable month for harvesting roots and for fall work in general. The highest temperature recorded is 78, compared with 73 last year, and the lowest 22 against 19. The mean temperature is 45.07, compared with 46.19 a year ago. The precipitation totals 2.59 inches, which is considerably less than last year, when the amount was 3.45 inches. Quite a number of farmers in this district have saved clover for seed this year, and have had it threshed with satisfactory results. This is an industry which should be encouraged as much as possible, and it is gratifying to know that more farmers went into it than last year. Ploughing is well advanced in this district. Farmers in this locality have marketed most of their lambs through the co-operative Sheep Breeders' Association and have realised very satisfactory prices for the same."

Brandon, Man.—W. C. McKillean, Superintendent, reports: "October has been a most unfavourable and disagreeable month. Snow fell on several different occasions, with a total fall of 9.5 inches. This interfered seriously with threshing and other farm work throughout Manitoba and made it necessary to stable and feed live stock unusually early. There still remains a considerable proportion of the threshing to be done, and most of the fall ploughing. At the Experimental Farm, fortunately, threshing had been completed before the bad weather came, and the pulling of field roots was also finished. Some progress has been made at ploughing, but during most of the month the carrying on of this work has been impossible."

Indian Head Sask.—W. H. Gibson, Superintendent, reports: "The weather during October has, undoubtedly, been the worst ever experienced in Saskatchewan at this season. The month started out cool and dull, with eleven inches of snow on the 3rd and 4th. By the 7th the snow had disappeared, leaving fields and roads in very muddy condition. Some threshing was done throughout the district from the 9th to the 14th; but, owing to the soft condition of the fields, it was found difficult to get the sheaves to the mills. On the 15th, dull, showery weather was again in evidence, ending with a typical blizzard on the 17th. This covered the stooks with soft snow, which

melted very slowly and had hardly disappeared by the 27th, when another storm once more covered the stooks with soft snow. On the 28th, the weather cleared up and remained so until the 31st. All roads are practically impassable, while the fields are in such a state that it is almost impossible to move threshing outfits at present. With continued fine weather, threshing will probably be resumed by the 3rd or 4th of November. Very little work on the land has been possible, and, as yet, practically no fall ploughing has been done. About 70 per cent of the threshing remains to be done in this district. In spite of the condition of the roads, considerable grain has been marketed at this point during October. The work on the Experimental Farm has included drawing straw and manure, taking up roots when weather permitted and caring for stock. Sixty steers have been purchased for experimental feeding tests during the coming winter. The poultry administration building was completed during the month, and also the foundation of the plant pathological laboratory of the Division of Botany."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The weather for October has been unusually wet, delaying threshing. At the end of the month, it is estimated that only forty per cent of the threshing in the northern part of the province has been finished. At the Experimental Station, about three hundred tons of straw of hauled-out wheat, oats and barley have been stacked, and during the month sixty-eight steers to which to feed this material have been purchased. These steers are two-year, three-year and four-year olds, of mixed Shorthorn and Hereford breeding. For their accommodation four corrals have been built, each 40 x 80 feet, with a feed rack down one side for hay and a table down the other side for meal, and twenty feet of the end covered over with straw."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The weather during October has been unusually unsettled, and, for the most part, has continued cool and cloudy. These conditions, following the rains in the latter part of September, have delayed threshing operations, and, at the end of the month, from 40 to 50 per cent of the crop is still in stook. Farmers, when not engaged in threshing, have been hauling wheat to market, and, as a result, very little fall ploughing has been accomplished in northwestern Saskatchewan. The average yield of wheat is much higher than was expected; even badly frozen fields are giving 12 bushels and upwards per acre, while the better crops of wheat are threshing as high as 40 bushels per acre. Very little barley has been grown, but oats are usually yielding quite satisfactorily. The high price of grain appears to more than counter-balance any decrease in yield due to the frost. At the Station, threshing has been completed and all the regular rotation fields ploughed. One small area, intended for bulk crops, remains to be ploughed at the end of the month. A carload of cattle has been purchased for winter feeding."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during the first half of October was unusually stormy, and caused general delay in threshing operations and, even at the

close of the month, it is estimated that more than fifty per cent of the threshing still remains to be done. Cereals are yielding fairly well, particularly oats. There have been fairly good yields of wheat, though the grade is irregular, due to the varying severity of the frost on the night of August 10th. There has been a slump in prices of both hogs and cattle as compared with prevailing quotations six weeks ago. Cattle have been going to market freely, but hogs are not in the country in any great numbers, and it is difficult to understand why there should be any serious break in prices. The high figure at which feed grains are being sold and the tendency which packers are showing to cut prices when the spring crop of pigs is ready, will, it is feared, result in a further curtailment of supply in 1917."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "In southern Alberta the weather during October has not been particularly favourable for threshing operations. There were two snowstorms, one in the first part of the month and the other a little after the middle of the month, which stopped threshing completely. In addition to the storms, high winds have been very prevalent, which, although there have not been many days when threshing had to be stopped, have, nevertheless, hindered operations materially. By the end of October, although threshing in particular localities was well advanced, on the whole there is not more than from 35 to 40 per cent of the work in the southern part of Alberta completed. The potato crop in this district has been very good, and, although the digging has been delayed on account of lack of labour, the weather during the month has been mild and there have been a good many cars of potatoes shipped out for Ontario points. At the Station, potatoes and roots have all been lifted and most satisfactory yields have been obtained in all cases. A number of steers and lambs have been purchased for winter feeding tests and also 100 ewes for breeding."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The weather during October has been favourable, and range cattle are in good condition for the winter. The snow, as yet, has not reached the flats; there is, however, considerable in the mountains. The yield of field roots and potatoes is lighter than last year, but these crops have been harvested under good conditions. At the Experimental Station, roots have been pulled, winter vegetables stored, grain from the experimental plots has been cleaned, proving a good sample, and the fall ploughing has been completed. The season's work attending fairs with the Experimental Farm exhibit, is over, again resulting in increased correspondence."

Agassiz, B.C.—P. H. Moore, Superintendent, reports: "The dry weather experienced in September has been continued during October. There has been only a trifle more rain than in September and a little less sunshine. There have been several frosts. The precipitation amounts to only 1.7 inch, which is very much below the average and nearly ten inches less than the same month last year. Conditions have been excellent for the harvesting of roots and corn. Mangolds average about 34 tons per acre. The corn crop was much better than expected, yielding over 12 tons per acre. The slight frosts which were experienced did not injure either crop. The Farm live

stock is in good condition. The two-year-old heifers which freshened during the month are giving excellent returns, and the main milking herd is doing well. Winter experimental work with the milking herd will start on November 1. Fall litters of pigs are coming and giving good returns. The sheep flock is in good condition and quite a number of fall lambs have come. The lamb finishing trials with clover and rape and grain have been completed during the month, the cheapest production being from rape alone; the extra gain made by feeding grain on both rape and clover was not sufficient to pay for the grain. This was a repetition of last year's work. In the poultry pens, the pullets are giving the largest proportion of eggs at the present time, and this production is increasing daily. The work about the garden and lawns has consisted chiefly in preparing for winter and the planting of fall bulbs. Owing to the dry weather, the autumn colours have been exceptionally grand this year."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Much needed rains fell during the closing days of October, making possible the germination of the autumn-sown cereals and the freshening up of the pasture areas and terminating the longest dry period that this district has experienced for many years. Silo filling, apple packing and potato digging occupied much of the time of those on the land during the month. Owing to the dry condition of the soil, little ploughing or land tillage has been accomplished, consequently the area sown to autumn wheat and rye is much below the average. Much stump and brush burning has been done during the month and considerable headway made in land-clearing operations throughout the island."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of October are given in the following table:—

Meteorological Record for October, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	Highest	Lowest	Mean		Possible	Actual
Ottawa, Ont.	76.8	23.6	45.78	2.92	339	166.2
Charlottetown, P.E.I.	78.0	28.0	48.84	4.22	339	120.0
Kentville, N.S.	76.0	24.0	48.96	5.38	339	166.0
Nappan, N.S.	75.0	20.0	46.44	5.55	339	132.8
Fredericton, N.B.	80.0	22.0	45.60	3.60	338	151.9
Ste. Anne de la Pocatière, Que.	72.8	22.2	39.40	5.66	336	125.2
Cap Rouge, Que.	72.0	24.2	43.70	4.42	339	125.0
Lennoxville, Que.	78.0	22.0	45.07	2.59	330	149.5
Brandon, Man.	72.0	— 3.9	35.80	1.55	333	108.0
Indian Head, Sask.	70.0	9.0	33.80	2.35	331	102.8
Rosthern, Sask.	64.8	9.4	36.20	0.81	334	116.2
Scott, Sask.	49.0	23.7	36.30	0.50	335	123.0
Lacombe, Alberta.	74.7	16.9	38.10	1.01	328	138.6
Lethbridge, Alberta.	75.0	18.0	40.00	1.99	331	168.8
Invermere, B.C.	67.0	20.0	39.20	0.54	332	159.2
Agassiz, B.C.	73.0	29.0	48.80	1.70	334	137.1
Sidney, Vancouver I., B.C.	64.0	35.0	47.20	2.01	335	145.0

Ottawa, November 15, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The English Board of Agriculture reports (November 1) that grain generally was only secured in fair condition, and this applies more particularly to the crops that were harvested late; there are, however, many districts in which quality and condition are described as good. The harvest was a late one, and less threshing than usual has taken place, partly owing to that cause, partly owing to the unsuitable weather and partly to shortage of labour for manning the threshing machines. Much of the potato crop was still in the ground at the date of the reports; even in the south, lifting was hardly completed, and probably quite a fourth, or more, remains to be harvested. Comparatively little disease is reported from the large Yorkshire and Lancashire potato-growing districts; but there is much disease in Cambridgeshire and the fen lands of adjoining counties, and in the southwest, while in the south also a certain amount is reported. Early potatoes were generally satisfactory and sound. The lateness of the harvest, and wet weather towards the end of October, have generally made autumn cultivation and wheat sowing very backward. The first fortnight was favourable, and much work was done during that time. Here and there reports state that wheat sowing was as advanced as usual, but such statements are exceptional. A large proportion of the area intended for wheat still remained to be sown at the end of the month, and the interruption caused by the storms rendered the prospect of a large wheat area problematical. Labour has generally been very deficient, especially horsemen and men for threshing; there are, in fact, statements from some districts that both horses and threshing machines have been idle from this cause. Women have been largely employed at high wages for lifting potatoes.

New South Wales.—The Government Statistician reports (October 7) that the area sown in the State to wheat for the season of 1916-17 amounts to 4,524,000 acres, a decrease of 647,864 acres, or $12\frac{1}{2}$ per cent, as compared with the previous year, when the area sown, viz., 5,172,649 acres, reached the maximum. The decrease is attributed to a variety of causes, the principal reason being the labour shortage, as regards both the putting in and taking off of the crop. In a number of districts there was a shortage of labour for ploughing and sowing operations, and in other cases farmers hesitated to crop a larger area than they could comfortably harvest themselves. Wet weather also retarded the sowing, the boggy condition of the paddocks rendering seeding operations impossible until it was too late. The unsettled state of the wheat market, and the difficulty in disposing of the harvest, have contributed materially to the reduction; whilst in other directions the enhanced prices ruling for sheep and wool have induced farmers, in some instances, to convert cultivation paddocks into sheep walks. On the basis of the returns received, it appears that the area for hay will be 720,000 acres, and is a fairly large proportion (16 per cent) of the total area sown with wheat. Owing

to the difficulty experienced in disposing of last season's grain crop, a number of farmers are inclined to cut a larger proportion of the area for hay, which will then be stacked on the farms in readiness for the next dry spell. About 3,803,000 acres will be reserved for grain; and, although this area is 432,000 acres below last year's grain area, it is nearly 600,000 acres in excess of the area reaped for grain in 1913-14, when 38,000,000 bushels were garnered. Signs of rust have appeared in a number of districts, owing to the abnormal rainfall, but the extent does not appear to be serious; and generally, reports indicate that there are splendid prospects for another bountiful harvest. It is too early to forecast with any degree of precision what the harvest will be, but even taking on the average a yield of 13 bushels, this would give a total production approximating 50,000,000 bushels, and, coming after the bumper crop of 67,000,000 bushels of the previous season, it will tax severely the facilities both for harvesting and for disposing of the crop. The area sown this season, although 648,000 acres less than last year's area, is, nevertheless, 381,000 acres in excess of the acreage sown in any other year.

Japan.—H. M. Ambassador at Tokio reports (October 6) that the actual crop of wheat, barley and rye for the current year amounts to 23,268,320 koku (115,479,000 bushels), which shows a decrease of 513,122 koku (2,547,000 bushels), that is 2·2 per cent compared with the yield of the preceding year, but an increase of 1,004,558 koku (4,986,000 bushels), that is $4\frac{1}{2}$ per cent compared with the yield of the average year. It was feared that the growth of the crop would be to some extent interfered with in consequence of short manuring and the prevalence of unseasonable weather shortly after the sowing. With the exception, however, of some localities where damage was done by storms and hurricanes after the month of April, the weather was, on the whole, favourable to the flowering and ripening of the crop. This accounts for an increased crop of 288,851 koku (1,433,500 bushels) over the estimate.

Sweden.—H. M. Minister at Stockholm has forwarded information regarding crop conditions in Sweden, which states that on the whole the quantity of grain and root crops is very good, though not excellent, while the quality is rather inferior.

Russia.—H. M. Commercial Attaché at Petrograd reports that according to the statistics issued by the All-Russian Sugar Refiners' Society the area under sugar beet in Russia this year was 590,775 dessiatines (1,595,000 acres), as compared with 660,796 dessiatines (1,784,000 acres) last year. The yield, it is estimated, will be 644,246,000 pouds (11,633,000 tons), as against 687,583,000 pouds (12,415,000 tons) last year, the yield per dessiatine being 1,090 pouds (7·29 tons per acre), as compared with 1,040 pouds (6·96 tons per acre) in 1915.

United States.—The Crop Reporting Board of the U. S. Department of Agriculture reports on the production, quality and price of this year's crops, as follows:—

Crops	Yield per acre		Total yield			Qual- ity ¹	Price	
	1916 prelimi- nary	10 yr. average	1915	1916	Average 1910-14	1916	1915	1916
	bush.	bush.	000 bush.	000 bush.	000 bush.	p.c.	cents	cents.
Corn.....	24.3	26.6	3,054,535	2,643,508	2,732,457	-0.5	61.9	85.0
Wheat.....	11.9	15.0	1,011,505	607,557	728,225	-3.7	93.1	158.4
Oats.....	30.3	30.3	1,540,362	1,229,182	1,157,961	+1.4	34.9	49.0
Barley.....	23.7	25.6	237,009	183,536	186,208	-3.4	50.1	83.2
Rye.....	15.3	16.4	49,190	41,884	37,568	-1.6	85.7	115.2
Buckwheat.....	14.0	20.0	15,769	11,447	17,022	-5.1	78.5	102.9
Potatoes.....	79.6	97.5	359,103	288,964	360,772	-2.6	60.8	135.7
Flaxseed.....	9.6	8.6	13,845	15,300	17,353	+6.5	162.9	234.7
	lb.	lb.	lb.	lb.	lb.			
Tobacco.....	819-12	822.4	1,060,587	1,145,530	991,958	+3.0	-	-
	tons	tons	tons	tons	tons		\$	\$
Hay.....	1.64	1.41	85,225	86,155	66,234	+3.1	10.83	10.68
Sugar beets.....	9.8	10.15	6,511	6,671	5,391	-	5.67	6.17

¹Percentage above or below average.

The United States apple crop of the past season amounts to 67,695,000 barrels, which is approximately 9,000,000 barrels less than last year, but nearly 2,000,000 barrels in excess of the average.

H. M. Consul at Galveston reports (October 18) that the local flour mills of Texas and of the adjoining States have purchased nearly the entire wheat crop; there will of necessity be but little more of it exported from this port during the present season. The crop was over 50 per cent short of that of the previous year.

FIELD CROPS OF ENGLAND AND WALES, 1916.

The preliminary estimate of the production of field crops in England and Wales, as issued by the English Board of Agriculture on November 1, shows that the total yield of wheat in England and Wales for 1916 is 55,540,472 bushels, of barley 41,740,592 bushels, of oats 83,689,312 bushels, of beans 6,900,976 bushels, of peas 2,081,032 bushels and of seeds and meadow hay 8,837,079 long tons, which is 2½ million tons, or 34 per cent more than last year. The production of wheat is about 12 million bushels less than last year, but greater than in 1912 or 1913. The yield per acre, 29.05 bushels, is about 2 bushels below that of 1915 and 2.84 bushels below the decennial average for 1906-15. Oats are only slightly below the average and are slightly better than last year. Barley, although about 1½ bushel per acre below average, is better than last year, and, with the acreage increased, has given a total nearly 5,600,000 bushels in excess of 1915. Oats are only very slightly below the average, and slightly better than last year; the total production, 83,689,312 bushels, is the largest since 1910.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The October issue of the Bulletin of Agricultural and Commercial Statistics gives the latest returns of this year's production of wheat, rye, barley and oats in countries of the northern hemisphere, including

48 governments of European Russia, but not Russia in Asia. For wheat, the countries reporting number 14, for rye 9, for barley 13 and for oats 11. The following belligerent countries are not included: Scotland, France, Algeria, Portugal, Belgium, Germany, Austria, Hungary, Bulgaria, Serbia and Turkey. Amongst neutral countries not included are Luxemburg, Denmark and Sweden, the two last named being northern countries with comparatively late harvests. In the table on pages 300 and 301 the data of the Rome Bulletin are transcribed with Canadian equivalents of the metric denominations. A new feature of this table is the percentage comparisons made with quinquennial averages in addition to the comparisons with the previous year. Last year being for most countries one of exceptionally abundant harvests a comparison with that year alone tends to mislead. The quinquennial average given is that of the pre-war period 1909-13, chosen apparently because applicable to the great majority of the countries in the table.

Summarised, the figures of production, as given in the table, stand as follows:

Crop	No. of countries	Bushels	P.c. of 1915	P.c. of 1909-13
Wheat.....	14	2,218,354,000	72.5	92.7
Rye.....	9	936,942,000	94.4	114.8
Barley.....	13	957,332,000	90.8	103.2
Oats.....	11	2,581,403,000	82.9	105.3

Thus all four crops give total yields considerably below those of 1915, wheat by 27.5, rye by 5.6, barley by 9.2 and oats by 17.1 per cent, whilst all these crops, excepting wheat, are above the average production of 1909-13, rye by 14.8, barley by 3.2 and oats by 5.3 per cent, wheat being 7.3 per cent below the average.

It is evident from the table that the effort to produce more wheat occasioned by the rise in price on the outbreak of the war was universal for 1915 and also that this effort, being in the nature of a spurt and being followed by withdrawals from the rural population through enlistment, could not be maintained for 1916. The table shows that for wheat the acreage was 13.4 per cent less in 1916 than in 1915, but only 2.8 per cent less than the five year average. As between 1915 and 1914 the increase in the acreage sown to wheat for the countries in the table was about 10 per cent.

Finally, it may be noted that the net average yield per acre in 1916 for all the countries considered as a unit is for wheat approximately $2\frac{1}{2}$ bushels less than in 1915 and a little more than half a bushel less than the five year average; for barley the yield per acre, although less than in 1915, exceeds the five year average; oats, while $5\frac{1}{4}$ bushels below last year, are nearly equal to the five year average, and rye is about the same as last year, but two bushels above the five year average.

Area and Production of Wheat, Rye, Barley and Oats in Countries of the Northern Hemisphere 1915 and 1916, with percentage comparisons.

Countries	1915	1916	Five years' average 1909-1913	P.c. of 1915	P.c. of average	1915	1916	Five years' average 1909-1913	P.c. of 1915	P.c. of average	1915	1916	Five years' average 1909-1913
	000 acres	000 acres	000 acres	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre	bush. per acre	bush. per acre
Wheat—													
Spain.....	10,037	10,071	9,547	100.3	105.5	139,299	152,921	130,447	109.8	117.2	13.83	15.17	13.68
England and Wales..	2,170	1,912	1,787	88.1	107.0	67,925	54,655	55,770	80.5	98.0	31.23	28.55	31.23
Ireland.....	87	76	43	88.3	177.6	3,238	2,711	1,597	83.7	169.7	37.47	35.54	37.17
Italy.....	12,502	11,678	11,722	93.4	99.6	170,542	180,044	183,330	105.6	98.2	13.64	15.46	15.61
Norway.....	12	14	12	110.0	110.1	284	305	306	107.4	99.7	22.93	22.30	24.68
Netherlands.....	160	136	138	84.6	98.5	5,680	4,034	4,896	71.0	82.4	35.39	29.74	35.54
Rumania.....	4,706	4,844	4,576	102.9	105.8	89,787	78,521	87,793	87.5	89.4	16.21	19.03	19.18
Russia in Europe (a)	16,052	13,770	14,233	85.9	96.7	286,746	251,708	198,260	87.8	127.0	17.84	18.29	13.98
Russia in Europe (b)	42,175	34,757	44,693	82.4	77.8	459,449	343,717	426,359	74.2	80.6	11.00	9.96	9.52
Switzerland.....	114	124	105	109.6	118.3	3,957	4,053	3,314	102.4	122.3	34.80	32.71	31.67
Canada.....	12,986	10,085	10,494	77.7	96.1	376,310	159,126	1204,711	42.3	77.7	29.00	15.76	19.48
United States (a)...	42,013	33,020	28,356	78.6	116.4	655,056	454,713	441,218	69.4	103.1	15.61	13.83	15.61
United States (b)...	19,445	17,851	18,741	91.8	95.3	356,466	152,853	245,483	42.8	62.3	18.29	8.62	13.09
British India.....	32,475	30,143	29,218	92.8	103.2	376,736	318,005	351,766	84.4	99.4	11.60	10.56	12.04
Japan.....	1,250	1,280	1,197	102.4	107.0	25,799	24,444	24,166	94.8	101.2	20.67	19.03	20.22
Egypt.....	1,582	1,447	1,314	91.5	110.2	39,148	36,544	34,814	93.3	105.0	24.68	25.28	26.47
Totals and Averages	197,764	171,208	176,176	86.6	97.2	3,656,495	2,218,354	2,394,236	72.5	92.7	15.45	12.96	13.59
Rye—													
Spain.....	1,820	1,856	1,988	101.9	93.4	26,102	31,437	27,636	120.4	113.8	14.34	16.89	13.86
Ireland.....	7	7	8	88.8	83.3	218	198	239	91.1	82.9	29.31	29.95	30.11
Italy.....	294	284	303	96.6	93.9	4,362	5,354	5,329	122.7	100.5	14.82	18.80	17.52
Norway.....	37	49	37	130.0	130.9	829	729	973	88.0	74.9	22.15	14.98	26.13
Netherlands.....	549	499	557	90.8	89.5	13,728	12,389	16,175	90.3	76.6	25.01	24.85	29.00
Russia in Europe (a)	60,418	57,970	59,323	95.9	97.7	886,351	836,332	722,849	94.4	115.7	14.50	14.66	12.11
Russia in Europe (b)	576	439	457	76.2	96.1	6,969	4,395	4,399	63.1	99.9	12.11	10.04	9.56
Switzerland.....	66	71	60	107.4	118.8	2,059	2,165	1,783	105.2	121.4	30.91	30.27	29.63
Canada.....	113	160	113	141.2	130.1	2,394	2,059	12,189	86.0	94.1	21.19	12.96	17.84
United States.....	3,155	2,727	2,236	86.5	121.9	49,190	41,884	34,916	85.1	120.0	15.61	15.29	15.61
Totals and Averages	67,023	64,062	65,092	95.6	98.4	992,201	936,942	816,488	94.4	114.8	14.86	14.63	12.54

(a) Winter sown.

(b) Spring sown.

¹ Four years' average 1910 to 1913.

Area and Production of Wheat, Rye, Barley and Oats in Countries of the Northern Hemisphere 1915 and 1916, with percentage comparisons—con.

Countries	1915	1916	Five years' average 1909-1913	P.c. of 1915	P.c. of average	1915	1916	Five years' average 1909-1913	P.c. of 1915	P.c. of average	1915	1916	Five years' average 1909-1913
	000 acres	000 acres	000 acres	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre	bush. per acre	bush. per acre
Barley—													
Spain.....	3,786	4,035	3,510	106.6	115.0	82,764	84,373	74,690	101.9	113.0	21.93	20.82	21.19
England and Wales..	1,232	1,332	1,488	108.1	89.5	37,984	49,138	50,658	129.4	97.0	30.85	36.99	34.01
Ireland.....	142	150	166	106.0	90.7	5,885	6,303	7,510	107.1	83.9	41.64	42.01	45.35
Italy.....	608	596	613	98.0	97.2	11,051	10,105	10,104	91.4	100.0	18.22	16.91	16.54
Norway.....	89	98	89	110.0	110.8	2,821	3,026	3,016	107.3	100.3	31.60	30.85	34.01
Netherlands.....	63	60	68	94.8	87.8	3,234	2,499	3,259	77.3	76.7	51.11	41.63	47.77
Rumania.....	1,371	1,454	1,319	106.0	110.2	29,031	30,038	24,988	103.5	120.2	21.19	20.63	18.96
Russia in Europe....	27,275	25,106	25,396	92.0	98.9	475,510	442,386	417,719	93.0	105.9	17.47	17.66	16.36
Switzerland.....	16	18	13	109.2	137.8	588	629	441	107.0	142.8	36.62	35.87	34.57
Canada.....	1,509	1,398	1,501	92.6	93.2	53,330	32,298	42,744	60.6	75.6	35.32	23.05	28.25
United States.....	7,395	7,757	7,620	104.9	101.8	237,004	183,532	181,877	77.4	100.9	31.97	23.61	23.79
Japan.....	3,239	3,109	3,189	96.0	97.5	100,863	99,821	97,868	99.0	102.0	31.23	32.16	30.67
Egypt.....	463	439	398	94.9	110.3	13,747	13,184	11,761	95.9	112.1	29.74	30.11	29.55
Totals and Averages	47,188	45,552	45,370	96.5	100.4	1,053,812	957,332	926,635	90.8	103.2	22.33	21.02	20.42
Oats—													
Spain.....	1,403	1,391	1,276	99.2	109.0	34,776	32,892	27,398	94.6	120.1	24.67	23.62	21.52
England and Wales..	2,088	2,085	2,039	99.8	102.2	95,914	86,652	91,212	80.3	95.0	45.92	41.46	44.61
Ireland.....	1,089	1,072	1,049	98.4	102.2	64,568	58,244	61,336	90.2	95.0	59.30	54.32	58.52
Italy.....	1,208	1,102	1,253	91.2	88.0	29,594	24,610	34,772	83.3	70.9	24.40	22.20	27.82
Norway.....	270	297	263	110.0	112.9	11,315	10,277	11,237	90.8	91.5	41.99	34.64	42.77
Netherlands.....	351	343	346	97.9	99.3	18,488	20,931	18,993	113.2	110.2	52.74	61.14	54.84
Rumania.....	1,065	1,068	1,105	100.3	96.6	28,172	27,234	27,338	96.7	99.6	26.50	25.45	24.67
Russia in Europe....	35,651	35,492	36,121	99.6	98.3	854,498	818,794	782,552	95.8	104.6	23.88	23.09	21.78
Switzerland.....	92	103	81	112.1	127.8	5,278	6,393	4,508	121.1	142.1	57.20	61.93	55.63
Canada.....	11,365	10,644	9,671	93.7	110.1	520,098	338,466	432,243	65.1	103.7	45.66	31.75	33.85
United States.....	40,781	40,600	37,358	99.6	108.7	1,449,756	1,156,880	1,064,637	79.8	108.7	35.42	28.60	28.60
Totals and Averages	95,363	94,197	90,562	98.8	101.6	3,112,457	2,581,403	2,450,221	82.8	105.3	32.61	27.19	27.06

¹ Four years' average 1910 to 1913.

EXPORTABLE SURPLUS OF WHEAT IN THE UNITED STATES.

The latest estimate of the United States wheat crop for the year 1916 is 607,557,000 bushels, and it is estimated that on July 1 the surplus from the crop of 1915 amounted to 163 million bushels, of which 74 million bushels were on farms and 89 million bushels were commercial stocks. This makes the total quantity for disposal to be 770,557,000 bushels. The per capita consumption of wheat in the United States is approximately 5.3 bushels, and on the basis of the present population the requirements for food in the current crop year are expected to be about 535 million bushels. The amount required for seed purposes is approximately 80 million bushels; so that the total domestic requirements will be about 615 million bushels. This quantity deducted from the 770½ million bushels given above as the estimated production of 1916, plus the surplus from the harvest of 1915, leaves about 155½ million bushels as the quantity available for export during the United States crop year 1916-17. If we add the Canadian surplus of 99½ million bushels, as estimated in the Census Monthly of October (page 273), we get a total of 255 million bushels as the combined exportable surplus of the United States and Canada.

INTERNATIONAL STATISTICAL YEAR BOOK.

The Permanent Office of the International Statistical Institute has just published the first volume of its Year Book, consisting of the Condition of the Population (Europe). The Permanent Office of the International Statistical Institute was established at the 14th Session of the Institute held at Vienna in 1913,¹ under the following scheme as finally approved by the General Assembly:—

The objects of the Permanent Office of the International Statistical Institute shall be (1) to collect, examine and preserve in its library and archives the statistical documents of different countries and international statistical offices. From these it shall extract the data that lend themselves to international comparisons, especially those relating to demography; (2) to facilitate by permanent action the uniformity of methods, schedules, compilation processes and methods of publication, so that as far as possible the results may be comparable; (3) to publish as soon as possible an International Year Book, a periodical bulletin and if necessary other works, in which besides statistical tables there shall be a bibliography, as well as notices relating to progress and new departures in certain countries, the details of which it would be useful to make generally known; (4) to assist the Institute's Bureau in preparing the sessional programme.

The location of the Permanent Office shall be the same as that of the Bureau of the Institute. It shall be under the authority of the Institute, as represented by its Bureau and shall be directed by the Institute's Secretary General. With the approval of the Institute's Bureau the Secretary General may nominate one or more divisional chiefs and the staff necessary for carrying out the work. The expenses of the Office shall be covered (1) by a subvention from the International Statistical Institute the amount of which shall be fixed by the General Assembly; (2) by subventions from States and institutions, which the Institute's Bureau shall undertake to request; (3) by gifts and legacies; (4) by proceeds of sales of publications.

¹See Census and Statistics Monthly for November, 1913, (Vol. 6, No. 64, page 271).

The financial administration of the Permanent Office will be kept distinct from that of the International Statistical Institute and no sum at the disposal of the Permanent Office may be spent upon objects other than those above defined. An Inspection Committee (Conseil de Surveillance) shall control the financial administration of the Permanent Office. It shall comprise one representative of each State furnishing a subvention of at least 5,000 francs (\$965). Every country providing more than 10,000 francs (\$1,930) shall be entitled to two representatives. In addition, the Institute may allow each institution or donor contributing to the expenses of the Permanent Office to be represented upon the Inspection Committee.

The Bureau of the Institute being situated at The Hague, the Permanent Office has also its location there under the direction of the Secretary General of the Institute, Dr. H. W. Methorst, who is Director of the Dutch Central Statistical Office. Up to the present, financial contributions towards the work of the Permanent Office have been received from the Governments of the following countries: Austria, Bulgaria, Denmark, France, Germany, Holland, Hungary, Italy, Norway, Sweden and Switzerland, besides extra gifts from a variety of sources, including the Royal Statistical Society of London and the Statistical Society of Paris. At the end of the war it is probable that the other countries represented upon the International Statistical Institute will also consider the question of contributing towards the expenses. At present the work of the Permanent Office is conducted by officials of the Dutch Central Statistical Office in their spare time, and by Mlle. Quanjer, who was appointed as Secretary of the Permanent Office on November 1, 1913, and who is charged with the correspondence, the care of the Archives and Library and with the typewriting.

The new Year Book is devoted to the condition of the Population of Europe and is divided into nine sections, lettered A to J. Section A treats of the area, population and density of each country; B of the population by sex and conjugal condition for the years 1850, 1880, 1900 and 1910; C by sex and age-periods; D by age and conjugal condition in absolute and relative figures; E by nationalities and birthplace; F by national languages spoken; G by religions; H by education and literacy and J by infirmities. In addition to the tables, a map shows graphically the density of the population in the countries of Europe by provinces, districts and other large divisions, and diagrams illustrate the population by sex and age groups in the different countries of Europe according to the censuses nearest to the year 1910.

It is announced in the preface that the present volume will be followed shortly by a second on the movement of the population of Europe, and that data are in hand for similar studies relating to the condition and movement of the population of countries outside of Europe.

The new Permanent Office of the International Statistical Institute has, therefore, made an excellent start in the preparation and presentation of international comparative statistics of population, which should prove of great interest and value to all students of demographic phenomena.

THE CANADA YEAR BOOK, 1915.

This publication of the Census and Statistics Office is now on the point of issuing from the press. It will be found to contain the following special articles: (1) Local Government of Canada by various writers; (2) Economic Geology in Canada, 1915; (3) Flora of Canada; (4) Faunas of Canada. The following are the other principal new features of the work. In Section III (Area and Population), tables relating to the foreign-born population, the population of military age and the occupations of the people, as derived from the Census returns of 1911, replace other Census tables previously given. Statistics of the universities and of higher education generally have been added to the tables of elementary and secondary education in Section IV (Education). Amongst other new statistics in Section VI (Production), are tables of grain prices and of ocean freight rates over long series of years and of the numbers of farm live stock in the principal countries of the world. This Section includes also a description of the Dominion and Provincial Agricultural Experiment Stations. To Section VII (Trade and Commerce) have been added tables showing the increase or decrease due to variation in quantity and in price of the exports and imports of Canada, by principal classes of products, for the year 1915 as compared with 1914. In Section X (Finance), the results are given of further efforts to collect municipal statistics, the new tables presenting (a) statistics of a general character and (b) financial statistics. Section XI (Administration) includes an outline of the work of the Commission of Conservation and finally Section XII (Principal Events of the Year) summarises the Acts of Provincial Legislatures in addition to those of the Dominion Parliament as heretofore.

THE WEATHER DURING OCTOBER.

The Dominion Meteorological Office reports that the mean temperature of the month was considerably below average from Manitoba westward to British Columbia, the negative departures being as much as 5° and 6° in western Manitoba and southern Saskatchewan. From Lake Superior eastward the average was very generally slightly exceeded, but in some districts near Lake Huron and in Nipissing the mean was slightly below average. The total precipitation was less than average in British Columbia, Nova Scotia and Prince Edward Island, and above average in the other provinces, excepting in districts immediately to the north of the western half of Lake Superior. The largest positive departures were in Ontario, near Lake Huron and the Georgian Bay, and in parts of Quebec, and the largest deficiency was in the lower mainland of British Columbia. Snow formed a large percentage of the total in many parts of the prairie provinces, the fall at Qu'Appelle aggregating 25 inches. The snow, however, had disappeared in practically all sections by the 31st.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	Oct. 7		Oct. 14		Oct. 21		Oct. 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 65½	1 70	1 64½	1 68½	1 64½	1 78½	1 81½	1 89
No. 2 Nor.....	1 62½	1 66½	1 61½	1 66½	1 61½	1 75½	1 78½	1 85½
No. 3 Nor.....	1 57½	1 62	1 56½	1 60½	1 56½	1 70½	1 73½	1 80½
No. 4.....	1 50½	1 52	1 44	1 50½	1 44½	1 60½	1 64½	1 71½
No. 5.....	1 44½	1 48½	1 37½	1 42½	1 37½	1 45½	1 48½	1 56½
No. 6.....	1 31½	1 35	1 26½	1 31½	1 26½	1 39½	1 42½	1 44
Feed.....	1 03½	1 10	1 04	1 09½	1 04	1 20	1 23½	1 29½
Oats—								
No. 2 C.W.....	0 53½	0 55½	0 52½	0 55½	0 52	0 56½	0 58	0 61½
No. 3 C.W.....	0 53	0 54½	0 51½	0 54½	0 50½	0 55½	0 56½	0 60½
No. 1 Feed Ex.....	0 53	0 54½	0 51½	0 54½	0 50½	0 55½	0 56½	0 59½
No. 1 Feed.....	0 52½	0 54½	0 50½	0 54½	0 50½	0 54½	0 56½	0 59½
No. 2 Feed.....	0 52½	0 54½	0 50½	0 54	0 49½	0 54½	0 55½	0 60½
Barley—								
No. 3 C.W.....	0 92	0 96	0 95	1 00	1 01	1 04	1 04½	1 11
No. 4 C.W.....	0 86½	0 91	0 90	0 94	0 94	0 96½	0 97	1 05
Rejected.....	0 89	0 80	0 79	0 82	0 82½	0 85½	0 86	0 95
Feed.....	0 78	0 80	0 79	0 81	0 82	0 85	0 85½	0 95
Flax—								
No. 1 N.W.C.....	2 23	2 26½	2 23½	2 28½	2 27½	2 49½	2 48	2 53½
No. 2 C.W.....	2 20	2 23½	2 20½	2 25½	2 24½	2 46	2 45	2 50½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	July		August		September		October	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 09	1 36½	1 29	1 65	1 47	1 48	1 58	1 95
Chicago.....	1 04	1 28½	1 26	1 58½	1 40½	1 43½	1 57½	1 88
New York (f.o.b. afloat).....	1 13½	1 35½	1 33	1 66	1 52	1 58½	1 64½	2 00½
Corn, No. 2 Mixed—								
St. Louis.....	0 75½	0 82½	0 80½	0 87½	0 84½	—	0 86½	1 11
New York (f.o.b. afloat).....	0 88	0 93½	0 93	1 01	1 00½	1 01½	0 97½	1 20
Corn, No. 2—								
Chicago.....	0 78	0 84½	0 82	0 83½	0 85½	0 86½	0 88½	1 11
Oats, No. 2—								
St. Louis.....	0 38	0 41½	0 38	0 43	0 45	0 45½	0 46	0 54
Chicago.....	0 38½	0 42	0 41	0 47	0 44½	0 45½	0 45½	0 53½
Rye, No. 2—								
Chicago.....	0 94	1 01	1 00	1 26½	1 15	1 15½	1 24	1 41

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	Oct. 2		Oct. 9		Oct. 16		Oct. 23		Oct. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	2 15½—2 18½	2 21½—2 24½	2 30—2 33	2 33½—2 36½	2 39½—2 42½					
“ No. 2.....	2 12½—2 15½	2 18½—2 21½	2 27½—2 30	2 30½—2 33½	2 36½—2 39½					
“ No. 3.....	—	2 15½—2 18½	2 24½—2 27½	2 27½—2 30½	—					
“ feed.....	—	2 03½—2 06½	2 12½—2 15½	—	—					
American Duluth.....	—	2 18½—2 21½	2 27½—2 30	2 27½—2 30½	2 36½—2 39½					
“ Durum.....	—	2 09½—2 12½	2 18½—2 21½	2 18½—2 21½	2 27½—2 30½					
Hard red winter.....	2 06½—2 09½	2 09½—2 12½	—	—	—					
Soft winter.....	—	2 03½—2 06½	—	—	—					
Argentine.....	2 09½—2 12½	2 15½—2 18½	2 21½—2 24½	2 21½—2 24½	2 27½—2 30½					
Indian.....	2 13—2 16½	2 16½—2 19½	2 22½—2 25½	2 22½—2 25½	2 27½—2 30½					
Australian.....	2 19—2 22	2 19—2 22	2 21½—2 24½	2 24½—2 27½	2 27½—2 30½					
Oats (per bushel)—										
Canadian.....	0 90½—0 93	0 94½—0 97	0 98½—1 01	0 98½—1 01	1 03½—1 06½					
American.....	0 85½—0 88	0 89½—0 91½	0 93—0 95½	0 93—0 95½	0 98½—1 01					
Chilian.....	0 90½—0 93	0 94½—0 97	0 95½—0 98½	0 95½—0 98½	1 01—1 03½					
Flour (per 280 lb.)—										
Canadian good.....	12 65—12 89	13 14—13 38	13 38—13 62	13 62—13 86	13 62—13 86					
“ first bakers.....	12 41—12 65	12 89—13 14	13 14—13 38	13 38—13 62	13 38—13 62					
“ common.....	11 66—11 91	12 15—12 41	12 42—12 65	12 65—12 89	12 65—12 89					
“ soft winter.....	11 66—12 15	12 15—12 65	12 41—12 89	12 65—13 14	12 65—13 14					
American spring good.....	12 89—13 14	13 38—13 62	13 62—13 86	13 86—14 10	13 86—14 10					
“ spring common.....	11 91—12 15	12 41—12 65	12 65—12 89	12 89—13 14	12 89—13 14					
“ winter good.....	12 89—13 14	13 38—13 62	13 14—13 38	13 38—13 62	13 38—13 62					
“ winter common.....	12 41—12 65	12 89—13 14	12 41—12 65	12 65—12 89	12 65—12 89					
Californian.....	12 15—13 62	12 65—13 62	12 65—13 62	12 65—13 62	12 65—13 62					
Australian.....	12 15—12 41	12 41—12 65	12 41—12 65	12 65—12 77	12 65—12 77					

LIVERPOOL.

Description	Oct. 3		Oct. 10		Oct. 17		Oct. 24		Oct. 31	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1.....	2 16—2 16½	2 23½—2 24½	2 23½—2 24½	2 30—2 30½	2 37½—2 38½					
“ No. 2.....	2 14½—2 15½	—	2 21½—2 22	2 28½—2 29½	2 36—2 36½					
“ No. 3.....	2 11—2 11½	2 17½—2 18½	2 18½—2 19	2 23½—2 24½	2 33½—2 34½					
Man. sample.....	2 09½—2 13	—	2 11½—2 15½	—	—					
“ feed.....	—	—	—	1 82½	—					
Nor. Chicago No. 1.....	2 11½—2 12½	—	2 20½	—	2 23½—2 23½	2 32½—2 33				
Nor. Duluth No. 1.....	2 11½—2 12½	—	2 20½	—	2 23½—2 24½	2 32½—2 33				
Hard winter, No. 2 new.....	04½—2 05½	2 13—2 13½	2 13—2 13½	2 22½—2 23½	—					
White winter.....	2 14½—2 14½	2 17½	2 17—2 17½	—	—					
Red Walla.....	2 06½—2 08	2 11½—2 12½	2 10½—2 11	—	—					
Blue Stem.....	—	—	—	2 21½—2 22	2 27½					
Durum.....	2 04½—2 05	2 11½	—	—	—					
Choice White Karachi.....	2 13½	2 15½—2 16	2 16—2 16½	2 20½—2 20½	—					
Oats (per bush.)—										
Canadian.....	0 87½—0 89½	0 89½—0 91½	0 95—0 96½	0 99½—1 01	1 04½—1 05½					
Chilian white.....	—	0 90—0 90½	0 96½—0 97½	1 01—1 02½	1 04½—1 05					
“ black.....	0 86—0 86½	—	0 93½—0 93½	0 99½—1 00½	1 01—1 01½					
“ tawny.....	0 84½—0 86	0 86½—0 87½	0 93½—0 93½	—	1 01—1 02½					
Flour (per 280 lb.)—										
Canada spring patents.....	12 89—13 14	13 26—13 50	13 38—13 62	13 80—14 10	14 58—14 82					
American soft winter patents.....	12 77—13 02	13 26—13 50	13 38—13 62	13 62—13 74	14 46—14 70					
Kansas patents.....	12 77—13 02	13 26—13 50	13 38—13 62	13 86—14 10	14 58—15 06					
Oatmeal (per 240 lb.)—										
Canadian rolled oats.....	10 21—10 33	10 45—10 57	10 69—10 81	10 69—10 81	11 91—12 15					
“ middle cut.....	10 09—10 21	10 45—10 57	10 69—10 81	10 69—10 81	11 54—11 66					
“ fine cut.....	10 09—10 21	10 45—10 57	10 69—10 81	10 69—10 81	11 54—11 66					
“ pinhead.....	10 21—10 33	10 45—10 57	10 69—10 81	10 69—10 81	11 54—11 66					

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
October 7.....	59 2	1 797	54 5	1 589	30 9	0 815
" 14.....	59 7	1 812	53 10	1 572	31 6	0 835
" 21.....	60 9	1 848	53 8	1 567	31 11	0 846
" 28.....	62 10	1 911	54 6	1 591	32 10	0 871
Average.....	60 7	1 842	54 1	1 580	31 9	0 842

V. Average Prices of Imported Meats, etc., at British Markets, 1916.

FRESH MEATS (per cwt. for 100 lb.).

Description and Market	Oct. 4		Oct. 11		Oct. 18		Oct. 25	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine frozen—								
Birmingham.....	17 23	14 70	17 74	14 70	—	—	—	—
Argentine chilled—								
Birmingham.....	18 76	15 21	20 28	16 21	—	—	18 25	15 21
Leeds.....	19 01	15 21	20 53	16 48	—	—	17 74	14 95
Liverpool.....	17 23	14 70	19 26	16 21	18 76	15 21	18 25	14 70
London.....	18 76	14 95	19 77	16 21	19 26	15 72	17 74	15 21
Manchester.....	17 23	14 70	19 26	16 21	18 76	15 21	17 74	15 21
Edinburgh.....	18 80	15 20	—	—	18 80	15 70	18 30	15 45
Glasgow.....	—	—	—	—	—	—	18 30	15 20

GREEN BACON (per cwt. of 100 lb.).

Description and Market	Oct. 4		Oct. 11		Oct. 18		Oct. 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian sides—								
Bristol.....	24 29—23 86	23 42—22 98	23 42—22 98	23 42—22 98	23 42—22 98	23 42—22 98	23 42—22 98	23 42—22 98
Liverpool.....	24 29—23 64	23 86—22 76	23 86—22 76	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54
London.....	24 29—23 42	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54	23 42—22 54
Glasgow.....	24 29—23 86	23 42—23 20	23 20—22 98	23 20—22 98	23 20—22 98	23 20—22 98	23 20—22 98	23 20—22 98
Danish sides—								
Bristol.....	25 39—24 73	25 39—24 73	25 39—24 73	25 39—24 73	25 39—24 73	25 39—24 73	25 39—24 73	25 39—24 73
Liverpool.....	25 39—24 95	24 95—24 51	24 95—24 51	24 95—24 51	24 95—24 51	24 95—24 51	24 95—24 51	24 95—24 51
London.....	25 39—24 29	24 73—23 42	24 51—23 86	24 51—23 86	24 51—23 86	24 51—23 86	24 51—23 86	24 51—23 86
Glasgow.....	25 39	— 24 51	— 24 29	— 24 29	— 24 29	— 24 29	— 24 29	— 24 29

GREEN HAMS (per cwt. of 100 lb.)

	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian long cut—									
London.....	-	-	24 51	-24 08	24 51	-23 64	24 29	-23 86	
American long cut—									
Bristol.....	23 42	-22 54	23 64	-22 76	23 86	-22 76	24 29	-23 42	
Liverpool.....	23 64	-22 54	24 08	-25 06	24 19	-22 98	24 29	-22 98	
London.....	22 98	-22 10	23 86	-22 54	23 64	-22 54	23 86	-22 98	
Glasgow.....	24 29	-23 42	24 29	-23 64	24 29	-23 86	24 73	-24 29	
American short cut—									
Bristol.....	22 76	-21 88	22 98	-22 10	22 98	-22 10	23 20	-22 54	
Liverpool.....	22 98	-22 21	23 20	-22 54	23 42	-22 87	23 42	-22 98	
London.....	22 54	-21 66	22 98	-21 88	22 54	-21 66	22 98	-22 10	
Glasgow.....	22 76	-22 10	22 54	-22 10	22 98	-22 54	23 42	-22 98	

CHEESE (per cwt. of 100 lb.)

	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canadian—									
Bristol.....	23 86	-23 20	24 29	-23 64	24 73	-24 08	24 73	-24 29	
Liverpool.....	23 97	-23 31	24 29	-23 64	24 84	-24 19	25 06	-24 29	
London.....	23 64	-22 98	24 73	-23 86	24 84	-24 29	24 73	-24 29	
Glasgow.....	24 29	-23 86	24 51	-	24 73	-24 51	25 17	-24 95	
New Zealand—									
London.....	23 42	-22 98	24 29	-23 86	24 29	-23 86	24 29	-23 86	
Glasgow.....	23 86	-	24 29	-23 86	24 51	-24 29	-	-	

Sugar Manufacture in Argentina.—A Bulletin published by the Argentine Department of Agriculture at Buenos Aires gives the following figures relating to the sugar industry of Argentina for the year 1915, as compared with the previous Census of 1895:—

Items	1895	1915
Number of establishments.....	51	37
Number of employees.....	28,308	37,008
Motor, etc., power used (H.P.).....	11,294	48,220
Capital involved (\$).	22,330,000	70,028,000
Sugar produced (short tons).....	76,051	318,951
Cane milled (short tons).....	1,228,594	3,562,145

The total value of the sugar produced in 1915 was \$29,545,000.

Mining Output of Ontario.—The Ontario Bureau of Mines reports that the mineral production of Ontario for the nine months ended September 30, 1916, was of the total value of \$46,896,263, as compared with \$26,571,288 for the corresponding period of 1915. There is thus a large increase in aggregate value, which is caused by a rise in values and also by increased production of many products, including cobalt, copper, gold and pig iron.

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No. 100

DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

PRELIMINARY STATEMENT OF AREAS SOWN TO THE PRINCIPAL FIELD CROPS IN MANITOBA, SASKATCHEWAN AND ALBERTA, 1906, 1911 AND 1916.

The Census and Statistics Office has issued a preliminary statement of the areas sown to the principal field crops in the provinces of Manitoba, Saskatchewan and Alberta for the year 1916 according to the returns of the Census taken during the past summer. The returns are complete with the exception of those from 18 sub-districts out of a total of 1,207. For Manitoba the incomplete returns number one out of 359; for Saskatchewan 12 out of 506; and for Alberta five out of 442. The totals for 1916, with comparative figures for 1911 and 1906, are as follows:—

Acres of Principal Field Crops of Manitoba, Saskatchewan and Alberta, in the Census years 1906, 1911 and 1916.

Field crops	1906	1911	1916
	acres	acres	acres
Three provinces—			
Fall wheat.....	85,199	321,727	155,966
Spring wheat.....	4,977,294	9,668,734	13,643,931
All wheat.....	5,062,493	9,990,461	13,799,897
Barley.....	522,734	886,225	1,334,189
Oats.....	2,309,439	4,861,453	6,976,160
Rye.....	14,496	21,439	67,905
Flax.....	131,819	1,340,899	636,440
Manitoba—			
Fall wheat.....	655	13,301	7,950
Spring Wheat.....	2,720,424	3,081,272	2,687,439
All wheat.....	2,721,079	3,094,573	2,695,389
Barley.....	336,986	448,105	655,308
Oats.....	931,282	1,307,434	1,397,013
Rye.....	4,308	4,725	28,295
Flax.....	16,501	79,765	22,344
Saskatchewan—			
Fall wheat.....	1,046	2,638	105,778
Spring wheat.....	2,116,438	5,253,276	8,427,060
All wheat.....	2,117,484	5,255,914	8,532,838
Barley.....	77,573	273,988	357,399
Oats.....	901,646	2,332,802	3,548,637
Rye.....	3,045	2,271	20,583
Flax.....	108,834	1,153,861	519,763
Alberta—			
Fall wheat.....	83,498	305,788	42,238
Spring wheat.....	140,432	1,334,186	2,529,432
All wheat.....	223,930	1,639,974	2,571,670
Barley.....	108,175	164,132	321,482
Oats.....	476,511	1,221,217	2,030,510
Rye.....	7,143	14,443	19,027
Flax.....	6,484	107,273	94,333

The Census obtained the acreages and yields of the crops of 1915 as well as the acreages of the 1916 crop. These will be published as soon as available. The 1915 figures for acreages as compiled to date are somewhat higher than those of 1916 in the older sections of these provinces, but are lower in the northern and more recently settled districts. The total acreage under spring wheat in Manitoba in 1915 was 2,748,921, compared with 2,687,439 in 1916. In Saskatchewan the acreage under spring wheat showed little change between 1915 and 1916, being 8,425,632 in the former year and 8,427,060 in the latter. In Alberta an increase from 2,112,912 acres under spring wheat in 1915 to 2,529,432 acres in 1916 is shown.

The total acreage under these five crops in all three provinces was 8,040,981 in 1906, 17,100,477 in 1911 and 22,814,591 in 1916. Thus, there was a gain of 9,059,496 acres between 1906 and 1911, and of 5,714,114 acres during the past five years.

Census and Statistics Office,
Ottawa, December 13, 1916.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperature during November has ranged lower than for the corresponding period of last year, the highest recorded being 62.4, the lowest -2 and the mean 31.12, compared with extremes of 60.8 and 14 and a mean temperature of 35.12 in 1915. The precipitation totals 1.78 inch, consisting of 1.45 inch of rain and 3.25 inches of snowfall, distributed over thirteen different days; while a year ago it aggregated 1.16 inch, made up of 1.11 inch of rain and 0.5 of an inch of snowfall. The bright sunshine averages 3.7 hours a day, compared with 2.94 hours a day in November 1915.

At the Ottawa Farm, during November, fall ploughing has been finished, and considerable attention given to improving the under-draining of certain land devoted to rotation plots. At the end of the month the work of constructing a flax building or experimental flax mill at the Central Farm, begun on October 17th, is well advanced.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first two weeks of November were mild with frequent showers, scarcely any frost occurring. Turnips grew splendidly and were all saved at the Experimental Station on the 9th and 10th. Many farmers counting on the splendid weather continuing for a few days longer, were caught with their turnips still out when a ten-day period of real wintry weather set in on the morning of the 14th. Sleighs were moving before night and the best of sleighing continued until the 24th, when a thaw with rain took away all the snow and every bit of frost from the ground. Turnips out during the period mentioned, though frozen solid under the snow, are keeping much better than might be expected. The last week in November has been

mild, and many have been able to finish up the ploughing or ridging of their land. On account of the very favourable autumn, practically all fall work has been completed, but many wells are low."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "On the whole, the temperatures recorded during November have been about normal, the mean being 37.5, compared with 39.15 in 1915, 36.4 in 1914 and 38.4 in 1913. Frost has been registered on fifteen different dates, the thermometer dropping to three degrees above zero on the 16th and to seven degrees above on the 17th. The precipitation totals 3.48 inches, made up of 2.18 inches of rain and the balance consisting of snow, 10.5 inches of which fell on the 14th. The bright sunshine recorded during the month aggregates 108.7 hours, compared with 65.5 hours in 1915, 109.7 hours in 1914 and 111.5 hours in 1913. Ploughing had to be discontinued from the 14th to the 24th, but from the 24th to the 30th a good deal of this work has been done. Turnips in many localities still remained to be pulled when the heavy snow-storm of the 14th occurred, but most of these have now been gathered in fair shape, having been protected from appreciable injury by the covering of snow. Except in very few cases, apples were harvested before the storm on the 14th. Some barrels of apples in outhouses and barns and in orchards were slightly frosted, but, being hardwinter varieties, they have suffered little injury."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "During the early part of November the weather was dull and cool for the most part, with frequent showers. Quite a storm was experienced on the 14th, when snow fell to a depth of about seven inches, resulting in excellent sleighing and sledding. A little snow fell on the 20th, but rain on the night of the 23rd and morning of the 24th, caused the snow to disappear rapidly. The remainder of November has been mostly fine. The mild weather experienced during the early part of the month aided much in getting fall ploughing done. Practically all roots were stored at the Experimental Farm previous to the snow-storm, but in the surrounding country a considerable acreage of turnips still remained in the ground. However, the thaw which followed was beneficial in getting out these roots. The mixed grain and oats at the Farm were threshed during the month, giving average yields. The steers for the experimental feeding work have been divided into groups and put in their winter quarters and fed preparatory to starting them on the experiment; they were dehorned on the 11th. All other classes of live stock here are in good condition and doing nicely. Other work that has engaged attention had included building a steer shed, hauling and spreading manure, fencing the yard, crushing corn, cleaning up barns, picking over apples, banking the root cellar, laying water pipe to steer shed, ditching the new field, mulching strawberries, and potting tulips."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "November was very favourable for farm work up till the 14th, when there were seven inches of snow, followed by a most unusual

drop in temperature, four degrees below zero being recorded here on the 15th, while much lower marks were registered in other parts of New Brunswick. The cold weather continued, and snow lay on the ground until the 23rd, when the mercury rose to 53, with rain. The remainder of the month has been broken, with some rain and also freezing and thawing. The mean temperature for the month is 29 against 36 last year and an average mean of 32 degrees for November during the past forty-two years. Generally speaking, farm work has been well advanced, although there are, at the end of the month, some turnips not yet taken in. Fall ploughing is more advanced than usual. The season of 1916 has been a good one for the New Brunswick farmer, all crops being above the average, excepting potatoes, and high prices for them have more than made up for the smaller yield. Live stock is scarce, there being considerable shrinkage in number in the last three years. What there is has gone into winter quarters in good condition."

Ste. Anne de la Pocatiere, Que.—Jos. Begin, Superintendent, reports: "The temperature during November has ranged considerably lower than for some years past, the highest being 59.2, the lowest -1.1 and the mean 25.5, compared with extremes of 59.8 and 17.2 and a mean temperature of 32.4 for the corresponding period of 1915. The precipitation amounts to 2.43 inches, made up of 1.93 inch of rain and 5 inches of snowfall. The bright sunshine averages 2.1 hours a day, against 3.4 hours a day in 1915. Squally winds and sudden changes of temperature have characterized much of the month. Frost set in earlier than usual, and practically no ploughing has been done during November. Cattle entered their winter quarters at least three weeks earlier than in previous seasons, and fortunately there is an abundance of fodder for them. There have been less sheep and young stock disposed of in this section than during the corresponding period for some years past. Although prices are very good, this certainly presages well for the future. Almost all the potatoes for sale have been disposed of at a very high price and shipped elsewhere, earload lots bringing \$1.25 and even \$1.30 per bushel."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "November has been colder, wetter, and brighter than the average for the corresponding period of the past four years, 28 degrees being the mean temperature, 3.79 inches the precipitation, and 64.9 the hours of sunshine, compared with a mean of 32.6, precipitation of 3.52 inches and sunshine of 53.7 hours, averaging this month from 1912 to 1915. Extremes of temperature have been in evidence, the highest being 63 and the lowest -4.1, whilst the thermometer never went above 61 and lower than -1.1 during the same period of the four previous years. As December opens, the roads are nothing but a bright sheet of ice, and are very dangerous. The meadows and pastures, especially in badly drained spots, are likely to suffer, as there is no snow to protect them. At the Station, the main work engaging attention has been the care of live stock and poultry and the cleaning and grading of seeds, including those

of cereals, forage crops, vegetables and flowers. Most of the latter are for distribution and are from the varieties which have shown their superiority in the trial plots."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The weather during the first part of November was favourable for farmers to get their fall ploughing done. The precipitation amounts to 2.67 inches, compared with 2.12 inches last year. The total bright sunshine recorded amounts to 74.8 hours, compared with 94.8 hours last year. On the 15th, six inches of snow fell, which made very good sleighing for about a week; but since then the ground has been bare. The temperature dropped to zero on the 17th, the lowest of the month. The farmers of the district got their live stock housed in good time, and seem to be paying more attention than usual to the feeding problem, as the high price of all grain and feed makes it very important that they should endeavour to procure the best balanced rations possible, in order to get the most profitable results. The new dairy barn which is being built at the Lennoxville Station is well under way, and is one of the most up-to-date buildings of its kind in this district, provision being made for an abundance of light and for the best ventilation."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "November has been an unusually fine month. Work on the land was stopped by frost on the 9th and there was some wintry weather for a time after that date. The remainder of the month has been moderate as regards temperature, and free from storms, and there has been more sunshine than usual. Work on the Experimental Farm has consisted chiefly in making preparations for winter. The remodelling of the barn has been completed, and supplies of feed and bedding have been drawn and stored. Two carloads of steers have been obtained for feeding experiments."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The weather up to the 14th of November was clear and cold, and favourable for threshing. On the 15th, it moderated considerably and remained mild until the end of the month. A light fall of snow was experienced on the 20th, and also on the 22nd, but threshing was not interfered with. Work on the land ended on the 7th, owing to the ground freezing up. Threshing was completed in this district about the 28th. A great deal of grain has been delivered to the elevators at this point, and, at present, all elevators are full, very few cars being available during the last ten days of the month. Roads, although still rough, are in fair condition for hauling grain. The work at the Experimental Farm has included the hauling of hay, straw and manure, the cleaning of seed grain and caring for the stock. During the month a building to be utilized as a plant pathological laboratory by the Division of Botany has been erected at this Farm."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "November has been particularly mild and, although occasional

flurries of snow have delayed threshing a little, most of the threshing in the district has been completed. At the Experimental Station, four corrals have been built for the accommodation of eighty steers, seventy-six of which have already been purchased; these are to be fed hauled-out oats, barley and wheat straw with varying proportions of meal, against a ration of hay and meal. A new implement shed, 24 by 80 feet, has been built. The greatest difficulty in the way of present operations is the obtaining of water. One well was dug, 8 feet in diameter and 24 feet deep, with a crib made of 2" x 6" stuff with bevelled edges like a barrel. The crib keeps out the quick-sand but does not allow sufficient intake of water. Another one, 6 feet in diameter, with the staves held slightly apart, has been dug for the sheep. The latter is proving more satisfactory than the former."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The weather during November has been unusually mild, the mean temperature for the month being 26.8, as compared with 19.1 in 1915, 23.69 in 1914, 23.9 in 1913, 27.0 in 1912 and 11.7 in 1911. Owing to the delay in harvest operations and the shortage of labour and the early freezing of the ground, practically no fall ploughing has been accomplished in northwestern Saskatchewan. At the end of the month, however, threshing operations are practically completed. At the Station, a good deal of work has been devoted to the construction of a dam in a coulee, to store up the water from melted snows and summer rains. A steer feeding shed has been built and another carload of steers purchased for the winter feeding experiment."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during the early part of November was fairly cold, and the land at this Station was frozen too hard to plough after the 4th; on the 12th a temperature of 18 below zero was registered. The latter part of the month has been warm and bright, as a result of which some four inches of snow which fell during the cold weather have practically disappeared, and conditions have been favourable for finishing up threshing. During the month, prices for all classes of live stock have been on the increase. Hogs have reached about \$10.25 per hundred, which should allow of the feeding of moderately high priced grain. Sheep have been increasing in value, and, with the present indications for a high wool market, should be one of the best investments for farmers during the coming year."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "Although the precipitation during November amounts to only about half an inch, snow fell on six different days. This, combined with the fact that heavy winds have been very prevalent, has not made the month particularly favourable for threshing operations. On the 30th, it is estimated that there remains from about ten to fifteen per cent of the threshing in southern Alberta yet to be done. On the night of the 10th, the weather turned very cold, and for three nights it was below zero. By this time the potato crop, which has been an excellent one in the district, was entirely dug, so no

material damage resulted from this cold dip. Owing to the heavy crop and the general delay that has occurred in threshing, there has not been much fall ploughing done; but there has been a distinct increase in the amount of land summer-fallowed this season as compared with 1915. One result of the good crops and high prices is that among the farmers in the district there appears to be a keen demand for live stock, particularly cattle, although considerable interest is also being aroused in sheep. The local market for hay seems to be getting stronger, and hay growers on irrigated lands are getting fair returns for this product. At the Station, a good deal of attention has been devoted to the hauling of manure and the carrying on of the general work in connection with preparations for the winter feeding tests."

Invermere, B. C.—G. E. Parham, Superintendent, reports: "Early in November the winter set in with exceptional severity, -12 degrees being registered on the 12th. The snowfall has been very slight and barely permits sleighing. On the ranches in the immediate district, there is a steadily increasing number of stock, and the indications are that this will become the chief industry of this section. The renewal of activity in mining, which is manifesting itself in this district, should be of benefit to the locality in providing a local market for produce. At the Experimental Station, the cold weather has brought the season's work to a close. Bulbs were planted just before the cold weather set in, and the experiments in forcing sea-kale and rhubarb in the cellar will be repeated this year. Three general purpose Shorthorn cows have been purchased and added to the Station herd."

Agassiz, B.C.—P. H. Moore, Superintendent, reports:—"November has been cool and cloudy, but without as much precipitation as is often recorded at this time of the year. At the close of the month, all young stock running on stubble at the Experimental Farm have been brought in and housed for the winter. The dairy herd is in good condition, and although grain feed is very high in price there is an abundant supply of roughage in the form of roots, silage and straw to keep the stock through the winter. All fall litters of pigs have come, giving reasonably good results. The hogs on experiment, which were carried through the summer by means of the self-feeder, show an advantage in cost of production by being self-fed. The results of the rice meal tests, just concluded, are an exact repetition of those of previous work. Where rice meal was fed as an exclusive grain ration, along with a limited amount of skim milk and green feed the showing has been poor, regardless of the source of the meal. A type of rice polishings which appeared to carry very little bran or middlings, but which is sometimes found on the market under the name of rice meal, gave very good results and almost equal to the control pens. The sheep are still at pasture and are in excellent condition. Fall lambs are making rapid growth. In the poultry yards, the egg production from the pullets has increased, and the price of eggs is very high. All fall planting of bulbs and the covering of beds for the winter season has been done."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "Fine weather has prevailed during November, enabling all on the land to accomplish more work than usual for this season. The soil has been in excellent condition for autumn tillage, and land work has been well done. The root crop harvests were completed early in the month. The box-packing and shipping of apples has occupied the attention of many fruit growers. Movements in live stock and poultry have been brisk. Prices of all farm produce have been satisfactory. High prices for feeds have had to be paid by purchasers. A very small quantity of animal feeds is being sold from the farming districts of the Island."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of November are given in the following table:—

Meteorological Record for November, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	Highest	Lowest	Mean		Possible	Actual
Ottawa, Ont.....	62.4	-2.0	31.12	1.78	285	111.1
Charlottetown, P.E.I.....	55.0	10.0	32.93	3.74	281	88.2
Kentville, N.S.....	64.0	3.0	37.50	3.48	287	108.7
Nappan, N.S.....	60.0	3.0	32.26	2.32	285	96.8
Fredericton, N.B.....	64.0	-4.0	29.00	2.52	284	88.6
Ste. Anne de la Pocatière, Que.....	59.2	-1.1	25.50	2.43	280	64.3
Cap Rouge, Que.....	63.0	-4.1	28.00	3.79	280	64.9
Lennoxville, Que.....	65.0	0.0	30.49	2.67	286	74.8
Brandon, Man.....	60.5	-5.8	24.10	0.15	272	132.9
Indian Head, Sask.....	55.0	-5.0	23.83	0.23	270	72.5
Rosyth, Sask.....	44.6	-2.8	23.80	0.20	258	108.5
Scott, Sask.....	63.8	-2.2	26.80	0.05	261	116.6
Lacombe, Alta.....	56.3	-18.1	26.30	0.40	263	122.0
Lethbridge, Alta.....	63.0	17.5	32.25	0.49	273	130.4
Invermere, B.C.....	50.0	-12.0	22.00	0.33	270	84.6
Agassiz, B.C.....	56.0	25.0	39.68	7.83	274	79.1
Sidney, Vancouver, I., B.C.....	56.0	28.0	40.31	3.18	276	103.9

Ottawa, December 15, 1916.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Report of the Board of Agriculture (December 1) states that the weather of November was wet nearly everywhere, and comparatively little progress could be made with autumn work; so that the backward condition of farming noted last month was on the whole accentuated. Of the total area intended for wheat barely three-fifths have as yet been sown, though more progress appears to have been made in the important counties of Lincoln and Norfolk than elsewhere. As compared with December

1 last year, the area actually seeded by this date would appear to be nearly 15 per cent smaller, though here also the same counties are in advance of most of the country. Only that sown early or on light land is yet showing above ground, but it is looking well. Root-lifting is late, and in practically every division there is a small quantity of mangolds still out. The weather having been open on the whole, little damage from frost is yet reported, except in Cambridgeshire. Large areas of turnips and swedes still remain to be got in. The condition and quality of the roots is satisfactory. Live stock have done well during the month, and, with good crops of hay and roots, prospects of home-grown keep for the winter are satisfactory. In some districts straw is at present rather short as a result of the small proportion of grain that has been threshed this year. Labour continues to be very scarce in all directions, whether skilled or casual, and has been felt in threshing, ploughing and root pulling. Martinmas hirings in the north showed a rise in wages, and only boys, with very few men, were in many cases obtainable.

New Zealand.—The Government Statistician reports (November 1) that the area estimated to be sown to wheat for the crop year 1916-17, is 218,877 acres, as compared with 335,423 acres, the area reaped for 1915-16; and similarly the area estimated to be sown to oats for 1916-17 is 548,526 acres, as compared with 640,227 acres reaped in 1915-16.

Russia.—According to a recent issue of the Bulletin des Halles (Paris) experiments in the cultivation of the sugar beet in southern Siberia have given excellent results and have proved that it can be grown there under conditions similar to those in European Russia. It is stated that a company has been formed with a capital of \$1,030,000 for the construction and operation of sugar mills in Siberia.

Uruguay.—The Revista del Ministerio de Industrias states that the condition of the sowings for the crops of 1916-17 has so far been satisfactory in general, but, owing to persistent drought, there is now a tendency towards deterioration in many of the agricultural regions of the Republic. Wheat sowings were effected under fairly good conditions, but the crop has suffered seriously from want of water, while frosts have damaged the early oats.

United States.—The Crop Reporting Board of the United States Department of Agriculture reports (December 18) that the area sown to winter wheat this fall is 2·3 per cent more than the revised estimated area sown in the fall of 1915, equivalent to an increase of 887,000 acres, the indicated total area being 40,090,000 acres. Condition on December 1 was 85·7 against 87·7 and 88·3 on December 1, 1915 and 1914, respectively, and a ten-year average of 90·2. The area sown this fall to rye is 21·3 per cent more than the revised estimated area sown in the fall of 1915, equivalent to an increase of 740,000 acres, the indicated total area being 4,214,000 acres. Condition on December 1 was 88·8, against 91·5 and 93·6 on December 1, 1915 and 1914, respectively, and a ten-year average of 92·9.

FIELD CROPS OF ENGLAND AND WALES, 1916.

The following is a preliminary statement of the estimated total produce and yield per acre of the principal field crops in England and Wales for the year 1916, as compared with 1915 and with the annual average of the ten years 1906-15:

Field crops	1915	1916	1915	1916	1915	1916	Average ten years 1906-15
	acres	acres	bush.	bush.	bush. per acre	bush. per acre	bush. per acre
Wheat.....	2,170,170	1,912,208	67,717,928	55,540,472	31.20	29.05	31.89
Barley.....	1,231,714	1,332,076	36,223,432	41,740,592	29.41	31.33	32.79
Oats.....	2,088,009	2,084,661	83,095,256	83,689,312	39.80	40.15	40.32
Beans.....	257,655	228,586	7,156,792	6,900,976	27.78	30.19	29.85
Peas.....	98,265	85,266	2,393,808	2,081,032	24.36	24.41	26.26
Potatoes.....	463,399	427,948	106,702,139	93,478,411	230.35	218.40	230.72
Turnips & swedes	928,949	932,366	440,804,261	484,787,818	474.51	520.05	489.81
Mangolds.....	412,509	376,950	292,472,320	273,939,978	708.96	726.88	720.16
			long tons	long tons	long cwt.	long cwt.	long cwt.
Seeds hay.....	1,538,067	1,762,699	2,287,703	2,899,234	29.75	32.90	29.04
Meadow hay.....	4,651,609	4,825,988	4,299,034	5,937,845	18.48	24.61	22.95

A brief comparison of the grain crops of 1916 with those of 1915 was given in the Census and Statistics Monthly of November last (page 298). The average yield of potatoes in England and Wales for 1916 is estimated at 218.40 bushels per acre, or just about 12 bushels below the yield of 1915 and the ten-year average; with a somewhat reduced acreage, the total production of 93,478,411 bushels is about 13,224,000 bushels less than last year, but only 720,000 bushels below the average. Turnips and swedes have produced almost 485 million bushels, which is nearly 45 million bushels more than in 1915; the yield per acre (520.05) is about 47 bushels more than in 1915, 30 bushels above the average, and the best yield since 1910. Mangolds, on a considerably reduced acreage, gave about 19 million bushels less than last year; but the yield per acre is also the largest since 1910, being about 18 bushels better than last year and 12 bushels above the average.

FIELD CROPS OF THE UNITED STATES, 1916.

The Crop Reporting Bureau of the United States Department of Agriculture issued (December 15, 1916) the following estimates of the acreage, production, and value of the principal farm crops in the United States for the years 1915 and 1916, as compared with the annual average for the quinquennium 1910-1914:—

Field crops		Area	Production		Farm value— December 1	
			per acre	Total	per bush.	Total
		000 acres	bush.	000 bush.	cents	000 \$
Corn.....	1915	106,197	28.2	2,994,793	57.5	1,722,680
	1916	105,954	24.4	2,583,241	88.9	2,295,783
Average 1910-14.....		105,240	26.0	2,732,457	57.7	1,576,938
Winter wheat.....	1915	41,308	16.3	673,947	94.7	638,149
	1916	34,829	13.8	481,744	162.7	783,911
Average 1910-14.....		30,154	16.4	494,654	88.7	438,932
Spring wheat.....	1915	19,161	18.4	351,854	86.4	304,154
	1916	17,956	8.8	158,142	152.9	241,854
Average 1910-14.....		18,799	12.4	233,571	81.6	190,707
All wheat.....	1915	60,469	17.0	1,025,801	91.9	942,303
	1916	52,785	12.1	639,886	160.3	1,025,765
Average 1910-14.....		48,953	14.9	728,225	86.5	629,639
Oats.....	1915	40,996	37.8	1,549,030	36.1	559,506
	1916	41,539	30.1	1,251,992	52.4	656,179
Average 1910-14.....		38,014	30.5	1,157,961	38.2	442,909
Barley.....	1915	7,148	32.0	228,851	51.6	118,172
	1916	7,674	23.6	180,927	88.2	159,534
Average 1910-14.....		7,593	24.5	186,208	59.5	110,840
Rye.....	1915	3,129	17.3	54,050	83.4	45,083
	1916	3,096	15.3	47,383	122.1	57,857
Average 1910-14.....		2,305	16.3	37,568	74.2	27,877
Buckwheat.....	1915	769	19.6	15,056	78.7	11,843
	1916	845	14.0	11,840	112.9	13,364
Average 1910-14.....		826	20.6	17,022	71.0	12,086
Flaxseed.....	1915	1,387	10.1	14,030	\$1.74	24,410
	1916	1,605	9.6	15,459	\$2.48	38,350
Average 1910-14.....		2,402	7.6	18,353	\$1.48	27,133
Rice.....	1915	803	36.1	28,947	90.6	26,212
	1916	879	47.8	41,982	88.6	37,186
Average 1910-14.....		733	33.3	24,375	83.9	20,452
Potatoes.....	1915	3,734	96.3	359,721	61.7	221,992
	1916	3,550	80.4	285,437	146.1	417,063
Average 1910-14.....		3,686	97.9	360,772	59.2	213,651
Sweet Potatoes.....	1915	731	103.5	75,639	62.1	46,980
	1916	774	91.7	70,955	84.8	60,141
Average 1910-14.....		611	93.5	57,117	72.1	41,172
Hay.....	1915	51,108	1.68 ton	85,920 000 tons	\$10.63 per ton	913,644
	1916	54,965	1.64	89,991	\$11.21	1,008,894
Average 1910-14.....		49,377	1.34	66,234	\$12.26	812,004
Sugar beets.....	1915	611	10.15	6,511	\$5.67	36,917
	1916	680	9.8	6,671	\$6.17	41,160
Average 1910-14.....		498	10.8 lb.	5,391 000 lb.	\$5.61 lb.	31,850
Tobacco.....	1915	1,370	775.4	1,062,237	9.1	96,281
	1916	1,412	815.0	1,150,622	14.7	169,008
Average 1910-14.....		1,209	820.5	991,958	10.4	103,061

¹Average 1911-1914.

Field crops		Area	Production		Farm value— December 1	
			per acre	Total	per lb.	Total
		000 acres	lb.	000 bales	cents	000 \$
Cotton lint.....	1915	31,412	170.3	11,192	11.3	604,210
	1916	35,239	156.3	11,511	19.6	1,079,598
Average 1910-14.....		35,330	193.1	14,259	10.5	715,072
			bbl.	000 lib.	per bbl.	
Cranberries.....	1915	23.1	19.1	441	\$6.59	2,908
	1916	23.6	17.6	415	\$7.30	3,030
Apples.....	1915	—	—	76,670	\$2.07	158,712
	1916	—	—	67,415	\$2.75	185,583

The values in the above table are based on the prices paid to farmers on December 1, 1916.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

From the November International Crop Report and Agricultural Statistics are taken the following particulars respecting (a) the maize crops of 1916 in the northern hemisphere, as in the accompanying table, and (b) the cereal production for 1916-17 of the Union of South Africa.

Area and Production of Maize in Countries of the Northern Hemisphere, 1915 and 1916.

Countries.	1915	1916	Per cent of 1915	1915	1916	Per cent of 1915	1915	1916
	000 acres	000 acres	p.c.	000 bush.	000 bush.	p.c.	bush. per acre	bush. per acre
Italy.....	3,887	3,830	98.5	121,825	78,736	64.6	31.39	20.55
Russia in Europe.....	3,917	3,666	93.5	78,543	71,990	91.7	20.07	19.60
Switzerland.....	3	4	114.3	138	157	114.3	40.94	42.54
Canada.....	253	184	61.8	14,368	6,271	43.6	56.72	34.09
United States.....	108,322	108,621	104.2	3,055,000	2,643,486	86.5	28.20	24.38
Japan.....	144	157	118.3	3,749	4,102	109.4	25.97	26.13

Cereal Production of the Union of South Africa.—The preliminary estimate of the production of wheat for the year 1916-17 is 3,575,000 bushels from 432,000 acres, as compared with 4,857,400 bushels from 556,700 acres in 1915-16. The area sown is 22.4 p.c. and the production is 26.4 p.c. less than in 1915-16. Of barley the production is 1,000,000 bushels from 57,000 acres. The acreage under barley in 1915-16 was 64,400 acres, or 13.4 p.c. more than

in 1916-17. The production of oats is 6,520,500 bushels from 250,000 acres, the acreage under oats in 1915-16 having been 376,700 acres, or 33.6 p.c. more than in 1916-17. The crop prospects in South Africa are stated to be by no means cheering. Again the south-western districts of the Cape province show an increase in the area under cultivation and, in addition, the anticipation of a good season runs high. On the other hand, in many other important cereal districts the reduction in the area under crop is so large and, moreover, the condition of the crops in some of them is so poor that a diminished total production in the Union as compared with 1915 is already certain. The decrease in the area sown is due to the severe drought of 1915-16, to its effects on the condition of the soil and to losses sustained by the farmers in the districts affected. The Transvaal and Orange Free State are suffering from drought and late frosts.

WORLD'S PRODUCTION AND CONSUMPTION OF WHEAT.

In the November issue of the Census and Statistics Monthly (pages 300 and 301) a table was reproduced from the Bulletin of the International Institute of Agriculture showing, with percentage comparisons, the wheat production of 1915 and 1916 for 14 countries of the northern hemisphere that had duly reported to the Institute. Number 4 of the Statistical Notes on Cereals published by the Institute in October 1916 now enables us to take a wider view and to form some idea of the world's total wheat production of 1916 and of the prospects of the supplies being sufficient to meet the world's requirements for consumption and seed during the crop year ending July 31, 1917.

Owing to the conditions created by the war a number of countries that previously reported to the Institute have ceased doing so, and therefore in estimating total production the Institute for both the years 1915 and 1916 has assumed the production in those countries to be equal to the annual average production of the five years 1909 to 1913. This gives a hypothetical character to the estimates of production, which under the circumstances cannot be avoided. The countries thus treated for the year 1916 are: Germany, Austria-Hungary, Belgium, Bulgaria, Denmark, France, Luxemburg, the invaded part of European Russia and Poland, Sweden, Russia in Asia and Algeria.

Altogether for 24 countries of the northern hemisphere, the total wheat production of the year 1916 is estimated at 3,225,015,000 bushels, as compared with 4,024,933,000 bushels in 1915 and 3,399,952,000 bushels, the average annual production for the years 1909 to 1913. As compared with 1915 the production of 1916 is less by 19.8 per cent and as compared with the quinquennial average it is less by 5.1 per cent. The world's wheat crop of 1916 is also decidedly inferior to that of any of the last four years, the previous nearest total being that of 1911 with 3,210,329,000 bushels. The

production for 1916-17 of the countries of the southern hemisphere (Argentina, Chili, Uruguay, Australia and New Zealand) is not yet known; but for 1915-16 the total estimated production was 354,073,000 bushels, as compared with the five years' average of 274,240,000 bushels for the period 1909-10 to 1913-14. If we assume that the production of 1916-17 for the southern hemisphere be equal to the average, viz., 274,240,000 bushels, we get a total yield in both hemispheres of 3,499,255,000 bushels for the year 1916 and 1916-17, as compared with 4,379,006,000 bushels in the preceding year 1915 and 1915-16.

By calculations based on the average consumption per head of the population, the Institute estimates that the total normal consumption of wheat, including that required for seed purposes, will be for the crop year 1916-17 in the countries of the northern hemisphere 3,683,702,000 bushels to supply which the total crop of 1916 is only 3,225,015,000 bushels. But from the abundant harvests of 1915 there remained surpluses which in the aggregate are estimated to amount to 509,804,000 bushels for the northern hemisphere and 107,376,000 bushels for the southern hemisphere, thus making the total supply available to be 3,842,195,000 bushels, and leaving a surplus of 158,493,000 bushels over the estimated requirements of 3,683,702,000 bushels, in addition to the exportable surplus of the coming harvest in the southern hemisphere.

Owing to the large number of uncertain factors it is impossible to estimate with anything like real precision the world's total consumption during the ensuing crop year; but it will be noticed that the estimated surplus of 158,493,000 bushels is a small one compared with that of the previous year, and should the harvests of 1917 not prove to be plentiful the total supply may be insufficient to meet the world's normal requirements for food and seed. Consequently the lesson to which the calculations of the Institute point is the necessity for rigid economies in consumption and the careful avoidance of every form of waste.

Pulp Mill in Finland.—H. M. Consul at Helsingfors, Finland (Mr. H. M. Grove), reports, under date 8th November, that a timber company is erecting a large pulp mill at Karihaara, at the mouth of the Kemi River. This company owns large tracts of forest land in northern Finland and is already running three saw mills. In order to utilise the large quantity of pulp wood obtained annually from its forests, the company is now constructing near the Karihaara saw mill a sulphite cellulose mill, which is being built for an output of 30,000 tons per annum; but land has been reserved so that the output can be doubled if necessary. The buildings are to be constructed of brick and ferro-concrete, and the machinery has already been ordered from Finnish and foreign firms.

POTATO-GROWING CONTESTS FOR BOYS.

For the fifth successive year local potato growing contests for boys between the ages of 12 and 18 years were held in competition for prizes given by Mr. R. B. Whyte of Ottawa. The arrangements were in charge of a Committee of which Mr. Whyte was Chairman. Mr. L. H. Newman, Secretary of the Canadian Seed Growers' Association acted as secretary for the competitions. The accompanying table gives the results obtained by the first three prize winners in the countries of Carleton (1912-16) and Russell (1913-16), the average yield of potatoes in the province of Ontario, according to the estimates of the Census and Statistics Office being added for purposes of comparison.

CARLETON COUNTY.

No	Prize winner	Age of competitor	Cost of production per acre	Yield obtained by competitors per acre	Average yield in Ontario per acre	Value of crop per acre	Net profit per acre
	1912		\$ c.	bush.	bush.	\$ c.	\$ c.
1	H. S. Wright.....	12	91 00	366	143.90	213 80	122 80
2	J. H. Thomson.....	12	107 50	540		286 50	179 00
3	W. Potvin.....	13	123 80	496		291 60	167 80
	1913						
1	H. S. Gourlay.....	12	65 00	451	119.11	270 40	205 40
2	H. W. Graham.....	16	83 50	319		177 50	94 00
3	H. W. Boucher.....	16	66 00	312		179 40	113 30
	1914						
1	H. W. Graham.....	17	71 00	354	167.35	200 40	129 40
2	M. Gordon.....	15	103 00	441		253 90	150 90
3	V. D. McCord.....	16	98 00	380		213 30	115 30
	1915						
1	D. P. Brownlee.....	13	58 50	564	92.66	326 40	267 90
2	M. Gordon.....	16	60 00	461		235 00	175 00
3	C. E. Pollock.....	16	55 00	355		201 40	146 40
	1916						
1	D. P. Brownlee.....	14	66 00	393	61.00	231 00	165 00
2	Harry S. Wright.....	16	74 00	190		110 70	36 70
3	Frank L. Perry.....	16	71 50	215		126 20	54 70

RUSSELL COUNTY.

No	Prize winner	Age of competitor	Cost of production per acre	Yield obtained by competitors per acre	Average yield in Ontario per acre	Value of crop per acre	Net profit per acre
	1913		\$ c.	bush.	bush.	\$ c.	\$ c.
1	S. Morrow.....	15	84 40	322	119.11	186 00	101 60
2	W. C. Hamilton.....	14	87 80	322		191 10	103 30
3	W. Potvin.....	14	50 50	228		131 70	81 20
	1914						
1	J. R. Thomson.....	14	78 00	652	167.35	380 50	302 50
2	W. C. Hamilton.....	15	74 00	501		300 20	226 20
3	S. Morrow.....	16	73 60	298		168 90	95 30
	1915						
1	S. Morrow.....	17	112 30	383	92.66	216 90	104 60
2	W. C. Hamilton.....	16	47 50	420		246 50	119 00
3	J. G. Melville.....	17	36 00	526		311 00	275 00
	1916						
1	W. C. Hamilton.....	17	73 00	420	61.00	247 00	174 00
2	John R. Thompson.....	16	106 50	350		206 20	99 70
3	Willard Presley.....	12	67 00	295		165 30	98 30

NOTE.—The values per acre are calculated at the uniform average price of 60 cents per bushel of 60 lb. for marketable and 10 cents per bushel for unmarketable tubers. Were the prices which prevail at present applied to the yields of 1916, the profits per acre for this year would be practically doubled.

The season of 1916 was exceedingly unfavourable. The spring was unusually wet, while the summer was unusually dry. The average yield of the prize winners in Carleton county in 1916 was 268.2 bushels as compared with 403.9 bushels in 1915, 353.3 bushels in 1914 and 320.6 bushels in 1913. In Russell county the first six prize winners in 1916 averaged 319.1 bushels per acre, compared with 433.7 bushels in 1913. The average yield in 1916 of the prize winners in the two counties was 293.6 bushels per acre, which is approximately five times the average yield for this year of potatoes in the province of Ontario, viz., 61 bushels, according to the report of the Census and Statistics Office. The average net profit per acre for all competitors in the two counties in 1916, was, at the rate of 60 cents per bushel, \$79.27, as compared with \$113.23 in 1915. The average cost of producing one bushel in 1916 was 42.8 cents, as compared with 21.3 cents in 1915, 22 cents in 1914 and 34.8 cents in 1913. The average net profit per acre of the prize winners in the two counties in 1916 was \$90.05 as compared with \$154.89 in 1915, \$149.77 in 1914 and \$82.33 in 1913. In all cases except one the variety used in 1916 was the Green Mountain and in practically all cases the seed used was registered stock.

The prizes were presented at a meeting held in the Ottawa City Hall on November 25, 1916, when addresses were delivered by the Hon. Arthur Meighen, M.P., Dr. J. W. Robertson, C.M.G., Mr. W. D. Jackson, Mr. W. T. Macoun and Mr. T. G. Raynor.¹

GRADING OF ALBERTA TIMOTHY SEED.

By GEORGE H. CLARK, Seed Commissioner, Department of Agriculture, Ottawa.

The Government interior terminal elevator at Calgary has been equipped with the necessary machinery for handling and cleaning Alberta timothy seed, and timothy grades are now offered as in the grain trade. Timothy seed is received in bags which are returned to the shipper, each lot being kept separate. After it is cleaned and graded, warehouse receipts are issued for the net weight and grade or grades, and the different lots of the same grade are then bulked. The total charge for receiving, cleaning, elevating, sacking and loading ex-elevator is 5 cents per cwt.

The following statement gives the names and addresses of shippers of Alberta timothy seed, together with the net quantities of the different grades in storage at the Calgary elevator up to December 30th, 1916:

Name of Shipper	Address	Grade No. 2	Grade No. 3	Rejected
		Lb.	Lb.	Lb.
South Alberta Hay Growers, Ltd.	Pincher Creek	588,040	90,280	6,860
J. J. Braniff	"	41,230		
J. M. Davidson	Coaldale	64,350		950
S. S. Siddes	"		14,900	
W. H. Pawson	"	12,120		
Stewart Bros.	Penhold	1,780		
A. E. Strandberg	Clive			360
W. Wilson	Bowden	5,970		
S. M. Fisher	"	1,300		
A. Mongeon	Broeket	12,730		
Simon Downie & Sons	Carstairs	13,530		
Grain Growers Grain Co.	Cowley	2,400		
C. Elton	"	530		
A. Crasbie	Three Hills	3,700		
A. E. Wight	Crossfield		1,200	
Totals		747,680	106,380	8,170

These quantities represent some twenty odd cars, which is about half of the total quantity available this season. Last year nine carloads comprised the Alberta shipments. About four hundred carloads are imported annually to supply Canadian needs.

¹The full report of the competition, as well as of the second annual Girls' Gardening and Canning Competition for prizes also provided by Mr. Whyte, may be obtained when ready from the Secretary of the Canadian Seed Growers' Association, Canadian Building, Ottawa.

MANUFACTURES IN CANADA.

PRELIMINARY RESULTS OF POSTAL CENSUS TAKEN IN 1916.

Ottawa, December 30, 1919. During 1916 a postal census of manufactures for Canada was taken by the Census and Statistics Office, Department of Trade and Commerce, and the preliminary compilation of results was completed in December. The investigation covered operations during the calendar year 1915, or the nearest business year. Construction operations and hand trades, as well as establishments conducted under the factory system, were included, and a record was obtained from every concern known to be in operation, irrespective of number of employees or value of output. The figures are preliminary only, but may be accepted as correct within one per cent, the only known alteration to be made being the addition of a few returns still under revision.

Table I on page 327 shows the results of the investigation by certain large groups of industries, and Table II on page 328 by provinces.

The returns for the Census of 1911, the latest preceding inquiry of this character, were compiled only for establishments employing five persons or over. Direct comparison with the figures of 1911 is accordingly not yet feasible, but is reserved for the final report to be issued subsequently. It may be stated, however, that all groups of industries show a substantial growth, the most notable exceptions being establishments for the manufacture of building materials, such as saw-mill, planing mills, brickyards, etc., and fruit and vegetable canneries.

The following statement compares the returns with those of the postal census of 1916, which like that of 1916, included all establishments:

Items	1905	1915	Increase	
			Amount	Per cent
Establishments.....NO.	15,796	21,291	5,495	34.80
Capital.....\$	846,585,023	1,984,991,427	1,138,406,404	134.47
Salaries.....\$	30,724,086	60,143,704	29,419,618	95.75
Wages.....\$	134,375,925	227,508,800	93,132,875	69.31
Value of Products.....\$	718,352,603	1,392,516,953	674,164,350	93.85

It will be seen that the *number of establishments* has increased during the last decade from 15,796 to 21,291. In this connection it may be pointed out that the term "establishment" may mean more than one plant, provided they are operated by a single individual or company.

The total *capital* (including value of land, buildings, machinery, materials and stocks on hand, and operating capital, owned or borrowed) has advanced from \$846,585,023 to \$1,984,991,427 or 134.47 per cent.

The total *wages* bill has likewise increased from \$134,375,925 to \$227,508,800, or 69.31 per cent, and the *salaries* bill from \$30,724,086 to \$60,143,704, an increase of 95.75 per cent.

I. Manufactures of Canada, by Groups of Industries, 1915.

Groups of Industries	Estab- lish- ments	Capital	Employees on Salaries		Employees on Wages		Cost of materials	Value of products
			No.	Salaries	No.	Wages		
	No.	\$		\$		\$	\$	\$
1. Food products.....	6,470	198,246,942	7,211	7,289,593	54,943	21,962,588	291,997,953	377,811,758
2. Textiles.....	2,670	126,488,359	5,827	6,462,926	68,616	27,042,060	81,427,279	144,691,235
3. Iron and steel products.....	849	194,178,446	5,660	6,799,117	53,182	27,022,793	58,924,280	119,636,755
4. Timber and lumber and their remanufacture.....	3,181	263,407,682	4,698	5,718,775	63,578	28,023,925	59,170,149	123,250,986
5. Leather and its finished products.....	523	60,081,498	2,259	2,526,747	20,297	10,301,922	45,175,517	70,975,644
6. Paper and printing.....	1,306	138,544,786	6,247	6,879,560	30,817	18,780,459	29,324,906	74,038,498
7. Liquors and beverages.....	341	52,283,857	1,016	1,712,503	4,376	2,961,993	10,129,252	34,859,927
8. Chemicals and allied products.....	255	52,148,588	1,993	2,302,447	10,436	5,413,846	24,930,308	45,410,486
9. Clay, glass and stone products.....	771	96,371,573	1,266	1,710,855	14,481	8,245,406	10,962,041	27,228,413
10. Metals and metal products other than steel.....	1,173	174,621,994	2,781	3,418,307	27,011	17,557,632	45,931,080	90,943,278
11. Tobacco and its manufactures.....	166	23,066,898	1,081	1,445,524	8,532	3,083,000	16,017,707	28,987,250
12. Vehicles for land transportation.....	464	125,965,499	2,629	2,651,568	34,195	18,637,545	40,547,113	73,878,212
13. Vessels for water transportation.....	103	12,331,341	270	326,954	5,261	2,467,074	3,035,857	8,419,648
14. Miscellaneous industries.....	1,440	441,118,405	8,365	9,332,448	48,001	25,921,759	56,323,786	134,255,029
15. Hand trades.....	1,579	26,135,559	1,245	1,566,380	15,585	9,186,798	17,627,192	38,129,834
Total of groups.....	21,291	1,984,991,427	52,548	60,143,704	459,311	227,508,800	791,524,420	1,392,516,953

II. Manufactures of Canada by Provinces, 1915.

Provinces	Estab- lish- ments	Capital	Employees on Salaries		Employees on Wages		Cost of Materials	Value of Products
			No.	Salaries	No.	Wages		
	No.	\$		\$		\$	\$	\$
Canada.....	21,291	1,984,991,427	52,548	60,143,704	459,311	227,508,800	791,524,420	1,392,516,953
Alberta.....	586	42,303,893	1,232	1,456,557	6,323	3,661,748	21,121,940	30,594,647
British Columbia.....	1,003	158,622,862	2,375	3,049,500	26,471	12,830,302	42,279,161	73,606,584
Manitoba.....	840	95,855,845	2,427	3,012,197	17,449	10,650,600	38,513,444	61,594,284
New Brunswick.....	712	46,049,862	1,457	1,452,904	16,091	7,341,581	21,442,924	37,656,034
Nova Scotia.....	966	126,478,530	2,321	2,266,488	31,419	14,067,248	37,725,261	70,827,656
Ontario.....	9,285	955,788,021	22,376	31,419,967	219,971	114,063,216	405,654,905	715,921,651
Prince Edward Island.....	291	1,906,564	224	120,033	2,132	438,389	1,520,327	2,646,469
Quebec.....	7,151	541,196,858	19,381	16,624,571	136,530	63,125,564	215,578,042	384,507,054
Saskatchewan.....	457	16,788,992	755	741,487	2,925	1,330,152	7,688,416	15,162,574

The *value of products* in 1915 was \$1,392,516,953, an increase of \$674,164,350 over 1905, or 93·85 per cent.

With regard to the *number of employees*, which are shown as 511,859 by the 1916 census, it should be pointed out that this figure is for the date December 15, 1915, when the number in certain classes of establishments is low, whereas the figure for 1905, namely, 392,530, is an average for the whole year. In the final publication of results the number of employees in each month of 1915 will be shown and an average computed, and the period of maximum and minimum employment in each class of industry indicated.

WAR TRADE.

In order to measure the extent to which manufacturing Canada was affected by the war during 1915, each manufacturer was asked in making his return to separate such products of his establishment as he had reason to believe were destined for war purposes, whether supplied directly or indirectly, from those entering into the general trade. It will be seen from Table III that the total value of goods manufactured for war purposes, actually completed and delivered during 1915, amounted to \$130,466,307, a total which it is expected will be increased by several millions in the final return.

III. War Trade in Manufactures, 1915.

Groups	Value of war trade.
	\$
1. Food products.....	5,789,354
2. Textiles.....	23,319,659
3. Iron and steel products.....	34,094,867
4. Timber and lumber and their re-manufactures.....	3,471,792
5. Leather and its finished products.....	13,159,261
6. Paper and printing.....	63,853
7. Liquors and beverages.....	19,358
8. Chemicals and allied products.....	8,519,735
9. Clay, glass and stone products.....	82,168
10. Metal and metal products other than iron and steel.....	9,837,013
11. Tobacco and its manufactures.....	127,686
12. Vehicles for land transportation.....	16,955,562
13. Vessels for water transportation.....	2,471,489
14. Miscellaneous industries.....	12,554,510
Total.....	130,466,307

THE WEATHER DURING NOVEMBER.

The Dominion Meteorological Office reports that the mean temperature of the month was above average throughout the western provinces, and below average in British Columbia and from Ontario eastward. The largest positive departure, 6°, occurred in northern Saskatchewan, and the largest negative, also 6°, in northern British Columbia, while in Nova Scotia the negative departure

was from 3° to 4°. The precipitation was less than average in nearly all parts of the Dominion, the only districts in which there was an excess being the lower St. Lawrence Valley and the immediate vicinity of the Georgian Bay. The largest deficiencies occurred in British Columbia, exclusive of the extreme North, and in Saskatchewan, Manitoba and Nova Scotia, in each of which provinces the total aggregate was about half of the average amount. At the close of the month the northern interior plateaus of British Columbia were snow-covered, as were also the districts north of the Great Lakes and north of the Gulf of St. Lawrence, but nearly all the Dominion was bare of snow.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The average prices of meat at British markets (Table V) are taken from the official returns of the English and Scottish Boards of Agriculture and represent, not the range, but the first and second qualities, respectively. (6) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb., oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade	Nov. 4		Nov. 11		Nov. 18		Nov. 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 82½	-1 88½	1 92½	-2 00½	1 92½	-2 01½	1 90	-2 05
No. 2 Nor.....	1 79½	-1 85	1 88½	-1 96½	1 87½	-1 96½	1 87	-2 01
No. 3 Nor.....	1 74½	-1 79½	1 83½	-1 91½	1 82	-1 91½	1 82	-1 96
No. 4.....	1 64½	-1 70	1 73	-1 78½	1 65½	-1 75½	1 69½	-1 77½
No. 5.....	1 50½	-1 56½	1 59½	-1 65½	1 50	-1 63½	1 48½	-1 64
No. 6.....	1 36½	-1 39½	1 43	-1 39½	—	—	—	—
Feed.....	1 18½	-1 26½	1 25½	—	1 05	-1 08	1 00	-1 09
Oats—								
No. 2 C.W.....	0 58	-0 62½	0 61½	-0 67½	0 65	-0 67½	0 63½	-0 66½
No. 3 C.W.....	0 56½	-0 58½	0 59½	-0 66	0 63½	-0 66½	0 62½	-0 65
No. 1 Feed Ex.....	0 56½	-0 58½	0 59½	-0 66	0 63½	-0 66½	0 62½	-0 65
No. 1 Feed.....	0 56	-0 58	0 59½	-0 65½	0 63	-0 65½	0 61½	-0 64½
No. 2 Feed.....	0 55½	-0 57½	0 59½	-0 65½	0 62½	-0 65½	0 61	-0 63½
Barley—								
No. 3 C.W.....	1 04	-1 12	1 08	-1 13	1 08	-1 14	1 12	-1 15
No. 4 C.W.....	0 98	-1 07	1 02	-1 06	0 99	-1 04	1 01	-1 05
Rejected.....	0 90	-0 98	0 96½	-1 00	0 88	-0 94	0 91	-0 95
Feed.....	0 90	-0 97½	0 96½	-1 00	0 88	-0 94	0 91	-0 95
Flax—								
No. 1 N.W.C.....	2 47½	-2 49	2 50½	-2 72	2 46	-2 73½	2 57	-2 66½
No. 2 C.W.....	2 44½	-2 46	2 47½	-2 69	2 43	-2 70½	2 54	-2 63½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	August		September		October		November	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 29	-1 65	1 47	-1 48	1 58	-1 95	1 77	-1 96
Chicago.....	1 26	-1 58 ¹ / ₄	1 40 ¹ / ₂	-1 43 ³ / ₄	1 57 ¹ / ₂	-1 88	1 74	-1 89 ¹ / ₂
New York (f.o.b. afloat).....	1 33	-1 66	1 52	-1 58 ¹ / ₂	1 64 ¹ / ₂	-2 00 ¹ / ₂	1 78 ³ / ₄	-2 02 ³ / ₄
Corn, No. 2, mixed—								
St. Louis.....	0 80 ¹ / ₂	-0 87 ¹ / ₂	0 84 ¹ / ₂	—	0 86 ¹ / ₂	-1 11	0 91	-1 07 ¹ / ₂
New York (f.o.b. afloat).....	0 93	-1 01	1 00 ¹ / ₈	-1 01 ¹ / ₈	0 97 ¹ / ₂	-1 20	1 06	-1 18
Corn, No. 2—								
Chicago.....	0 82	-0 88 ¹ / ₂	0 85 ¹ / ₂	-0 86 ¹ / ₂	0 88 ¹ / ₂	-1 11	0 90	-1 10
Oats, No. 2—								
St. Louis.....	0 38	-0 48	0 45	-0 45 ¹ / ₂	0 46	-0 54	0 52	-0 59
Chicago.....	0 41	-0 47	0 44 ¹ / ₂	-0 45 ¹ / ₂	0 45 ¹ / ₂	-0 53 ¹ / ₂	0 51 ¹ / ₂	-0 59
Rye, No. 2—								
Chicago.....	1 00	-1 26 ¹ / ₂	1 15	-1 15 ¹ / ₂	1 24	-1 41	1 40	-1 53

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description	Nov. 6		Nov. 13		Nov. 20		Nov. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bushel)—								
Canadian No. 1.....	2 56	-2 59	2 44 ¹ / ₂	-2 47 ¹ / ₂	2 47 ¹ / ₂	-2 50 ¹ / ₂	2 47 ¹ / ₂	-2 50 ¹ / ₂
“ No. 2.....	2 53 ¹ / ₂	-2 56	2 41 ¹ / ₂	-2 44 ¹ / ₂	2 44 ¹ / ₂	-2 47 ¹ / ₂	2 44 ¹ / ₂	-2 47 ¹ / ₂
“ No. 3.....	2 50 ¹ / ₂	-2 53 ¹ / ₂	2 38 ¹ / ₂	-2 41 ¹ / ₂	2 41 ¹ / ₂	-2 44 ¹ / ₂	2 41 ¹ / ₂	-2 44 ¹ / ₂
American Duluth Spring.....	2 53 ¹ / ₂	-2 56	2 44 ¹ / ₂	-2 47 ¹ / ₂	2 47 ¹ / ₂	-2 50 ¹ / ₂	2 47 ¹ / ₂	-2 50 ¹ / ₂
“ Durum.....	2 36 ¹ / ₂	-2 42 ¹ / ₂	2 26 ¹ / ₂	-2 32 ¹ / ₂	2 29 ¹ / ₂	-2 35 ¹ / ₂	2 29 ¹ / ₂	-2 35 ¹ / ₂
“ hard red winter.....	2 30 ¹ / ₂	-2 36 ¹ / ₂	2 26 ¹ / ₂	-2 29 ¹ / ₂	2 32 ¹ / ₂	-2 35 ¹ / ₂	2 32 ¹ / ₂	-2 35 ¹ / ₂
“ soft red winter.....	2 24 ¹ / ₂	-2 27 ¹ / ₂	2 23 ¹ / ₂	-2 26 ¹ / ₂	2 26 ¹ / ₂	-2 29 ¹ / ₂	2 26 ¹ / ₂	-2 29 ¹ / ₂
Argentine.....	2 39 ¹ / ₂	-2 45	2 29 ¹ / ₂	-2 32 ¹ / ₂	2 35 ¹ / ₂	-2 38 ¹ / ₂	2 35 ¹ / ₂	-2 38 ¹ / ₂
Indian.....	2 40 ¹ / ₂	-2 43 ¹ / ₂	2 26 ¹ / ₂	-2 40 ¹ / ₂	2 34 ¹ / ₂	-2 36 ¹ / ₂	2 36 ¹ / ₂	-2 40 ¹ / ₂
Californian.....	2 30 ¹ / ₂	-2 33 ¹ / ₂	2 30 ¹ / ₂	-2 33 ¹ / ₂	2 33 ¹ / ₂	-2 36 ¹ / ₂	2 33 ¹ / ₂	-2 36 ¹ / ₂
Australian.....	2 39 ¹ / ₂	-2 42 ¹ / ₂	2 29 ¹ / ₂	-2 32 ¹ / ₂	2 32 ¹ / ₂	-2 38 ¹ / ₂	2 35 ¹ / ₂	-2 38 ¹ / ₂
Oats (per bushel)—								
Canadian.....	1 06 ¹ / ₂	-1 08 ¹ / ₂	1 11 ¹ / ₂	-1 13 ¹ / ₂	1 19	-1 21 ¹ / ₂	1 24 ¹ / ₂	-1 26
American.....	1 01	-1 03 ¹ / ₂	1 06 ¹ / ₂	-1 08 ¹ / ₂	1 13 ¹ / ₂	-1 16 ¹ / ₂	1 19	-1 21 ¹ / ₂
Chilian.....	1 03 ¹ / ₂	-1 06 ¹ / ₂	1 08 ¹ / ₂	-1 11 ¹ / ₂	1 21 ¹ / ₂	-1 24 ¹ / ₂	1 24 ¹ / ₂	-1 26
Flour (per 280 lb.)—								
Canadian good.....	14 84	-15 09	15 09	-15 33	15 57	-15 81	15 57	-15 81
“ first bakers’.....	—	—	—	—	14 84	-15 09	14 84	-15 09
“ common.....	—	—	—	—	14 60	-14 84	14 36	-14 60
“ soft winter.....	—	—	—	—	13 87	-14 11	13 63	-13 87
American, spring good.....	15 09	-15 33	15 09	-15 33	15 33	-15 57	15 09	-15 33
“ spring common.....	—	—	14 84	-15 09	15 09	-15 33	14 84	-15 09
“ winter, good.....	—	—	14 84	-15 09	15 09	-15 33	14 84	-15 09
“ winter common.....	—	—	14 36	-14 60	14 60	-14 84	14 36	-14 60
Californian.....	13 87	-13 99	14 11	-14 36	14 11	-14 36	14 11	-14 36
Australian.....	13 87	-13 99	14 11	-14 36	14 11	-14 36	14 11	-14 36

LIVERPOOL.

Description	Nov. 7		Nov. 14		Nov. 21		Nov. 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bushel)—								
Nor. Man. No. 1.....	2 33½	— 2 34½	2 40½	— 2 41	2 45½	—	2 49½	— 2 50½
“ No. 2.....	2 31½	— 2 32½	2 30½	—	—	—	—	—
“ No. 3.....	2 30	— 2 31½	—	—	2 25½	— 2 27	—	—
Nor. Chicago No. 1.....	2 30	—	—	—	—	—	—	—
Nor. Duluth No. 1.....	2 28½	— 2 30	—	—	—	—	2 44½	—
No. 2 hard winter.....	2 28½	—	2 30	—	2 33½	— 2 34½	—	—
No. 2 west winter.....	2 26½	— 2 27½	—	—	—	—	—	—
No. 2 red winter.....	—	—	2 22½	—	—	—	—	—
White Walla.....	2 27½	—	2 26½	—	2 31½	—	—	—
Oats (per bushel)—								
Chilian, white.....	1 08	— 1 08½	1 13½	— 1 18	1 18	— 1 19½	1 28½	— 1 30½
“ tawny.....	1 05½	— 1 06½	1 11½	—	1 13½	— 1 15	—	—
Canadian.....	1 10½	— 1 11½	1 15	— 1 16½	1 19½	— 1 21	1 25½	—
Flour (per 280 lb.)—								
Canada spring patents.....	14 34	— 14 72	14 84	— 15 09	15 09	— 15 33	15 33	— 15 57
Amer. soft winter patents.....	14 48	— 14 72	14 72	— 14 96	14 96	— 15 21	15 21	— 15 45
Kansas patents.....	14 60	— 15 09	14 84	— 15 09	14 96	— 15 21	15 33	— 15 57
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	12 03	— 12 27	13 38	— 13 50	14 60	— 14 72	14 60	— 14 72
“ middle cut.....	11 91	— 12 03	13 38	— 13 50	14 60	— 14 72	14 60	— 14 72
“ fine cut.....	11 91	— 12 03	13 38	— 13 50	14 60	— 14 72	14 60	— 14 72
“ pinhead.....	11 91	— 12 03	13 38	— 13 50	14 60	— 14 72	14 60	— 14 72

IV. Average Prices of British-Grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
November 4.....	66 7	2.025	56 2	1.640	34 0	0.901
“ 11.....	69 8	2.119	58 0	1.694	35 8	0.945
“ 18.....	70 9	2.152	59 8	1.742	37 8	0.998
“ 25.....	70 8	2.150	61 8	1.801	39 7	1.049
Average.....	69 5	2.112	58 11	1.719	36 9	0.973

V. Average Price of Imported Meats at British Markets, 1916.

Fresh Meats (per cwt. of 100 lb.)

Description and Markets	Nov. 1		Nov. 8		Nov. 15		Nov. 22		Nov. 29	
	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.	hind qrs.	fore qrs.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Argentine chilled—										
Birmingham.....	17.74	15.21	17.46	15.21	17.74	15.21	17.74	15.21	18.25	15.44
Leeds.....	17.23	14.70	17.23	14.70	17.74	14.95	17.23	14.70	18.25	15.21
Liverpool.....	17.23	14.70	17.74	15.21	17.23	15.21	17.23	15.21	18.26	15.21
London.....	17.74	14.70	17.23	14.70	19.55	15.21	17.74	15.21	18.25	15.21
Manchester.....	17.23	14.70	17.47	15.21	17.74	15.21	17.23	15.21	18.25	15.21
Edinburgh.....	18.30	15.20	18.30	15.20	18.30	15.70	18.30	15.45	18.80	15.70
Glasgow.....	17.70	15.20	—	—	—	—	18.30	15.20	18.30	15.20

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EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA, 1916.

Report for the Year ended December 31, 1916.

This report relates to the yield, quality and value of the grain crops of Canada for the season of 1916. Returns of the average yields per acre, of the average weights per measured bushel and of the average prices per bushel received by farmers have been collected in December, after completion of threshing, from agricultural correspondents throughout Canada; and for the three prairie provinces a large number of returns estimating the average yields per acre of wheat, oats, barley and flax were received from the rural post-masters and brought into the compilation.

CORRECTION OF AREAS BY CENSUS RETURNS.

Previous estimates of the areas sown to wheat, oats and barley in Manitoba, Saskatchewan and Alberta for the years 1915 and 1916 have been corrected by the preliminary results of the Census taken in June, 1916, and for 1916 the corrections include also rye and flax. These results indicate that the annual estimates of areas sown, as compiled from the reports of correspondents, are considerably below the census returns as compiled from the individual schedules filled up for every farm. Thus, in 1915, the census returns show, for the three provinces, 13,433,600 acres of wheat instead of 11,744,700; 6,349,600 acres of oats instead of 6,290,000 and 1,160,300 acres of barley instead of 962,000. Similarly, in 1916, the census returns, after the deduction of areas estimated to be unproductive, are for wheat 11,872,600 acres instead of 9,068,200; for oats 6,198,100 acres instead of 5,673,000; for barley 1,239,400 acres instead of 898,500; for rye 67,500 acres instead of 23,800 and for flax 600,700 acres instead of 705,000 acres, the area in the case of flax being less. The increases thus shown are largely in the more recently settled districts where the system of reporting by correspondents is necessarily less fully developed. A final statement of the harvest results of 1916, to include all crops, is dependent upon completion of the census compilation, a work that is now being proceeded with.

AVERAGE YIELDS PER ACRE OF GRAIN CROPS.

The prospects for a favourable grain harvest were good up to the end of July, and from the beginning of the crop-reporting season in May up to that time, the monthly figures representing the condition of spring wheat in Saskatchewan and Alberta were over 90 per cent of the standard, whilst in Manitoba they were above 90 for May and June and 84 for July. But during August a severe

outbreak of rust spread rapidly into Canada from the northern States across the border. The Census and Statistics Office crop correspondents reported on August 31 that the grain crops in Manitoba and Saskatchewan, had been so seriously affected by rust and hot winds during August that large areas sown would either fail to produce any crop at all, or would have to be cut green, whilst the yield of grain from producing areas would be very low, both in quantity and grade. These statements were fully borne out by the numerical expression given to the facts, and for Manitoba, where the attacks of rust were of the greatest and most widespread severity, the average condition of spring wheat on August 31 was down to 37 per cent of the standard—the lowest percentage on record since the crop-reporting system was started in 1908,—and in Saskatchewan and Alberta the averages were 61 and 78 respectively. The consequence was that the average yield per acre of spring wheat in Manitoba was only 12 bushels, as compared with 28.8 bushels in 1915; in Saskatchewan the yield per acre was $16\frac{1}{2}$ bushels against $28\frac{1}{2}$ bushels and in Alberta 23 bushels against 32.6 bushels.

For the whole of the Dominion, the average yields per acre of the principal grain crops for 1916 are, in bushels, as follows, the yields of 1915 and 1916 being placed within brackets for comparison: Fall wheat, $21\frac{1}{2}$ ($28\frac{3}{4}$ and $21\frac{1}{2}$); spring wheat, $16\frac{3}{4}$ (29 and 15); all wheat, 17 (29 and $15\frac{1}{2}$); oats, $35\frac{3}{4}$ ($45\frac{3}{4}$ and 31); barley, 25 ($35\frac{1}{2}$ and $24\frac{1}{4}$); rye, 20 ($21\frac{1}{2}$ and 18); peas, $14\frac{1}{2}$ ($17\frac{3}{4}$ and $17\frac{1}{2}$); beans, $12\frac{3}{4}$ ($16\frac{3}{4}$ and $18\frac{1}{4}$); buckwheat, $17\frac{1}{2}$ (23 and $24\frac{1}{4}$); mixed grains, $25\frac{1}{4}$ ($37\frac{1}{2}$ and $35\frac{1}{4}$); flaxseed, $11\frac{3}{4}$ (13 and $6\frac{1}{2}$); corn for husking, $36\frac{1}{4}$ ($56\frac{3}{4}$ and $54\frac{1}{2}$). For wheat, oats, barley and flaxseed these average yields, although inferior to the excellent returns of 1915, are higher than those of 1914, which was a year of low yields due to drought. For rye, the average is lower than in 1915, but higher than in 1916. For peas, beans, buckwheat, mixed grains and corn for husking, the average yields are lower than in either of the two previous years.

TOTAL AREAS AND YIELDS OF GRAIN CROPS.

The total harvested areas and the total production of the principal grain crops of Canada in 1915 and 1916, as corrected by the census returns of 1916, are therefore now estimated as follows:—

Crops	1915.	1916.	1915.	1916.
	acres.	acres.	bush.	bush.
Wheat.....	14,875,300	12,879,500	428,746,600	220,367,000
Oats.....	11,424,600	9,835,100	523,684,400	351,174,000
Barley.....	1,707,650	1,651,100	60,699,100	41,318,000
Rye.....	-	145,120	-	2,896,400
Flaxseed.....	-	605,700	-	7,122,300

For other crops the estimated total production in 1916 is as follows: peas, 2,172,400 bushels from 150,280 acres; beans, 412,600 bushels from 32,500 acres; buckwheat, 5,976,000 bushels from 341,500 acres; mixed grains, 10,077,000 bushels from 397,770 acres and corn for husking, 6,282,000 bushels from 173,000 acres.

YIELD OF ROOT AND FODDER CROPS.

The yield of hay and clover in 1916 was the record one of 14,799,000 tons, an average of 1.86 ton per acre, which is the highest yield on record for this crop in Canada. The average value per ton was \$11.52, as compared with \$14.22 in 1915. Potatoes were again upon the whole a poor crop, this result being due to unfavourable conditions in Quebec and Ontario, where the average yield per acre was for Quebec, 131 bushels, as compared with 149.66 bushels in 1915, and for Ontario, 61 bushels, as compared with 92.66 bushels. The total estimated production of potatoes in Canada was 61,128,000 bushels, as compared with 62,604,000 bushels in 1915 and 85,672,000 bushels, the record crop of 1914.

In the Maritime Provinces the potato yield was good, being 206 bushels per acre for Prince Edward Island, 201 bushels per acre for Nova Scotia and 192 bushels per acre for New Brunswick. The average price per bushel for potatoes was 81 cents for Canada, 52 cents for Prince Edward Island, 69 cents for Nova Scotia, 84 cents for New Brunswick, 97 cents for Quebec and \$1.28 for Ontario. Fair yields of potatoes were recorded for the prairie provinces, the averages being between 170 and 177 bushels, with prices of 61 and 62 cents per bushel in Manitoba and Saskatchewan, and 53 cents in Alberta. In British Columbia the average yield per acre was 189 bushels and the price 70 cents per bushel. The total yield of turnips and other roots was placed at 41,274,000 bushels, as compared with 64,281,000 bushels in 1915. Of fodder corn, the total yield was 1,976,700 tons, against 3,429,870 tons in 1915. Alfalfa produced 261,450 tons, compared with 261,470 tons in 1915, and sugar beets 71,000 tons against 141,000 tons.

QUALITY OF GRAIN CROPS.

The quality of the grain crops of 1916, as determined by the average weight in lb. per measured bushel, is as follows: Fall wheat, 59.52 lb.; spring wheat, 56.51 lb.; all wheat, 57.10 lb.; oats, 33.86 lb.; barley, 45.66 lb.; rye, 54.95 lb.; peas, 59.88 lb.; beans, 60 lb.; buckwheat, 46.35 lb.; mixed grains, 43.13 lb.; flax, 55 lb., and corn for husking 56.51 lb. For wheat and oats these weights per measured bushel are lower than in any previous year on record.

AVERAGE VALUES PER BUSHEL OF GRAIN CROPS.

Offsetting the low yields and grades is the increase in the average prices of grain received by farmers in 1916. These prices are considerably higher than those of 1915, and are even higher than the prices which ruled in 1914 after the outbreak of the war. The average prices per bushel received by farmers for the grain products of 1916 work out as follows: Fall wheat, \$1.53 against 91 cents in 1915, spring wheat, \$1.29 against 82 cents, all wheat, \$1.31 against 83 cents, oats, 53 cents against 34 cents, barley, 82 cents against

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49 cents, rye, \$1.11 against 79 cents, flaxseed, \$2.05 against \$1.50, peas, \$2.22 against \$1.66, beans, \$5.40 against \$3.05, buckwheat, \$1.07 against 75 cents, mixed grains, 90 cents against 57 cents and corn for husking, \$1.07 against 71 cents.

TOTAL VALUES OF FIELD CROPS.

The total farm values of the principal grain crops of 1916 are estimated as follows, the values of wheat, oats, barley, rye and flaxseed being based upon the corrected areas of the census returns of 1916, and the corresponding values of 1915, similarly corrected, are given in brackets for wheat, oats and barley: Wheat, \$289,374,000 (\$352,359,400); oats, \$187,759,000 (\$177,727,700); barley, \$34,010,000 (\$29,709,700); rye, \$3,205,800; peas, \$4,816,000; beans, \$2,228,000; buckwheat, \$6,375,000; mixed grains, \$9,076,300; flaxseed, \$14,581,300 and corn for husking, \$6,747,000.

Including the root and fodder crops, of which the estimated value was published last November, the total value of the field crops of Canada in 1916 is estimated at \$808,054,000 as compared with \$841,297,500, the revised estimate of 1915. The totals comprise grain crops, \$558,172,400 compared with \$611,789,900 in 1915; potatoes and sugar beets, \$50,094,000 compared with \$36,739,500 and fodder crops, \$199,787,600 compared with \$192,768,100. The total of \$808,054,000 for 1916 is higher than in any previous year with the exception of 1915.

WHEAT, OATS, BARLEY AND FLAX IN THE PRAIRIE PROVINCES.

In the three prairie provinces of Manitoba, Saskatchewan and Alberta, the production of wheat in 1916 is estimated at 199,900,000 bushels, as compared with 393,391,000 bushels in 1915; of oats at 254,879,000 bushels, compared with 338,422,000 bushels; of barley at 31,967,000 bushels, compared with 42,685,000 bushels, and of flax at 7,075,000 bushels, compared with 10,559,000 bushels. The estimated wheat production of 1916 in Manitoba was 27,714,000 bushels from 2,305,900 acres, in Saskatchewan, 123,448,000 bushels from 7,457,700 acres and in Alberta, 48,738,000 bushels from 2,109,000 acres, the acreage representing the areas harvested.

DESCRIPTION OF TABLES.

Table I shows in column 1 the areas sown to wheat, oats, barley and flax throughout Canada for the season of 1916, the areas sown in the three prairie provinces having been corrected by the census returns of 1916 for wheat, oats and barley in 1915 and for wheat, oats, barley, rye and flax in 1916. In columns 2 to 5 of this table are given in percentages and total figures the areas the crops upon which were estimated to have been either totally destroyed or cut green, according to the reports furnished by correspondents. Column 6 of Table I shows the resulting areas upon which the crops are esti-

mated to have been actually harvested for grain. Table II gives for Canada and the provinces the latest estimates of the harvested area, yield, quality and value of the principal field crops in 1916, as compared with 1915, including the census revisions in the case of wheat, oats, barley, rye and flax as above explained. Table III shows the estimated total acreage and production of wheat, oats, barley and flaxseed in the three prairie provinces for the years 1915 and 1916, the areas being those of the Census of 1916, after deduction of the areas estimated to be unproductive as in Table I. Finally, Table IV shows for Canada and by provinces the total estimated areas and values of field crops for each of the years 1911 to 1916. For 1916 the total area under field crops is placed at 35,192,450 acres, as compared with 39,010,255 in 1915 and 33,436,675 in 1914.

Census and Statistics Office,
Ottawa, January 20, 1917.

ERNEST H. GODFREY,
Editor.

I. Estimate of Areas either totally unproductive or producing crops that were cut green, 1916.

Field crops.	Area sown.	Total loss.		Cut green.		Area harvested.
		p c.	acres.	p.c.	acres.	
Canada—	acres.		acres.		acres.	acres.
Fall wheat.....	984,600	4.87	48,000	—	—	936,600
Spring wheat.....	13,886,400	10.25	1,428,000	3.75	515,500	11,942,900
All wheat.....	14,871,000	10.00	1,476,000	3.50	515,500	12,879,500
Oats.....	11,332,100	6.33	717,000	6.88	780,000	9,835,100
Barley.....	1,795,700	6.43	115,400	1.63	29,200	1,651,100
Flax.....	640,700	5.50	35,000	—	—	605,700
Prince Edward Isl'd.—						
Spring wheat.....	34,500	—	—	—	—	34,500
Oats.....	199,000	—	—	—	—	199,000
Barley.....	3,600	—	—	—	—	3,600
Nova Scotia—						
Spring wheat.....	13,400	—	—	—	—	13,400
Oats.....	116,000	—	—	—	—	116,000
Barley.....	4,700	—	—	—	—	4,700
New Brunswick—						
Spring wheat.....	14,000	—	—	—	—	14,000
Oats.....	198,000	—	—	—	—	198,000
Barley.....	1,900	—	—	—	—	1,900
Quebec—						
Spring wheat.....	70,000	6.00	4,200	2.50	1,800	64,000
Oats.....	1,308,000	8.50	111,000	9.50	124,000	1,073,000
Barley.....	81,000	6.25	5,000	4.00	3,200	72,800
Flax.....	500	—	—	—	—	500
Ontario—						
Fall wheat.....	820,600	5.60	45,800	—	—	774,800
Spring wheat.....	101,000	8.75	8,800	2.00	2,000	90,200
All wheat.....	921,600	6.00	54,600	0.25	2,000	865,000
Oats.....	2,465,000	14.00	345,000	5.25	129,000	1,991,000
Barley.....	368,000	11.50	42,000	—	—	326,000
Flax.....	4,500	—	—	—	—	4,500
Manitoba—						
Fall wheat.....	7,900	—	—	—	—	7,900
Spring wheat.....	2,687,000	11.25	302,000	3.25	87,000	2,298,000
All wheat.....	2,694,900	11.20	302,000	3.26	87,000	2,305,900
Oats.....	1,397,000	3.00	42,000	6.00	84,000	1,271,000
Barley.....	655,000	4.25	28,000	2.00	13,000	614,000
Flax.....	22,000	—	—	—	—	22,000

I. Estimate of Areas either totally unproductive or producing crops that were cut green, 1916.—con.

Field crops.	Area sown.	Total loss.		Cut green.		Area harvested.
		p.e.	acres.	p.e.	acres.	
	acres.					acres.
Saskatchewan—						
Fall wheat.....	105,700	—	—	—	—	105,700
Spring wheat.....	8,427,000	10.50	885,000	2.25	190,000	7,352,000
All wheat.....	8,532,700	10.40	885,000	2.25	190,000	7,457,700
Oats.....	3,543,600	3.75	133,000	6.50	230,000	3,180,600
Barley.....	357,400	3.75	13,400	—	—	344,000
Flax.....	519,700	4.25	22,000	—	—	497,700
Alberta—						
Fall wheat.....	44,200	5.00	2,200	—	—	42,000
Spring wheat.....	2,529,000	9.00	228,000	9.25	234,000	2,067,000
All wheat.....	2,573,200	9.00	230,200	9.10	234,000	2,109,000
Oats.....	2,030,500	4.25	86,000	9.75	198,000	1,746,500
Barley.....	321,400	8.50	27,000	4.00	13,000	281,400
Flax.....	94,000	13.75	13,000	—	—	81,000
British Columbia—						
Fall wheat.....	6,200	—	—	—	—	6,200
Spring wheat.....	10,500	—	—	7.00	700	9,800
All wheat.....	16,700	—	—	4.20	700	16,000
Oats.....	75,000	—	—	20.00	15,000	60,000
Barley.....	2,700	—	—	—	—	2,700

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Canada—						
Fall wheat..... 1915	1,124,200	28.81	32,391,600	59.71	0.91	29,546,500
1916	936,600	21.50	20,131,000	59.52	1.53	30,687,000
Spring wheat... 1915	13,551,100	29.10	394,355,000	60.31	0.82	322,812,900
1916	11,942,900	16.75	200,236,000	56.51	1.29	258,687,000
All wheat..... 1915	14,675,300	29.08	426,746,600	60.19	0.83	352,359,400
1916	12,879,500	17.00	220,367,000	57.10	1.31	289,374,000
Oats..... 1915	11,424,600	45.84	523,684,400	36.61	0.34	177,727,700
1916	9,835,100	35.75	351,174,000	33.86	0.53	187,759,000
Barley..... 1915	1,707,650	35.55	60,699,100	35.33	0.49	29,709,700
1916	1,651,100	25.00	41,318,000	45.66	0.82	34,010,000
Rye..... 1915	112,300	21.32	2,394,100	56.32	0.79	1,899,900
1916	145,120	20.00	2,896,400	54.95	1.11	3,205,800
Peas..... 1915	196,210	17.73	3,478,850	60.74	1.66	5,730,700
1916	150,280	14.46	2,172,400	59.88	2.22	4,816,000
Beans..... 1915	43,310	16.70	723,400	59.61	3.05	2,206,800
1916	32,500	12.70	412,600	60.00	5.40	2,228,000
Buckwheat... 1915	343,800	22.88	7,865,900	48.02	0.75	5,913,000
1916	341,500	17.50	5,976,000	46.35	1.07	6,375,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Canada—con.						
Mixed grains.... 1915	466,800	37.54	17,523,100	44.98	0.57	10,034,700
1916	397,770	25.33	10,077,000	43.13	0.90	9,076,300
Flax..... 1915	806,600	13.18	10,628,000	55.28	1.50	15,965,000
1916	605,700	11.75	7,122,300	54.99	2.05	14,581,300
Corn for husking 1915	253,300	56.72	14,368,000	56.32	0.71	10,243,000
1916	173,000	36.31	6,282,000	56.51	1.07	6,747,000
Potatoes..... 1915	478,600	130.81	62,604,000	—	0.57	35,964,000
1916	448,800	136.20	61,128,000	—	0.81	49,654,000
Turnips, man- golds, etc.... 1915	172,700	372.21	64,281,000	—	0.26	16,560,000
1916	156,200	264.24	41,274,000	—	0.41	16,761,000
Hay and clover. 1915	7,875,000	tons. 1.39	10,953,000	—	per ton 14.22	155,807,000
1916	7,974,000	1.86	14,799,000	—	11.52	170,504,000
Fodder corn.... 1915	343,400	10.00	3,429,870	—	4.96	16,999,100
1916	297,100	6.65	1,976,700	—	4.92	9,725,300
Sugar beets.... 1915	18,000	7.83	141,000	—	5.50	775,500
1916	15,000	4.75	71,000	—	6.20	440,000
Alfalfa..... 1915	92,490	2.83	261,470	—	12.98	3,395,900
1916	89,780	2.91	261,450	—	10.70	2,797,300
Prince Edward I.—		bush.	bush.		per bush.	
Spring wheat... 1915	34,400	19.00	653,600	59.05	1.08	705,800
1916	34,500	16.75	578,000	58.79	1.52	879,000
Oats..... 1915	196,000	34.86	6,832,500	36.70	0.45	3,074,600
1916	199,000	37.25	7,413,000	36.93	0.61	4,522,000
Barley..... 1915	3,700	28.88	106,800	48.83	0.71	75,800
1916	3,600	29.25	105,000	47.40	0.95	100,000
Peas..... 1915	70	15.75	1,100	61.67	2.33	2,500
1916	60	22.25	1,300	59.71	2.19	2,800
Buckwheat.... 1915	2,600	29.00	75,400	48.15	0.75	56,500
1916	2,500	27.25	68,000	49.10	1.00	68,000
Mixed grains.... 1915	8,000	38.65	309,200	43.00	0.55	170,000
1916	8,000	41.25	330,000	47.60	0.75	248,000
Potatoes..... 1915	31,000	114.78	3,558,000	—	0.46	1,637,000
1916	31,000	206.00	6,386,000	—	0.52	3,321,000
Turnips, man- golds, etc.... 1915	7,900	449.46	3,551,000	—	0.26	923,000
1916	8,000	477.00	3,816,000	—	0.28	1,068,000
Hay and clover 1915	198,000	tons. 1.77	351,000	—	per ton. 12.18	4,275,000
1916	199,000	1.70	338,000	—	11.56	3,907,000
Fodder corn.... 1915	260	13.00	3,400	—	3.00	10,200
1916	250	13.00	3,300	—	2.50	8,300

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	per bush.	\$
Nova Scotia—						
Spring wheat... 1915	13,300	18.57	247,000	59.26	1.21	298,700
1916	13,400	19.50	261,000	59.95	1.70	444,000
Oats..... 1915	112,000	31.14	3,487,700	34.18	0.59	2,057,700
1916	116,000	34.75	4,031,000	34.19	0.71	2,862,000
Barley..... 1915	4,900	26.20	128,400	48.39	0.80	102,700
1916	4,700	26.25	123,000	48.58	0.99	122,000
Rye..... 1915	300	15.00	4,500	56.00	1.08	4,900
1916	320	17.00	5,400	56.00	1.25	6,800
Peas..... 1915	190	18.66	3,550	59.00	2.01	7,100
1916	180	17.75	3,200	59.80	2.73	8,700
Beans..... 1915	840	17.50	14,700	50.83	3.87	56,800
1916	850	16.25	13,800	60.00	5.62	78,000
Buckwheat.... 1915	10,200	21.72	221,500	47.45	0.72	159,500
1916	10,000	24.50	245,000	46.97	0.84	206,000
Mixed grains.... 1915	4,100	34.16	140,000	43.05	0.71	99,400
1916	4,100	34.00	139,000	44.07	0.92	128,000
Potatoes..... 1915	33,700	141.23	4,759,000	—	0.58	2,760,000
1916	34,500	201.00	6,935,000	—	0.69	4,785,000
Turnips, man- golds, etc.... 1915	9,200	390.02	3,598,000	—	0.34	1,223,000
1916	9,000	404.00	3,636,000	—	0.42	1,527,000
Hay and clover 1915	538,000	1.78 tons.	958,000 tons.	—	per ton. 13.33	12,770,000
1916	553,000	1.80	995,000	—	12.25	12,189,000
Fodder corn.... 1915	500	4.64	2,300	—	7.00	16,000
1916	500	8.75	4,400	—	2.50	11,000
Alfalfa..... 1915	30	2.30	70	—	13.00	900
1916	30	5.00	150	—	15.00	2,300
New Brunswick—						
Spring wheat... 1915	14,000	bush. 19.09	bush. 267,000	59.69	per bush. 1.26	335,000
1916	14,000	17.25	242,000	59.20	1.72	416,000
Oats..... 1915	201,000	27.66	5,559,600	36.33	0.55	3,058,000
1916	198,000	30.50	6,039,000	35.49	0.68	4,107,000
Barley..... 1915	2,100	22.96	48,000	48.85	0.85	40,800
1916	1,900	23.75	45,000	46.70	1.00	45,000
Peas..... 1915	420	17.08	6,700	60.27	2.52	16,900
1916	400	16.50	6,600	60.21	2.46	16,200
Beans..... 1915	270	21.37	5,700	60.71	4.03	23,000
1916	250	15.25	3,800	60.54	6.11	23,000
Buckwheat.... 1915	58,000	22.68	1,315,000	47.51	0.73	960,000
1916	53,000	22.75	1,200,000	46.51	0.84	1,013,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
New Brunswick—con.						
Mixed grains.... 1915	900	31.50	28,400	45.80	0.71	20,000
1916	870	34.25	30,000	43.25	0.78	23,000
Potatoes..... 1915	40,000	144.31	5,772,000	—	0.64	3,694,000
1916	39,000	192.00	7,488,000	—	0.84	6,290,000
Turnips, man- golds, etc.... 1915	8,000	329.10	2,633,000	—	0.33	869,000
1916	7,700	411.00	3,165,000	—	0.45	1,424,000
Hay and clover. 1915	569,000	tons. 1.39	791,000	—	per ton. 14.00	11,074,000
1916	571,000	1.48	850,000	—	11.27	9,563,000
Fodder corn.... 1915	110	7.00	770	—	2.50	1,900
1916	100	10.00	1,000	—	4.00	4,000
Quebec—		bush.	bush.		per bush.	
Spring wheat... 1915	71,000	19.88	1,411,000	59.62	1.34	1,891,000
1916	64,000	15.00	960,000	57.71	1.86	1,786,000
Oats..... 1915	1,400,000	30.13	42,182,000	36.92	0.55	23,200,000
1916	1,073,000	22.75	24,411,000	33.55	0.77	18,796,000
Barley..... 1915	85,000	26.53	2,255,000	48.79	0.86	1,939,000
1916	72,800	20.00	1,456,000	46.67	1.15	1,674,000
Rye..... 1915	8,700	16.71	145,000	55.90	1.12	162,000
1916	8,300	14.25	118,000	55.97	1.40	165,000
Peas..... 1915	24,400	16.56	404,000	61.14	2.47	998,000
1916	21,600	14.00	302,000	59.95	3.22	972,000
Beans..... 1915	4,700	21.89	103,000	59.38	3.17	327,000
1916	4,400	17.75	78,000	60.18	5.56	434,000
Buckwheat.... 1915	104,000	24.69	2,568,000	48.17	0.84	2,157,000
1916	101,000	19.00	1,919,000	43.35	1.21	2,322,000
Mixed grains.... 1915	101,000	29.67	2,997,000	45.44	0.73	2,188,000
1916	91,000	20.25	1,843,000	44.01	0.90	1,825,000
Flax..... 1915	600	11.89	7,000	54.16	2.18	15,000
1916	500	10.50	5,300	54.50	2.50	13,300
Corn for husk- ing..... 1915	16,300	31.17	508,000	56.85	1.12	569,000
1916	13,000	24.75	322,000	56.18	1.52	489,000
Potatoes..... 1915	117,000	149.66	17,510,000	—	0.55	9,631,000
1916	112,000	131.00	14,672,000	—	0.07	14,232,000
Turnips, man- golds, etc.... 1915	10,200	308.25	3,144,000	—	0.36	1,132,000
1916	10,000	265.00	2,650,000	—	0.48	1,272,000
Hay and clover. 1915	2,922,000	tons. 1.26	3,682,000	—	per ton. 15.89	58,507,000
1916	2,985,000	1.75	5,224,000	—	11.00	57,464,000
Fodder corn.... 1915	34,000	8.61	293,000	—	6.39	1,872,000
1916	31,000	8.00	248,000	—	5.75	1,426,000
Alfalfa..... 1915	2,860	2.84	8,100	—	11.78	95,000
1916	2,600	2.65	7,000	—	9.50	67,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Ontario—						
Fall wheat.....1915	972,000	28.34	27,546,000	59.41	0.93	25,618,000
1916	774,800	21.25	16,465,000	59.42	1.55	25,521,000
Spring wheat....1915	121,000	22.36	2,706,000	59.41	0.96	2,598,000
1916	90,200	16.25	1,466,000	57.80	1.55	2,272,000
All wheat.....1915	1,093,000	27.67	30,252,000	59.41	0.93	28,216,000
1916	865,000	20.73	17,931,000	58.79	1.55	27,793,000
Oats.....1915	3,095,000	39.68	122,810,000	34.67	0.39	47,896,000
1916	1,991,000	25.50	50,771,000	30.30	0.64	32,493,000
Barley.....1915	449,000	34.23	15,360,000	47.83	0.56	8,607,000
1916	326,000	23.00	7,498,000	44.94	0.99	7,422,000
Rye.....1915	78,000	19.88	1,551,000	56.89	0.79	1,225,000
1916	69,000	17.50	1,208,000	55.20	1.17	1,413,000
Peas.....1915	169,000	17.79	3,007,000	59.86	1.54	4,631,000
1916	126,000	14.25	1,790,000	59.71	2.06	3,700,000
Beans.....1915	37,500	16.00	600,000	59.76	3.05	1,800,000
1916	27,000	11.75	317,000	59.72	5.34	1,693,000
Buckwheat.....1915	169,000	21.81	3,686,000	48.21	0.70	2,580,000
1916	175,000	14.50	2,538,000	45.80	1.09	2,766,000
Mixed grains....1915	345,000	39.91	13,769,000	44.76	0.54	7,435,000
1916	286,000	26.00	7,436,000	40.77	0.89	6,618,000
Flax.....1915	5,000	12.38	62,000	50.78	1.72	107,000
1916	4,500	9.25	42,000	57.17	2.78	117,000
Corn for husk- ing.....1915	237,000	58.48	13,860,000	55.75	0.69	9,674,000
1916	160,000	37.25	5,960,000	57.18	1.05	6,258,000
Potatoes.....1915	155,000	92.66	14,362,000	—	0.76	10,915,000
1916	133,000	61.00	8,113,000	—	1.28	10,385,000
Turnips, man- golds, etc....1915	112,000	394.42	44,175,000	—	0.21	9,277,000
1916	97,000	211.00	20,467,000	—	0.36	7,368,000
Hay and clover 1915	3,082,000	tons. 1.32	4,068,000	—	per ton. 14.06	57,196,000
1916	3,059,000	2.00	6,118,000	—	11.90	72,804,000
Fodder corn....1915	287,000	10.63	3,051,000	—	4.76	14,523,000
1916	248,000	6.50	1,612,000	—	4.80	7,738,000
Sugar beets....1915	18,000	7.83	141,000	—	5.50	775,500
1916	15,000	4.75	71,000	—	6.20	440,000
Alfalfa.....1915	60,000	2.72	163,000	—	13.41	2,186,000
1916	56,000	3.00	168,000	—	9.75	1,638,000
Manitoba—						
Fall wheat.....1915	5,500	bush. 33.30	183,000	61.33	per bush. 0.88	161,000
1916	7,900	17.50	138,000	—	1.40	193,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Manitoba—con.						
Spring wheat...1915	2,748,900	28.83	79,251,000	61.18	0.85	67,363,000
1916	2,298,000	12.00	27,576,000	51.23	1.23	33,918,000
All wheat....1915	2,754,400	28.84	79,434,000	61.18	0.85	67,524,000
1916	2,305,900	12.00	27,714,000	—	1.23	34,111,000
Oats.....1915	1,326,800	48.21	63,965,000	36.36	0.32	20,469,000
1916	1,271,000	32.75	41,625,000	33.05	0.49	24,559,000
Barley.....1915	569,500	36.25	20,644,000	47.70	0.50	10,322,000
1916	614,000	22.50	13,815,000	42.78	0.80	11,052,000
Rye.....1915	5,800	26.74	155,000	57.50	0.73	113,000
1916	28,000	20.00	560,000	56.50	1.06	594,000
Mixed grains...1915	1,550	32.50	50,000	43.00	0.41	21,000
1916	1,400	32.25	45,000	42.00	0.45	20,300
Flax.....1915	34,000	11.00	374,000	55.00	1.54	576,000
1916	22,000	10.75	237,000	—	2.13	505,000
Potatoes.....1915	28,300	109.67	3,104,000	—	0.54	1,676,000
1916	28,000	170.00	4,760,000	—	0.61	2,904,000
Turnips, man- golds, etc....1915	4,300	269.01	1,157,000	—	0.35	405,000
1916	4,100	312.00	1,297,000	—	0.49	627,000
		tons.	tons.		per ton.	
Hay and clover 1915	159,000	1.93	307,000	—	9.63	2,956,000
1916	158,000	2.00	316,000	—	7.80	2,465,000
Fodder corn...1915	18,000	3.36	60,000	—	8.33	500,000
1916	14,000	6.75	95,000	—	4.67	444,000
Alfalfa.....1915	4,700	2.19	10,300	—	11.17	115,000
1916	4,700	2.75	13,000	—	11.83	154,000
Saskatchewan—		bush.	bush.		per bush.	
Fall wheat....1915	98,000	30.76	3,014,000	—	0.81	2,441,000
1916	105,700	20.25	2,140,000	59.50	1.41	3,017,000
Spring wheat...1915	8,425,600	28.54	240,467,000	60.75	0.81	194,778,000
1916	7,352,000	16.50	121,308,000	55.18	1.28	155,274,000
All wheat....1915	8,523,600	28.57	243,481,000	—	0.81	197,219,000
1916	7,457,700	16.50	123,448,000	55.27	1.28	158,291,000
Oats.....1915	3,200,400	53.67	171,765,000	37.48	0.28	48,094,000
1916	3,180,600	42.75	135,971,000	35.76	0.46	62,547,000
Barley.....1915	285,000	36.83	10,497,000	47.54	0.43	4,514,000
1916	344,000	29.25	10,062,000	46.02	0.77	7,748,000
Rye.....1915	2,700	28.00	75,600	55.17	0.75	57,000
1916	20,500	23.50	482,000	55.91	1.10	530,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—con.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Saskatchewan—con.						
Peas.....1915	400	23.00	9,200	61.00	1.40	13,000
1916	360	32.50	11,700	60.00	2.25	26,300
Mixed grains....1915	1,950	30.00	58,500	48.33	0.45	26,300
1916	2,000	35.00	70,000	40.00	0.46	32,000
Flax.....1915	697,000	13.00	9,061,000	55.89	1.50	13,592,000
1916	497,700	11.50	5,724,000	55.29	2.23	12,765,000
Potatoes.....1915	30,300	146.15	4,428,000	—	0.49	2,170,000
1916	30,000	176.00	5,280,000	—	0.62	3,274,000
Turnips, man- golds, etc....1915	12,400	236.75	2,936,000	—	0.52	1,527,000
1916	12,200	266.00	3,245,000	—	0.57	1,850,000
		tons.	tons.		per ton.	
Hay and clover 1915	67,000	1.41	94,000	—	6.96	654,000
1916	75,000	1.97	148,000	—	5.85	866,000
Fodder corn....1915	2,000	4.16	8,300	—	3.00	25,000
1916	1,800	2.75	5,000	—	6.00	30,000
Alfalfa.....1915	1,800	1.71	3,000	—	14.50	44,000
1916	1,850	2.85	5,300	—	10.25	54,000
Alberta—		bush.	bush.		per bush.	
Fall wheat....1915	42,700	33.92	1,448,000	61.32	0.79	1,144,000
1916	42,000	28.50	1,197,000	61.19	1.39	1,664,000
Spring wheat...1915	2,112,900	32.67	69,028,000	61.57	0.79	54,532,000
1916	2,067,000	23.00	47,541,000	58.00	1.33	63,230,000
All wheat....1915	2,155,600	32.69	70,476,000	61.52	0.79	55,676,000
1916	2,109,000	23.25	48,738,000	58.45	1.33	64,894,000
Oats.....1915	1,822,400	56.35	102,692,000	39.76	0.27	27,727,000
1916	1,746,500	44.25	77,283,000	37.36	0.46	35,550,000
Barley.....1915	305,800	37.75	11,544,000	49.57	0.35	4,040,000
1916	281,400	28.75	8,090,000	46.18	0.71	5,744,000
Rye.....1915	16,800	28.61	463,000	56.63	0.73	338,000
1916	19,000	27.50	523,000	53.71	0.95	497,000
Peas.....1915	430	20.00	8,600	62.00	1.65	14,200
1916	380	20.00	7,600	57.50	2.25	17,000
Mixed grains....1915	1,700	39.17	67,000	47.20	0.34	23,000
1916	1,800	30.00	54,000	36.00	0.35	19,000
Flax.....1915	70,000	16.05	1,124,000	56.37	1.49	1,675,000
1916	81,000	13.75	1,114,000	55.91	1.06	1,181,000
Potatoes.....1915	27,300	188.84	5,155,000	—	0.33	1,701,000
1916	26,000	177.00	4,602,000	—	0.53	2,439,000

II. Area, Yield, Quality and Value of principal Field Crops in Canada, 1915 and 1916—concluded.

Field crops.	Area.	Yield per acre.	Total yield.	Weight per measured bushel.	Average price per bushel.	Total value.
	acres.	bush.	bush.	lb.	\$	\$
Alberta—con.						
Turnips, man-golds, etc.... 1915	4,900	276.73	1,356,000	—	0.39	520,000
1916	4,500	255.00	1,148,000	—	0.61	700,000
		tons.	tons.		per ton.	
Hay and clover 1915	173,000	1.80	311,000	—	8.61	2,678,000
1916	196,000	1.75	343,000	—	8.62	2,957,000
Fodder corn.... 1915	1,100	5.14	5,700	—	5.00	29,000
1916	1,000	3.50	3,500	—	9.00	32,000
Alfalfa..... 1915	11,000	3.06	34,000	—	9.31	317,000
1916	12,000	2.65	32,000	—	10.70	342,000
British Columbia—		bush.	bush.		per bush.	
Fall wheat.... 1915	6,000	33.44	200,600	60.46	0.91	182,500
1916	6,200	30.75	191,000	61.60	1.53	292,000
Spring wheat.... 1915	10,000	32.43	324,400	58.40	0.96	311,400
1916	9,800	31.00	304,000	59.55	1.54	468,000
All wheat.... 1915	16,000	32.80	525,000	59.32	0.94	493,900
1916	16,000	30.94	495,000	60.16	1.54	760,000
Oats..... 1915	71,000	61.84	4,390,600	36.28	0.49	2,151,400
1916	60,000	60.50	3,630,000	37.15	0.64	2,323,000
Barley..... 1915	2,650	40.36	106,900	49.39	0.64	68,400
1916	2,700	45.75	124,000	47.60	0.83	103,000
Peas..... 1915	1,300	29.75	38,700	60.00	1.24	48,000
1916	1,300	33.75	44,000	61.20	1.67	73,000
Mixed grains.... 1915	2,600	40.00	104,000	—	0.50	52,000
1916	2,600	50.00	130,000	52.00	1.25	163,000
Potatoes..... 1915	16,000	247.28	3,956,000	—	0.45	1,780,000
1916	15,300	189.00	2,892,000	—	0.70	2,024,000
Turnips, man-golds, etc.... 1915	3,800	455.61	1,731,000	—	0.39	675,000
1916	3,700	500.00	1,850,000	—	0.50	925,000
		tons.	tons.		per ton.	
Hay and clover 1915	167,000	2.34	391,000	—	14.57	5,697,000
1916	175,000	2.67	467,000	—	17.75	8,289,000
Fodder corn.... 1915	430	12.62	5,400	—	4.00	22,000
1916	450	10.00	4,500	—	7.00	32,000
Alfalfa..... 1915	12,100	3.52	43,000	—	14.84	638,000
1916	12,600	2.88	36,000	—	15.00	540,000

III. Harvested Areas and Yields of Wheat, Oats, Barley and Flaxseed in the three Prairie Provinces, 1915 and 1916.

Provinces.	1915.	1916.	1915.	1916.
	acres.	acres.	bush.	bush.
Prairie Provinces—				
Wheat.....	13,433,600	11,872,600	393,391,000	199,900,000
Oats.....	6,349,600	6,198,100	338,422,000	254,879,000
Barley.....	1,160,300	1,239,400	42,685,000	31,967,000
Flax.....	801,000	600,700	10,559,000	7,075,000
Manitoba—				
Wheat.....	2,754,400	2,305,900	79,434,000	27,714,000
Oats.....	1,326,800	1,271,000	63,965,000	41,625,000
Barley.....	569,500	614,000	20,644,000	13,815,000
Flax.....	34,000	22,000	374,000	237,000
Saskatchewan—				
Wheat.....	8,523,600	7,457,700	243,481,000	123,448,000
Oats.....	3,200,400	3,180,600	171,765,000	135,971,000
Barley.....	285,000	344,000	10,497,000	10,062,000
Flax.....	697,000	497,700	9,061,000	5,724,000
Alberta—				
Wheat.....	2,155,600	2,109,000	70,476,000	48,738,000
Oats.....	1,822,400	1,746,500	102,692,000	77,283,000
Barley.....	305,800	281,400	11,544,000	8,090,000
Flax.....	70,000	81,000	1,124,000	1,114,000

IV. Total Areas and Values of Field Crops in Canada, 1911-1916.

AREAS.

Provinces.	1911.	1912.	1913.	1914.	1915.	1916.
	acres	acres	acres	acres	acres	acres
Canada.....	34,545,672	35,575,550	35,374,930	33,436,675	30,010,255	35,192,450
P. E. Island.....	477,035	462,880	456,970	461,510	481,985	485,910
Nova Scotia.....	709,703	700,100	711,630	693,860	727,260	746,580
New Brunswick.....	978,530	931,900	906,130	904,055	893,940	889,220
Quebec.....	5,375,066	5,010,400	4,898,800	4,863,850	4,801,760	4,590,200
Ontario.....	9,848,900	9,349,000	9,200,000	8,973,700	9,391,500	7,637,500
Manitoba.....	5,134,087	4,671,400	4,965,000	4,671,790	4,906,350	4,451,100
Saskatchewan.....	8,644,102	10,315,800	10,307,600	9,238,000	12,824,550	11,623,710
Alberta.....	3,351,745	3,603,080	3,690,100	3,389,270	4,590,030	4,478,580
British Columbia.....	226,495	230,660	238,700	260,640	292,880	289,650

VALUES.

	\$	\$	\$	\$	\$	\$
Canada.....	597,926,000	557,344,100	552,771,500	638,580,300	841,297,500	808,054,000
P. E. Island.....	9,099,300	9,456,000	9,535,500	11,544,000	10,932,700	14,124,100
Nova Scotia.....	17,174,500	19,420,000	17,132,900	21,969,700	19,556,700	22,369,800
New Brunswick.....	17,695,200	17,295,700	17,065,100	20,045,100	20,096,400	22,924,200
Quebec.....	106,248,000	69,901,000	88,589,000	99,270,000	104,683,000	102,937,300
Ontario.....	195,764,000	198,715,000	167,835,000	106,220,000	207,043,500	190,646,000
Manitoba.....	76,548,000	71,647,000	64,557,000	65,528,400	104,677,000	77,435,300
Saskatchewan.....	115,426,000	115,813,000	129,376,000	152,751,500	267,935,300	248,013,300
Alberta.....	48,475,000	44,603,400	46,712,000	59,779,600	94,747,200	114,372,000
British Columbia.....	11,496,000	10,593,000	11,069,000	11,463,000	11,625,700	15,232,000

DISTRIBUTION AND EXPORTABLE SURPLUS OF CANADIAN WHEAT, 1915 AND 1916.

In the Census and Statistics Monthly of October, 1916 (Vol. 9, No. 98, p. 272) calculations were given showing the distribution of the wheat crop of 1915 and the estimated exportable surplus of the wheat crop of 1916. The publication of the returns of the Census of the prairie provinces taken in 1916 (see Census and Statistics Monthly of December, 1916, page 309 and pages 1 to 5 of this present issue) necessitates fresh calculations based upon the revised data. Accordingly, Table I, as revised, shows an estimated exportable surplus from the wheat crop of 1915 of 330,730,946 bushels. The actual exports of wheat and wheat flour were 289,794,162 bushels.

I. Distribution and Exportable Surplus of Wheat Crop of 1915.

	bush.	bush.
Quantity in Elevators, September 3, 1915 (Weekly Bulletin, September 13, 1915).....		1,063,795
Merchantable Wheat Crop of 1915 (426,746,600 bushels less 5 per cent loss in cleaning, etc.).....		405,409,000
Imports of Wheat and Flour during the year ended August 31, 1916.....		282,401
		406,755,196
Retained for seeding crop of 1916, 14,871,000 acres at 1.75 bushel per acre.....	26,024,250	
Retained for Food: Population of 8 millions at 6.25 bushels per capita.....	50,000,000	76,024,250
Exportable Surplus.....		330,730,946
Actual Exports of Wheat and Flour during Crop Year ended August 31, 1916.....		289,794,162
Difference.....		40,936,784

II. Estimate of Exportable Surplus of Wheat Crop of 1916.

Carry over from 1915-16 (Census and Statistics Monthly, September, 1916, p. 242).....		27,033,000
Allowance for Imports, say.....		250,000
Crop of 1916 (see page 2 of this issue).....		220,367,000
		247,650,000
Loss in cleaning and for grain not of merchantable quality, say 10 per cent.....	22,036,700	
Retained for seeding crop of 1917, say 15 million acres at 1.75 bushels per acre.....	26,250,000	
Retained for food: population of 8 millions at 6.25 bushels per capita.....	50,000,000	98,286,700
Balance available for export.....		149,363,300

In Table II the "carry over" into the new crop year 1916-17 is given as 27,033,000 bushels, which deducted from the balance of 40,936,784 bushels in Table I leaves a quantity of 13,903,784 bushels unaccounted for, or 3.2 per cent of the total crop. With

allowances for imports, loss in cleaning and home requirements, the balance available for export of the wheat crop of 1916 works out to 149,363,300 bushels; or, say, in round figures, an indicated exportable surplus during the crop year ending August 31, 1917, of about 150 million bushels instead of the 99½ million bushels previously estimated.

INSPECTION AND SHIPMENTS OF GRAIN, 1916.

According to the Weekly Bulletin of the Department of Trade and Commerce (January 17, 1916, and January 15, 1917), the number of cars and total quantities in bushels of grain inspected at Winnipeg and other points in the western division for the four months ended December 31, 1916, compared with the corresponding periods of 1914 and 1915, were as follows:

Grain.	Four months ended December 31, 1914.		Four months ended December 31, 1915.		Four months ended December 31, 1916.	
	cars	bushels	cars	bushels	cars	bushels
Wheat.....	61,349	69,017,625	156,449	176,005,125	84,247	101,096,400
Oats.....	10,114	19,216,600	21,341	40,547,900	20,018	41,036,900
Barley.....	2,472	3,213,600	5,276	6,858,800	4,984	6,728,400
Flaxseed.....	2,146	2,199,650	1,423	1,458,575	2,608	2,999,200
Rye.....	90	90,000	76	76,000	98	98,000
Speltz.....	—	—	1	1,000	—	—
Screenings.....	83	83,000	107	107,000	188	188,000
Total.....	76,254	93,820,475	184,673	225,054,400	112,143	152,146,900

The shipments of grain from Fort William and Port Arthur for the four months ended December 31, 1914, 1915 and 1916, were in bushels as follows:

Grain.	Four months ended December 31, 1914.	Four months ended December 31, 1915.	Four months ended December 31, 1916.
	bushels.	bushels.	bushels.
Wheat.....	49,312,580	140,989,805	61,081,973
Oats.....	9,626,842	22,278,121	20,452,027
Barley.....	1,779,167	4,199,721	3,949,731
Flaxseed.....	3,629,624	1,761,267	2,503,243
Total.....	64,348,213	169,228,914	88,586,974

Thus, it will be seen that the total shipments of 1916, whilst little more than half of those of 1915, exceeded the quantities of 1914 by about 24 million bushels.

REPORTS ON THE CONDITION OF LIVE STOCK.

The Crop Correspondents of the Census and Statistics Office were asked in their reports returnable at Christmas to state whether the supply of winter feed in their respective districts was sufficient to carry stock in good condition through the winter. They were requested to state "Yes" or "No" for each of the following articles of fodder: Hay, straw, silage, grain and roots.

The following statement shows for each province the numerical percentage of the total replies that were affirmative, the remainder answering "No".

Winter Feed for Live Stock, 1916-17.

Provinces.	Hay.	Straw.	Silage.	Grain.	Roots.
	p.c.	p.c.	p.c.	p.c.	p.c.
Prince Edward Island.....	100	100	52	92	92
Nova Scotia.....	100	100	31	60	71
New Brunswick.....	100	100	32	61	75
Quebec.....	100	83	51	44	45
Ontario.....	99	70	40	33	21
Manitoba.....	94	99	44	89	53
Saskatchewan.....	88	100	26	93	45
Alberta.....	89	100	24	98	70
British Columbia.....	69	75	47	54	68
Canada.....	95	89	40	65	48

It will be gathered from this statement that hay and straw were abundant throughout the greater part of the Dominion, especially in the Maritime provinces, and that straw was also plentiful in the western provinces. On the other hand, the supplies of silage were generally insufficient. Grain supplies were shown to be insufficient in Quebec and Ontario. Roots too, were short in Quebec, Ontario, Manitoba and Saskatchewan.

The following is a summary of the remarks of correspondents relating to live stock conditions in each province.

Prince Edward Island.—Live stock are stated to be everywhere in thriving condition. Feed of all sorts is plentiful, with the exception of roots in some few places where light yields were realized. Some reports state that more attention is being paid to winter dairying on account of the high price of butter.

Nova Scotia.—Live stock are in healthy condition generally, though cattle in some parts of the province are poor in flesh, owing to the bareness of pastures in the late fall. The supply of hay and straw is adequate. The supply of roots and grain is limited, and has to be supplemented by the use of mill feed. Increased attention is being given to winter dairying.

New Brunswick.—Stock went into the barns in good condition. The supply of hay and clover is ample to last through the winter. Roots are none too plentiful in some districts, and bran and middlings are brought in to help out the grain supply.

Quebec.—All cattle entered the stables in excellent condition, and as a result of the abundant supply of hay are wintering well. No reports of disease have been received. There is a shortage of roots and grain, and as little of the latter is being fed, horses are looking rather thin. Very high prices prevail for grain, and many farmers state that they will have to purchase their grain for seed.

Ontario.—Live stock are reported as being free from disease everywhere, though in some places they were poor in flesh where they came off bare pastures in the fall. There are large supplies of good clover and timothy hay. Roots and silage, however, are everywhere rather scarce, and grain has to be purchased for feeding horses and pigs. Much mill feed has to be bought to feed to milch cows, but prices for dairy produce are so high that farmers are finding heavy feeding profitable. The size of some herds has been reduced in parts of the province as a result of the high prices offered for beef.

Manitoba.—Live stock are all in excellent condition. The fall was a fine, open one, and cattle and horses were grazing off the stubble and feeding at the straw stacks till very late. There is an abundance of well-cured wild hay. Straw is fairly plentiful, and no apparent injury has resulted to animals feeding on that affected by rust. Less grain than usual will be fed owing to reduced yields and high prices.

Saskatchewan.—Stock is in good condition, owing to the fine fall weather. Animals fed largely off the stubble, which provided good rations, as there was a good deal of destroyed crops containing small percentages of grain. There is an ample supply of hay and straw, and out sheaves are being much fed. High prices for grain tempt the farmer to sell rather than feed.

Alberta.—Live stock commenced the winter in excellent condition. The absence of deep snow allowed the cattle to graze out on the stubble until very late. There is plenty of hay, though not always of the best quality owing to rains at harvesting. The straw is generally of good quality, and as much of it was cut green, it has a special value for feeding purposes. The conditions at High River are expressed by our correspondent there as follows: "Live stock is in an extraordinarily good condition, excepting milch cows, which are only fair, due partly to the fact that grain being dear is spared as much as possible and partly to continual rains making an abnormal proportion of water in the feed. On the other hand, these conditions have been very good for range stock, which has had an ample supply of green grass till the beginning of October. However the dry grass in the prairies will not be very rich for fodder, and stock will have to consume a much bigger quantity to get the same amount of nutritious matter; as for the stock wintered on stubble, it will come out wonderfully. The supply of straw is not only unusually large, but most of the grain being cut green the straw is good; many kernels

were left in the heads, and many light ones have been blown out at threshing." Grain is dear and will be fed as sparingly as possible.

NOTE.—The attention of the Census and Statistics Office has been called by the Publicity Bureau of the Alberta Department of Agriculture to a statement summarized from the crop reports on Alberta which appeared at pp. 288 and 289 of the Census and Statistics Monthly for November, 1916. The statement in question was as follows: "Few roots are grown in the province, as mixed farming is not generally followed." It was found on further examination of the returns that this statement referred to a particular district and was inadvertently applied to the whole province. We regret the error and are glad to insert this correction. The Alberta Department writes that it has studied to "direct operations more generally along the mixed farming lines, and from time to time we have been pleased with the evidences of our farmers' response and desire to adopt the more intensive method of agriculture" [Ed.].

British Columbia.—Stock is in healthy condition with a fair supply of fodder, though in some districts hay and grain have to be imported.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during December have ranged very much lower than during the corresponding period of 1915, the mean being 16.62, the highest 46 and the lowest -20, compared with a mean temperature of 20.66 and extremes of 37 and -8.2 a year ago. The precipitation totals 2.48 inches made up of 0.6 of an inch of rain and 18.75 inches of snow; while a year ago it amounted to 4.21 inches, consisting of 0.36 of an inch of rain and 38.5 inches of snow. The bright sunshine recorded during the month averages 2.77 hours a day, against 2.07 hours a day in 1915.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—"December has been very dull, the hours of sunshine totalling only 32.7, or very little more than half of the record of any other month since the sunshine recorder was set up in 1910. There has not been sufficient snow for sleighing, although light flurries fell on nine different days. The month was one of heavy winds and gales from the southeast and the northwest. The temperatures until after Christmas were quite moderate, and had only a slight range. On the 29th, the thermometer dropped to within a degree of zero, and the last three days of the month have been cold. Ridging of the land was continued until the 9th of the month, the final freeze-up coming on the 11th. Two Short Courses in Agriculture were held, one at Glenwood, and the other at Dundas. The attendance was good, and greatly exceeded expectations under the unfavourable weather conditions. Navigation closed at Summerside with the last trip of

the "Northumberland" on December 29th. The ice made so fast in the Straits that she had difficulty in reaching Charlottetown on the 30th."

Kentville, N.S.—W. S. Blair, Superintendent, reports:—"There has not been much cold weather during December, but the thermometer dropped within two degrees of zero on the 24th. The mean temperature of the month is 27·83, compared with 29·14 in 1915, 22·89 in 1914 and 23·44 in 1913, respectively. There have been sixteen days on which no bright sunshine has been recorded, the total sunshine for the month being only 50·6 hours, compared with an average of 72·05 for the corresponding period of the three previous years. The precipitation amounts to 4·5 inches, 3·15 inches of this being rain and the remainder being made up of 13·5 inches of snow. Eight inches of the snow fell on the 16th, with the result that from that date until the 21st there was the only fair sleighing of the month. Ploughing was possible on the 1st and the 2nd, and also from the 6th to the 11th."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "During December there have been alternate mild and cold spells; thus, the temperature during the opening period was comparatively mild and the weather dull, while for the last eight days the thermometer has been quite low and the weather fine. The highest reading of the mercury is 55, and the lowest 2 and the mean temperature of the month 25·91. The precipitation amounts to 3·91 inches, 2·7 inches of this being rain and the balance made up of a foot of snow. The bright sunshine totals only 61·6 hours. Exceptionally good prices are being realized for practically all farm products, with the exception of hay, for which there is not much demand and which is selling for considerably less than last year. The work engaging attention at the Nappan Farm has included clearing land and burning stumps, hauling wood, hay and straw, and caring for the live stock, poultry and bees. Some thirty-four steers, all of which were dehorned in November, have been put under various feeding tests* and up to date have made very satisfactory gains."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "The weather during December has been changeable, with storms and very high winds. Temperatures have been both unusually low and high; the mean of 21·7, while over three degrees lower than in December, 1915, is nearly six degrees higher than the 42-year average of 16 degrees. The snowfall of 18 inches is unusually heavy, but it blew about so much that the ground has not been well covered; and a heavy rain, after the heaviest snowstorm, left both fields and roads more or less bare. High winds following, the soil in some places has been blown quite badly. The ice in the river ran; and the whole St. John River, except where the ice jammed for a short distance above and below Fredericton, was clear of ice between the 6th and the 13th. It has not been a very good month for farm work, as the roads have been in poor shape; and in the woods there has been too much snow to permit of swamps freezing, consequently

roads had to be made and yarding operations were difficult. Live stock has done very well. There is an abundance of hay, and prices are low, but, as nearly all farmers have sold their turnips on account of prevailing high prices, and as all kinds of grain and mill feeds are almost at famine prices, the best results cannot be expected on hay alone. At the Station farm, feeding cattle have done exceptionally well, and the whole herd is thriving and giving a satisfactory milk yield."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "December has been cold and stormy, with the heaviest snowfall ever recorded in this section at this time of the year. The highest temperature that has been recorded is 39.2, the lowest -14.5 and the mean 14, or six degrees lower than a year ago. The precipitation amounts to 4.32 inches, made up of 0.22 of an inch of rain on the 5th, and 41 inches of snow recorded on twelve different days. The bright sunshine averages 2.4 hours a day. Sleighing has been possible since the middle of the month. All classes of live stock at the Station are making satisfactory gains."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "December has been colder, drier, and brighter than the average of the corresponding period of the past four years, the figures being 16.7 degrees for the mean temperature, 2.74 inches for the precipitation, and 64.9 for the hours of sunshine in 1916, compared with 18.14 mean, 2.96 inches precipitation, and 48.8 hours sunshine, averaging 1912, 1913, 1914 and 1915. The weather has been very cold during the last week, the thermometer going down to 13.9 degrees below zero. Roads have been good, and farmers have taken advantage of this to haul to Quebec city hay, straw, meat and eggs, which are all abnormally high in price, with the exception of the first mentioned. A few experiments with poultry are quite interesting to visitors, such as comparing birds of different ages—pullets and hens—as winter layers; skim milk versus beef scraps; plump grain versus screenings; clover versus roots; and snow versus water. There is a brisk demand for good seed grain, especially Banner oats, and some 1,600 bushels are being cleaned and graded."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "During December the thermometer has registered below zero on ten different days, dropping to 30 below on the 30th. The precipitation amounts to 2.33 inches, compared with 2.26 inches last year. The highest temperature recorded during the month is 49, against a maximum of 42 in 1915, and the lowest, 30 below, compared with zero last year; while the mean temperature is 16.56 compared with 24.09 a year ago. The bright sunshine recorded totals 72.4 hours, compared with 22 hours in the previous December. There is good sleighing in this district and farmers are taking advantage of it. During the month there has been completed at the Lennoxville Station, a model dairy cattle barn for the accommodation of 48 animals. This barn has been built with the object of securing as much light as possible and the best of ventilation, and has good high ceilings, with

the least possible obstruction to interfere with light and ventilation. There have already been installed in this barn seventeen head of extra good registered Ayrshires as a foundation for the dairy herd."

Brandon, Man.—W. C. McKillean, Superintendent, reports: "The past month has been the coldest December in seven years, the thermometer dropping to -40.2 on the 19th, and the mean temperature being 1.6 , compared with 8.3 a year ago. The ground was bare until the 25th. During the last week nine inches of snow have fallen, but, being accompanied by violent winds, most of it has drifted to sheltered spots, leaving exposed places bare. The barns on the Experimental Farm were destroyed by fire on December 6th. No live stock was burned; but a great deal of feed, machinery, and equipment of all kinds was destroyed. Milch cows and working horses were provided with temporary shelter through the hospitality of the Indian Industrial School. A temporary cover has been put over the concrete basement of the main barn, and most of the stock is being sheltered there."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "December opened with moderately cool weather. On the 6th the thermometer took a drop, and it has continued intensely cold. The mean temperature of the month is -1.39 , the lowest for any December for the past ten years. The snowfall has been very light and, as the high winds have blown the snow from the roads, sleighing has been poor. Owing to cold weather and the shortage of elevator space, delivery of grain fell off considerably at this point."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "December has been marked by almost no snow, and at the end of the month there is scarcely sufficient for sleighing. The live stock at the Station are doing well, and particularly the steers; the latter are being fed on hauled out wheat and oat straw. The attention of the Station during the month has been principally taken up with trying to obtain well water in sufficient quantities for the stock. The soil formation is sand to an indefinite depth, and much difficulty has been experienced in getting water."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "Mild weather prevailed during the first week in December, but it has been much colder since, and on eleven days during the last half of the month the thermometer never registered above zero. The mean temperature of the month is 2.05 , which is the lowest on record at this Station for December. Two carloads of steers were weighed in on the 15th in the feeding experiments. They were purchased early in the fall and had been running in the pasture, receiving one oat sheaf each per day. The herd of cattalo, or buffalo crosses, was shipped to Buffalo Park, Wainwright, Alberta, during the last of the month. Owing to the shortage of cars and the decline in the price of grain, very little wheat has been shipped out during December."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "Moderate temperatures characterized the first half of December, but the weather during the closing weeks has been extremely cold,

the thermometer dropping to -4.02 . Live stock have gone into the winter in good condition, and the supply of such roughage as oat straw is abundant; but, owing to unfavourable weather conditions for the harvesting of hay last summer, the supply of this class of fodder is somewhat limited. However, there will be no serious shortage of feed unless the weather continues extremely cold during January and February. Some districts reported a lack of cars early in December, and it would appear likely that there is to be trouble again this year as to the supply of cars for both coal and grain."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "During the first half of December there were many days made disagreeable by particularly heavy southwest winds. During the latter part of the month, it turned very cold for ten days, reaching as low as 36 degrees below zero. The mean temperature for the month is 12, as compared with 24.8 degrees for the corresponding period a year ago. The precipitation totals 0.51 of an inch, which, although light, is not far from normal, which is 0.57 of an inch. Threshing in southern Alberta, although not entirely done, is nearly so by December 31st. The situation in this connection, therefore, is in very much better condition than was the case last year. At the Station, the feeding experiments with lambs and steers are well under way."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "The weather conditions during December have been more severe than usual, but the low temperatures have been accompanied by bright, still days; and, although the snowfall has not been heavy, the absence of wind and consequent drifting has rendered conditions favourable for sleighing. The season up to the present has been exceptionally favourable for range cattle, which are generally in excellent condition; and, as yet, no supplementary feeding has been necessary. At the Station, a graded road has been constructed leading down into the Tobey Creek bottom, where the poultry grounds and the apiary are located. This improvement, besides making conditions much better for efficiently carrying on the work, will also be a great advantage in rendering these departments more accessible to visitors. The poultry grounds have been cleared of brush to a very considerable extent, with the idea of giving the birds as much sunlight as possible during the winter months."

Agassiz, B.C.—W. H. Hicks, in charge, reports: "December has been very dull and cloudy, with only 22 hours of bright sunshine. The temperature has been quite low during the latter part of the month, and this, along with a strong wind, made conditions quite disagreeable. Twenty-four inches of snow fell during the month. The dairy herd is in good condition. Five Holstein heifers are in the Record of Performance test. Among the calves are some promising animals. The milking machine, lately installed, gives good satisfaction. On account of the snow, the sheep have been unable to get much pasture, and consequently have been fed considerable roughage. The fall lambs are growing rapidly. The winter litters of swine are doing well. The breeding animals are spending the winter in cabins

in the bush. The poultry work is progressing satisfactorily. Early matured pullets are laying more eggs than the later birds."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"The precipitation during December totals 6.59 inches, being the heaviest for any one month of the year. A temperature of 23.5 was recorded on the 29th, being the lowest of the month. Autumn ploughing, road improvement, cutting and teaming of wood, care of live stock and the packing of apples have been the principal lines of endeavour in the district. The local markets for farm produce have been very satisfactory, dairy cows and dairy produce selling higher than for some time past. Poultry and eggs have been in good demand, with new laid eggs selling at from fifty to sixty cents per dozen wholesale. The movement of feedstuffs has been largely from the town warehouse to the country. All feeds are priced very high. At the Experimental Station, landscape planting and tillage have been continued. One area of oats, barley and vetch, sown in August, supplied green feed for the Station cows during the month and is expected to be a source of green feed supply for the entire winter."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of December are given in the following table:—

Meteorological Record for December, 1916.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.....	46.0	-20.0	16.62	2.48	272	86.0
Charlottetown, P.E.I.....	50.0	1.0	28.27	4.55	269	32.7
Kentville, N.S.....	52.0	2.0	27.83	4.50	274	50.6
Napan, N.S.....	55.0	2.0	25.91	3.91	271	61.6
Fredericton, N.B.....	45.0	-10.0	21.70	3.02	270	77.1
Ste. Anne de la Pocatière, Que.....	39.2	-14.5	14.00	4.32	264	71.8
Cap Rouge, Que.....	40.0	-13.9	16.70	2.74	264	64.9
Lennoxville, Que.....	49.0	-30.0	16.56	2.33	272	72.4
Brandon, Man.....	44.5	-40.2	1.60	0.90	254	115.3
Indian Head, Sask.....	42.0	-36.0	1.39	0.75	248	39.5
Rosthern, Sask.....	37.1	-32.2	2.60	0.15	233	94.0
Scott, Sask.....	47.2	-31.8	2.05	5.00	238	104.0
Lacombe, Alta.....	43.8	-40.2	6.50	0.45	238	94.3
Lethbridge, Alta.....	50.5	-36.0	12.00	0.51	254	83.2
Invermere, B.C.....	39.0	-31.0	10.10	0.30	251	84.4
Agassiz, B.C.....	45.0	16.0	31.40	6.72	256	22.0
Sydney, Vancouver Island, B.C.....	48.5	23.5	35.59	6.59	259	31.4

Ottawa, January 15, 1917.

J. H. GRISDALE,
Director, Dominion Experimental Farms.

PRODUCTION OF FLAX FIBRE IN ONTARIO, 1916.

Information furnished by the DIVISION OF ECONOMIC FIBRE PRODUCTION, Central Experimental Farm, Department of Agriculture, Ottawa.

The area under flax grown for fibre in Ontario during 1916 was 5,200 acres. From this area was produced 300 tons of dressed flax fibre valued at \$600 per ton, or \$180,000; 75 tons of fine tow valued at \$200 per ton, or \$15,000; 100 tons of upholsterers' tow valued at \$50 per ton, or \$5,000, and 25,000 bushels of flaxseed valued at \$3 per bushel or \$75,000. In addition there are about 800 tons of flax straw being held over, which is valued at \$15 per ton or \$12,000.

The crop of flax fibre produced in Ontario during 1916 was the poorest on record, late sowing and subsequent dry weather being responsible. About 20 per cent of the flax fibre produced in Ontario is consumed at home; 20 per cent is exported to Ireland and the balance to the United States. All the surplus flaxseed not needed for resowing in Ontario, and which is of good quality, was exported to Ireland. This amounted to some 10,000 bushels.

There are small areas of flax grown for fibre in parts of Quebec and New Brunswick, but the production in Canada outside of Ontario is negligible.¹

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (January 1) that the weather during December greatly hindered work on the land. In some districts the first fortnight was fine enough to allow of some progress being made, but in most parts the weather was too stormy for much to be done, and later there were frosts. Only a comparatively small area was consequently sown with wheat, and it is estimated that by the end of the year little over two-thirds of the area intended for this crop had been got in; while the total area sown is still, as was the case in November, nearly 15 per cent less than at the corresponding date of 1915. Labour is everywhere still very deficient.

India.—The Department of Statistics published (December 28, 1916) the first wheat forecast for the season 1916-17 relating to all but 1½ per cent of the total wheat acreage of India. The total area so far reported as sown to wheat amounts to 30,924,000 acres as against 28,535,000 acres in 1915-16, which represents an increase of 2,389,000 acres, or 8.4 per cent. The sowing season has on the whole been favourable, particularly in the Punjab. Excessive rain, however, impeded sowing operations in Bengal, Central India and in parts of the Central Provinces, Bihar and Orissa, and Hyderabad. The present condition of the crop is reported to be generally good. Want of rain was beginning to be felt in the Punjab, the United Provinces and the Northwest Frontier Province.

The area sown to rape and mustard is estimated at 3,888,000 acres as against 3,544,000 acres in 1915-16, an increase of 344,000 acres, and of linseed at 2,627,000 acres against 2,706,000 acres, a decrease of 79,000 acres.

¹For the production of flax fibre in Ontario in 1915, see Vol. 9, No. 89, page 30.

France.—According to the French Minister of Agriculture the yields of specified crops in France for 1916, compared with 1915, are estimated as follows:—

Crops.	1916.	1915.
Potatoes.....bush.	335,507,051	345,351,141
Jerusalem artichokes.....short tons	1,735,032	1,490,701
Fodder turnips.....“	2,655,441	2,846,279
Fodder cabbage.....“	6,555,058	7,185,183
Sugar beets.....“	2,105,283	1,265,518
Distillery beets.....“	930,303	644,700
Forage beets.....“	17,292,243	16,163,173
Hay.....“	41,161,563	46,280,369
Hops.....lb.	4,958,145	4,909,644
Tobacco.....“	20,218,387	33,990,523

United States.—A decided shortage of marketable potatoes was in the United States on January 1, according to reports of potato growers and handlers to the Bureau of Crop Estimates of the U.S. Department of Agriculture. Supplies on hand January 1, 1917, for market in 19 important northern potato growing States are estimated to be about 44 per cent smaller than a year ago, 65 per cent smaller than two years ago and 54 per cent smaller than the average holdings on January 1 of the preceding five years. If, for the purpose of comparison, the estimates in percentages of marketable stocks of potatoes on hand January 1 be applied to the estimates of total production, it shows, in the 19 States included (which produced 61 per cent of the total 1916 crop and 66 per cent of the 1915 crop) a total of 59,938,000 bushels on January 1, 1917, compared with 106,225,000 a year ago, 169,554,000 two years ago, and 129,941,000 bushels, the average holdings of the preceding five years on January 1. These figures indicate a scanty supply of potatoes during the spring months.

Farm Animals in the United States.—The Crop Reporting Board of the U. S. Bureau of Crop Estimates issued (January 16) the following estimates of the numbers and values of farm animals in the United States on January 1, 1917, as compared with January 1, 1916:—

Farm Animals.	1916.	1917.	1916.	1917.	1916.	1917.
	No.	No.	\$ per head.	\$ per head.	\$	\$
Horses.....	21,159,000	21,126,000	101 00	102 94	2,149,786,000	2,174,629,000
Mules.....	4,593,000	4,639,000	113 83	118 32	522,834,000	548,864,000
Milch cows.....	22,108,000	22,768,000	53 92	59 66	1,191,955,000	1,358,435,000
Other cattle.....	39,812,000	40,849,000	33 53	35 88	1,334,928,000	1,465,786,000
Sheep.....	48,635,000	48,483,000	5 17	7 14	251,594,000	346,064,000
Swine.....	67,766,000	67,453,000	8 40	11 73	569,573,000	791,242,000

In numbers horses have decreased 33,000; mules increased 46,000; milch cows increased 660,000; other cattle increased 1,037,000; sheep decreased 142,000; swine decreased 313,000. In average value per head, horses increased \$1.34; mules increased \$4.49; milch cows increased \$5.74; other cattle increased \$2.35; sheep increased \$1.97; swine increased \$3.33. In total value, horses increased \$24,843,000; mules increased \$26,030,000; milch cows increased \$166,480,000; other cattle increased \$130,858,000; sheep increased \$94,470,000; and swine increased \$221,669,000. The total value on January 1, 1917, of all animals enumerated above was \$6,685,020,000, as compared with \$6,020,670,000 on January 1, 1916, an increase of \$664,350,000, or 11 per cent.

AGRICULTURAL RETURNS OF THE UNITED KINGDOM, 1916.

In last month's issue of the Census and Statistics Monthly (Vol. 9, No. 100, p. 318) a preliminary statement was given of the areas under field crops and of the numbers of live stock in England and Wales for 1916. The English Board of Agriculture has now issued the complete returns for the United Kingdom, including the Isle of Man and the Channel Islands. The results are set out in the following tables:—

I. Acreage under Crops and Grass in the United Kingdom, 1915 and 1916.

Field Crops.	1915.	1916.	Difference between 1915 and 1916. (+) Increase (-) Decrease.	
	acres	acres	acres	p.c.
Wheat.....	2,335,091	2,053,568	-281,523	-12.06
Barley.....	1,524,316	1,653,376	+129,060	+8.47
Oats.....	4,182,296	4,171,353	-10,943	-0.26
Potatoes.....	1,214,458	1,155,404	-59,054	-4.86
Turnips and swedes.....	1,625,589	1,623,161	-2,428	-0.15
Mangolds.....	499,804	461,823	-37,981	-7.60
Clover, sainfoin, and grasses under rotation.....	6,462,279	6,763,011	+300,732	+4.65
Permanent grass.....	27,328,814	27,188,037	-140,777	-0.51

The area under wheat in 1916 amounted to 2,053,568 acres, being 281,523 acres, or about 12 per cent less than in 1915. The large area placed under this crop in the autumn of 1914 was no doubt attributable to the general desire of farmers to contribute to the national effort and to a feeling of confidence in the prospect of higher prices. Difficulties arising from depletion of labour and other causes had, however, become aggravated a year later, and it appeared probable that supplies of wheat from overseas would be

exceptionally large. The relative advantages of other crops, and especially barley, of which one of the main sources of supply had been cut off, no doubt had some influence on the arrangement of cropping. Nevertheless, although the wheat acreage was reduced from the previous year, it was greater in 1916 by 148,636, or 7·8 per cent, than in 1914.

II. Numbers of Farm Live Stock in the United Kingdom, 1915 and 1916.

Description.	1915.	1916.	Difference between 1915 and 1916. (+) Increase. (-) Decrease.	
	No.	No.	No.	p.c.
Horses—				
For agricultural purposes, including mares for breeding.....	1,224,055	1,294,064	+ 70,609	+5·45
Unbroken, including stallions—				
One year and above.....	320,542	346,962	+ 26,420	+8·24
Under one year.....	167,261	192,589	+ 25,328	+15·14
Total horses.....	1,711,858	1,834,215	+122,357	+7·14
Cattle—				
Cows and heifers in-milk and in-calf.....	4,404,750	4,499,321	+ 4,571	+0·10
Two years and above.....	2,221,218	2,344,667	+123,449	+5·56
One year and under two.....	2,665,551	2,801,698	+136,147	+5·11
Under one year.....	2,789,933	2,805,854	+ 15,921	+0·57
Total cattle.....	12,171,452	12,451,540	+280,088	+2·30
Sheep—				
Ewes kept for breeding.....	11,341,004	11,603,904	+262,000	+2·31
One year and above.....	5,397,745	5,576,513	+178,768	+3·31
Under one year.....	11,536,321	11,669,238	+132,917	+1·15
Total sheep.....	28,275,970	28,849,655	+573,685	+2·03
Swine—				
Sows kept for breeding.....	439,290	434,464	- 4,826	-1·10
Other pigs.....	3,355,841	3,181,427	-174,414	-5·20
Total swine.....	3,795,131	3,015,891	-179,240	-4·72

With regard to live stock it will be noted that the figures for 1916 show a satisfactory increase for each description except swine. The decline in horsebreeding noted in the two preceding reports of the Board has been arrested, and for cattle the total number is the largest recorded since the returns were first collected. Sheep show an increase of 573,685; but swine a decrease of 179,240, or 4·72 per cent.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The December issue of the International Crop Report and Agricultural Statistics gives the yield of cereal crops of 1916 in countries not hitherto reported as in Table I, which supplements the data given on pages 300 and 301 of the Census and Statistics Monthly for November and on pages 320 and 321 of the issue of December, 1916.

I. Area and Production of Wheat, Rye, Barley and Oats, 1915 and 1916.

Countries.	1915.	1916.	1915.	1916.	1915.	1916.
	000 acres.	000 acres.	000 bush.	000 bush.	bush. per acre.	bush. per acre.
Wheat—						
Denmark.....	164	151	7,983	6,026	48.62	39.85
France.....	13,564	12,856	222,778	214,622	16.36	16.65
Tunis.....	1,112	1,482	11,023	7,165	9.96	4.91
Scotland.....	77	63	2,959	2,265	38.66	35.84
Rye—						
Denmark.....	521	479	13,288	10,787	25.49	22.46
France.....	2,309	2,275	33,149	35,889	14.34	15.77
Barley—						
Denmark.....	644	633	28,369	24,480	44.05	38.66
France.....	1,575	1,547	31,787	39,405	20.26	25.46
Tunis.....	1,038	1,233	11,482	6,889	10.97	5.53
Scotland.....	149	170	5,235	5,392	34.94	31.78
Oats—						
Denmark.....	1,024	1,040	49,275	48,631	48.02	46.71
France.....	8,062	7,796	224,521	267,664	27.82	34.38
Tunis.....	148	164	3,242	1,945	21.78	11.81
Scotland.....	983	990	44,829	41,542	45.66	41.99

Table II gives the total areas and yields of cereal crops for 1915 and 1916 in all the countries of the northern hemisphere that have reported for 1916, and Table III shows the area and yield of potatoes for 1915 and 1916 in all the countries that have reported for 1916.

II. Total Areas and Yields of Cereals in Countries of the Northern Hemisphere, 1915 and 1916.

Crops.	No. of countries.	1915.	1916.	1915.	1916.	1915.	1916.
		000 acres.	000 acres.	000 bush.	000 bush.	bush. per acre.	bush. per acre.
Wheat.....	18	212,680	187,675	3,304,625	2,478,020	15.46	13.23
Rye.....	11	69,866	67,185	1,038,638	988,937	14.82	14.06
Barley.....	18	50,596	49,051	1,130,020	1,025,455	22.30	20.82
Oats.....	16	105,578	105,127	3,433,724	2,972,298	32.54	28.34
Corn.....	6	116,527	113,794	3,273,132	2,744,469	28.04	24.06

The total production of wheat in 1916 is 25 per cent less than in 1915 and 9.1 per cent less than the average of the five years 1909–13. Rye is 4.8 per cent less than 1915 but 12 per cent above the average. Barley is 9.3 per cent below 1915 but 1.1 per cent above the average. Oats yield 13.4 per cent less than in 1915, but are 3.2 per cent above average. Finally, the corn crop is 16.2 per cent below 1915 and 5.3 per cent below the quinquennial average.

III. Acreage and Yield of Potatoes in Various Countries in the years 1915 and 1916.

Countries.	1915.	1916.	1915.	1916.	1915.	1916.
	000 acres.	000 acres.	bush. per acre.	bush. per acre.	000 bush.	000 bush.
Denmark.....	164	159	239.70	—	39,419	—
France.....	3,219	3,226	103.34	—	332,791	—
England and Wales.....	463	428	230.33	218.44	106,702	93,478
Scotland.....	144	130	251.30	152.41	36,290	19,824
Ireland.....	594	586	233.00	154.94	138,509	90,845
Italy.....	725	729	78.36	74.50	56,769	54,278
Norway.....	—	114	—	—	18,590	—
Netherlands.....	424	413	206.84	178.44	87,757	73,686
Rumania.....	28	35	—	—	—	—
Sweden.....	382	—	266.24	—	78,807	—
Switzerland.....	159	180	248.92	122.23	39,683	22,046
Canada.....	479	449	130.85	136.21	62,605	61,129
United States.....	3,761	3,550	95.46	80.45	359,109	285,442
Japan.....	194	231	129.07	168.62	25,078	39,006
New Zealand ¹	22	25	226.32	230.03	4,952	5,749

¹Figures are for 1914-15 and 1915-16.

CENSUS RETURNS AND ANNUAL ESTIMATES OF GRAIN CROPS.

In the report on pages 1 to 5 of this issue, attention is drawn to the difference between the annual estimates for 1915 and 1916 of the areas and yields of the principal grain crops, as based upon the reports of crop correspondents, and the results for the same crops and years, as returned by the Census of the prairie provinces taken in 1916. These differences for the three prairie provinces are set out in the statement on page 31, showing the area and yield of wheat, oats, barley, rye and flaxseed, as estimated from the reports of crop correspondents and as returned by the Census of 1916.

From the census figures for 1916 have been deducted the areas estimated to have been unproductive of grain, as shown in Table I on pages 5 and 6; therefore the figures of area for 1916 do not agree with the sown areas, as given on page 309 of the Census and Statistics Monthly for December, 1916.

The statement shows that, for the three provinces, the wheat area and yield was underestimated by 15 per cent in 1915 and by 31 per cent in 1916, which means that the wheat crop in both years was more by about 50 million bushels than the estimates based on the reports of correspondents. For 1915 the estimate of the large oat crop was less than one per cent different from the census returns; but for the small barley crop the annual estimate was less than the Census by 21 per cent for 1915 and by 42 per cent for 1916. In both years the Census gave larger returns than the estimate for all the crops excepting fall wheat and flaxseed, which turned out to be less than the estimate. The changes in respect

Comparison between Census Returns and Annual Estimates, 1915 and 1916.

1915.

Crops.	Acreage.		Difference More (+) or Less (-).		Yield in Bushels.		Difference More (+) or Less (-).	
	Estimates.	Census.	acres	p.c.	Estimates.	Census.	bushels	p.c.
Manitoba—								
Fall wheat..	10,900	5,500	-5,400	-50	363,000	183,000	-180,000	-50
Spring wheat	3,332,000	2,748,900	-583,100	-18	96,062,000	79,251,000	-16,811,000	-18
All wheat.	3,342,000	2,754,400	-587,600	-18	96,425,000	79,434,000	-16,991,000	-18
Oats.....	1,441,000	1,326,800	-114,200	-8	69,471,000	63,965,000	-5,506,000	-8
Barley.....	490,000	569,500	+79,500	+16	17,763,000	20,644,000	+2,881,000	+16
Saskatchewan—								
Fall wheat.	4,100	98,000	+93,900	+2290	126,000	3,014,000	+2,888,000	+2290
Spring wheat	6,834,000	8,425,600	+1,591,600	+23	195,042,000	240,467,000	+45,425,000	+23
All wheat.	6,838,100	8,523,600	+1,685,500	+25	195,168,000	243,481,000	+48,313,000	+25
Oats.....	2,937,000	3,200,400	+263,400	+9	157,628,000	171,765,000	+14,137,000	+9
Barley.....	287,000	285,000	-2,000	-7	10,570,200	10,497,000	-73,200	-7
Alberta—								
Fall wheat.	215,700	42,700	-173,000	-80	7,316,000	1,448,000	-5,868,000	-80
Spring wheat	1,345,000	2,112,900	+767,900	+57	44,019,000	69,028,000	+24,999,000	+57
All wheat.	1,560,700	2,155,600	+594,900	+38	51,335,000	70,476,000	+19,121,000	+38
Oats.....	1,912,000	1,822,400	-89,600	-5	107,741,000	102,692,000	-5,049,000	-5
Barley.....	185,000	305,800	+120,800	+65	6,984,000	11,544,000	+4,560,000	+65
Three prov.—								
Fall wheat.	230,700	146,200	-84,500	-36	7,805,000	4,645,000	-3,160,000	-36
Spring wheat	11,514,000	13,287,400	+1,773,400	+15	335,143,000	388,746,000	+53,603,000	+15
All wheat.	11,744,700	13,433,600	+1,688,900	+15	342,948,000	393,391,000	+50,443,000	+15
Oats.....	6,290,000	6,349,600	+59,600	+9	334,840,000	338,422,000	+3,582,000	+9
Barley.....	962,000	1,160,300	+198,300	+21	35,317,200	42,685,000	+7,367,800	+21

1916.

Manitoba—								
Fall wheat..	9,400	7,900	-1,500	-16	165,000	138,000	-27,000	-16
Spring wheat	2,525,000	2,298,000	-227,000	-9	30,300,000	27,576,000	-2,724,000	-9
All wheat.	2,534,400	2,305,900	-228,500	-9	30,465,000	27,714,000	-2,751,000	-9
Oats.....	1,338,000	1,271,000	-67,000	-5	43,820,000	41,025,000	-2,795,000	-5
Barley.....	463,100	614,000	+150,900	+33	10,420,000	13,815,000	+3,395,000	+33
Rye.....	6,200	28,000	+21,800	+352	124,000	560,000	+436,000	+352
Flaxseed....	27,000	22,000	-5,000	-19	290,000	237,000	-53,000	-19
Saskatchewan—								
Fall wheat.	4,100	105,700	+101,600	+2478	83,000	2,140,000	+2,057,000	+2478
Spring wheat	5,150,000	7,352,000	+2,193,000	+43	85,124,000	121,308,000	+36,184,000	+43
All wheat.	5,163,100	7,457,700	+2,294,600	+44	85,207,000	123,448,000	+38,241,000	+44
Oats.....	2,634,000	3,180,600	+546,600	+21	112,604,000	135,971,000	+23,367,000	+21
Barley.....	262,000	344,000	+82,000	+31	7,664,000	10,062,000	+2,398,000	+31
Rye.....	3,200	20,500	+17,300	+541	75,000	482,000	+407,000	+541
Flaxseed....	592,700	497,700	-95,000	-16	6,816,000	5,724,000	-1,094,000	-16
Alberta—								
Fall wheat.	247,700	42,000	-205,700	-83	7,050,000	1,197,000	-5,853,000	-83
Spring wheat	1,117,000	2,067,000	+950,000	+85	25,691,000	47,541,000	+21,850,000	+85
All wheat.	1,364,700	2,109,000	+744,300	+55	32,750,000	48,738,000	+15,988,000	+55
Oats.....	1,615,000	1,746,500	+131,500	+8	71,464,000	77,283,000	+5,819,000	+8
Barley.....	148,700	281,400	+132,700	+89	4,275,000	8,090,000	+3,815,000	+89
Rye.....	14,400	19,000	+4,600	+32	396,000	523,000	+127,000	+32
Flaxseed....	62,000	81,000	+19,000	+31	853,000	1,114,000	+261,000	+31
Three prov.—								
Fall wheat.	261,200	155,600	-105,600	-40	7,307,000	3,475,000	-3,832,000	-40
Spring wheat	8,801,000	11,717,000	+2,916,000	+33	141,115,000	196,425,000	+55,310,000	+33
All wheat.	9,062,200	11,872,600	+2,810,400	+31	148,422,000	199,900,000	+51,478,000	+31
Oats.....	5,587,000	6,198,100	+611,100	+11	227,888,000	254,879,000	+26,991,000	+11
Barley.....	873,800	1,249,400	+365,600	+42	22,359,000	31,907,000	+9,608,000	+42
Rye.....	23,800	67,500	+43,700	+184	595,000	1,565,000	+970,000	+184
Flaxseed....	681,700	590,700	-91,000	-13	7,953,000	7,075,000	-884,000	-13

of fall wheat in Saskatchewan and Alberta have failed to be registered under the system of reporting by crop correspondents. In the former

province the acreage, according to the Census, is 98,000 in 1915 and 105,700 in 1916, whilst the estimates remained practically stationary at 4,100 acres. Alberta, where the estimated acreage based on the previous Census of 1911 was 215,700 in 1915, and 247,700 in 1916, shows, according to the Census of 1916, a large reduction, the areas being only 42,700 acres in 1915 and 42,000 acres in 1916.

The present system of crop-reporting was started by the Census and Statistics Office in 1908, and the method employed of estimating the annual changes in the areas sown to field crops by the application to the returns of the previous year of average percentages of increase or decrease, as returned by correspondents, was then copied from that which has been followed for many years by the United States Department of Agriculture and which has also been adopted by provincial Departments of Agriculture in Canada. The defects inherent in this system are recognized by agricultural statisticians and have been frequently exposed. In addition to the fact that the reports of correspondents, however, conscientiously made, are necessarily to a great extent conjectural, there is the further defect that errors are multiplied from year to year and therefore become cumulative in effect.¹

As a rule the tendency is for the annual estimates made under this system to exceed the returns of the Census, and this was the case in 1911, to what extent may be seen by reference to the Census and Statistics Monthly of January, 1912 (Vol 5, No. 44, p. 7); but on the present occasion the error has been chiefly in the other direction. The reason probably lies in the fact that as the years between 1911 and the outbreak of the war in 1914 witnessed an extraordinary immigration into Canada, settlers flocked on to the unoccupied lands of the western provinces faster than the system of correspondents could be adjusted to meet the new conditions; consequently the increased areas sown to grain crops in the west failed to be included in the estimates. Two facts bear out this explanation. In the first place, the differences between the census returns and the reports of correspondents for wheat and oats are not so acute in Manitoba, a province where settlement is more stable,—the differences also being in the usual direction, that is, the estimates exceed the census returns—and secondly, the estimates of the Saskatchewan Department of Agriculture, for which the same method of the application of percentage increases or decreases is followed, also show a surprising increase in the acreage under wheat.

In their press bulletin of January 4 last, the Saskatchewan Department of Agriculture reports as follows:

“As in 1916 a Census of the province was taken by the Federal Government, it was thought better to wait until the figures for the crop acreages were available. The preliminary statement has now been issued and indicates that the acreage under grain crops in Saskatchewan has been greatly underestimated by both federal and

¹See Report of Departmental Commission on the Official Statistics of Canada, 1913, p. 14.

provincial departments, and shows that the increase in acreage in the province is much greater than was anticipated."

For 1916 the area under wheat in Saskatchewan is estimated by the provincial Department at 8,886,311 acres, as compared with 6,884,874 acres, the estimate for 1915 of the same Department, and as compared with 8,532,838 acres, the census return of 1916.

In view of the increasing importance of the grain crops in the west, the necessity for obtaining more trustworthy annual official estimates of area and yield, both on the part of the provincial and Dominion Governments, is recognized, and the whole situation with regard to agricultural statistics has been exhaustively studied by the Census and Statistics Office with a view to the adoption of improved and uniform methods throughout Canada in co-operation with the provincial Departments of Agriculture. At an informal Conference on this subject with provincial representatives held at Ottawa¹ it was agreed that the Dominion Government should draft a scheme to provide a basis for discussion at a more formal Conference to be subsequently convened. This has now been done, and it is intended to proceed further by consultation between the Dominion and Provincial statistical representatives at the earliest possible date.

Essential however to the success of any new scheme, no matter how carefully it may be thought out, will be the active and cordial co-operation of the farmers of Canada. To replace the present system of estimates by one of true statistics the farmers of Canada must be prepared to furnish annual statements of areas sown, the areas sown being the best basis for the correct annual estimation of yields. There is no reason why eventually an annual return to the Government for statistical purposes only of areas sown should not form part of every farmer's routine. And the results should be found of the greatest value to each farmer as well as to all others interested in the agricultural production of the Dominion.

THE WEATHER DURING DECEMBER.

The mean temperature of the month was decidedly below normal from Lake Superior westward to the Pacific Coast, negative departures of 12° to 15° being recorded in northern Alberta, and the northern interior districts of British Columbia. In Ontario it was below normal to a lesser extent, and then from the Ottawa Valley eastward, it was above, the positive departure increasing to about 6° near the eastern shores of New Brunswick and Cape Breton. With the exception of Nova Scotia and the British Columbia Coast, the ground was covered with snow in all parts of the Dominion. Great depths prevailed in some northern interior districts of British Columbia, while over the greater portion of the Prairie Provinces, it was from

¹See Census and Statistics Monthly, Vol. 7, No. 67, p. 31.

2 to 5 inches. In eastern Manitoba, however, the covering amounted to about 1 foot. In Ontario and western Quebec the depth was as a rule from 4 to 15 inches, while in the vicinity of Father Point 44 inches were reported. In northern New Brunswick it was fairly deep, but this diminished farther southward to about 1 inch at St. John. Precipitation was considerably above normal in the Maritime provinces and eastern Quebec, while in other parts of the Dominion, with some local exceptions, the normal amount was not recorded.

PRICES OF AGRICULTURAL PRODUCE, 1916.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Brookhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb., oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1916.

Grain and Grade.	Dec. 2		Dec. 9		Dec. 16		Dec. 23		Dec. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.	1 80½	—1 91½	1 77½	—1 88½	1 58½	—1 83	1 64	—1 71½	1 72½	—1 76
No. 2 Nor.	1 77½	—1 88	1 74½	—1 86½	1 55½	—1 80	1 60½	—1 68½	1 69½	—1 73
No. 3 Nor.	1 72½	—1 83	1 68½	—1 79½	1 49½	—1 75	1 56½	—1 63½	1 64½	—1 68
No. 4	1 58½	—1 67½	1 55½	—1 67½	1 34½	—1 63	1 43½	—1 52½	1 48½	—1 55½
No. 5	1 35½	—1 46½	1 31½	—1 38½	1 06½	—1 32	1 18½	—1 28½	1 28½	—1 34
No. 6	0 98½	—1 10½	0 96½	—1 06½	0 79½	—0 90	0 88½	—1 01½	1 04½	—1 06
Feed	0 90	—1 00	0 90	—0 92	0 73	—0 83	0 75	—0 88	0 85	—0 90
Oats—										
No. 2 C.W.	0 58½	—0 62½	0 57	—0 59½	0 50½	—0 56	0 51	—0 54½	0 53½	—0 55½
No. 3 C.W.	0 56½	—0 61½	0 54½	—0 57	0 47½	—0 53½	0 48½	—0 51½	0 50½	—0 52½
No. 1 feed ex.	0 56½	—0 61½	0 54½	—0 57	0 47½	—0 53½	0 48½	—0 51½	0 50½	—0 52½
No. 1 feed	0 56½	—0 60½	0 54½	—0 56½	0 45½	—	0 46½	—0 49½	0 49½	—
No. 2 feed	0 55½	—0 59½	0 52½	—0 54½	0 44½	—	0 45½	—0 48½	0 48½	—
Barley—										
No. 3 C.W.	1 08	—1 12	1 05	—1 14	0 90	—1 00	0 94	—0 98	0 97	—0 98
No. 4 C.W.	0 95	—1 00	0 95	—0 96	0 80	—0 90	0 89	—0 93	0 93	—0 93
Rejected	0 82	—0 88	0 80	—0 84	0 65	—0 80	0 66	—0 72	0 70	—0 73
Feed	0 80	—0 88½	0 80	—0 83	0 65	—0 80	0 65	—0 72	0 68	—0 73
Flax—										
No. 1 N.W.C.	2 54	—2 58½	2 55	—2 64½	2 50	—2 58½	2 55½	—2 59½	2 58½	—2 59½
No. 2 C.W.	2 51	—2 55	2 52	—2 61½	2 47	—2 55½	2 52½	—2 56½	2 55½	—2 56½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market	September		October		November		December	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 47	—1 48	1 58	—1 95	1 77	—1 96	1 68	—1 87
Chicago.....	1 40½	—1 43½	1 57½	—1 88	1 74	—1 89½	1 67	—1 80½
New York (f.o.b. afloat).....	1 52	—1 58½	1 64½	—2 00	1 78½	—2 02½	1 63	—1 90½
Corn, No. 2, mixed—								
St. Louis.....	0 84½	—	0 86½	—1 11	0 91	—1 07½	0 88½	—0 94½
New York (f.o.b. afloat).....	1 00½	—1 01½	0 97½	—1 20	1 06	—1 18	1 00	—1 14
Corn, No. 2—								
Chicago.....	0 85½	—0 86½	0 88½	—1 11	0 90	—1 10	0 88	—0 96
Oats, No. 2—								
St. Louis.....	0 45	—0 45½	0 46	—0 54	0 52	—0 59	0 55	—0 56
Chicago.....	0 44½	—0 45½	0 45½	—0 53½	0 51½	—0 59	0 46½	—0 54
Rye, No. 2—								
Chicago.....	1 15	—1 15½	1 24	—1 41	1 40	—1 53	1 30	—1 51

III. Range of Prices of Imported Grain and Flour at British Markets, 1916.

MARK LANE, LONDON, E.C.

Description.	Dec. 4		Dec. 11		Dec. 18		Dec. 25	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1 old.....	2 62	—2 64½	2 64½	—2 67½	2 70½	—2 73½	2 73½	—2 76½
“ No. 1 new.....	2 53½	—2 56	2 56	—2 59	2 62	—2 64½	2 67½	—2 70½
“ No. 2 new.....	2 50½	—2 53½	2 53½	—2 56	2 59	—2 62	2 64½	—2 67½
“ No. 3 new.....	2 47½	—2 50	2 50½	—2 53	—	—	2 62	—2 64½
American Duluth spring.....	2 53½	—2 56	2 56	—2 59½	2 62	—2 64½	—	—
“ Durum spring.....	2 35½	—2 41½	2 38½	—2 44½	2 44½	—2 50½	—	—
Hard red winter.....	2 35½	—2 38½	2 38½	—2 41½	2 44½	—2 47½	2 44½	—2 47½
Soft winter.....	2 29½	—2 32½	2 32½	—2 35½	2 38½	—2 41½	2 38½	—2 41½
Argentine.....	2 35½	—2 41½	—	—	—	—	—	—
Indian.....	2 26½	—2 43½	2 43½	—2 46½	2 52½	—2 55½	2 52½	—2 55½
Australian.....	2 35½	—2 41½	2 35½	—2 41½	2 49½	—2 52½	2 47½	—2 50½
Oats (per bush.)—								
Canadian.....	1 31½	—1 34½	1 31½	—1 34½	1 37	—1 39½	1 37	—1 39½
American.....	1 19	—1 21½	1 24½	—1 26	1 29½	—1 31½	1 29½	—1 31½
Chilian.....	1 28½	—1 26	1 24½	—1 26	1 29½	—1 31½	1 29½	—1 31½
Flour (per 280 lb.)—								
Canadian good.....	15 33	—15 52	15 33	—15 52	15 33	—15 52	15 33	—15 52
“ first bakers'.....	14 60	—14 84	14 60	—14 84	14 60	—14 84	14 60	—14 84
“ common.....	14 36	—14 60	14 36	—14 60	14 36	—14 60	14 36	—14 60
“ soft winter.....	13 63	—13 87	13 63	—13 87	13 63	—13 87	13 63	—13 87
American spring good.....	15 09	—15 33	15 09	—15 33	15 09	—15 33	15 00	—15 33
“ common.....	14 84	—15 09	14 84	—15 09	14 48	—15 09	14 84	—15 09
“ winter good.....	14 84	—15 09	14 84	—15 09	14 84	—15 09	14 84	—15 09
“ common.....	14 36	—14 60	14 36	—14 60	14 36	—14 60	—	—
Californian.....	14 11	—14 36	14 11	—14 36	14 11	—14 36	14 11	—14 36
Australian.....	14 11	—14 36	14 11	—14 36	14 11	—14 36	14 11	—14 36

LIVERPOOL.

Description.	Dec. 5		Dec. 12		Dec. 19		Dec. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1 (old).....	2 56½	—	—	—	—	—	2 64	—
Nor. Man. No. 3 (new).....	—	—	—	—	2 45½—2 48½	2 48½	—	—
Sample Man.....	2 54½—2 55	—	2 54½—2 55	—	—	—	—	—
Man. feed.....	—	—	2 10½	—	2 08	—	2 08—2 10½	—
Hard winter No. 2.....	2 43½	—	2 47—2 48½	2 48½	—	—	—	—
Nor. Chicago No. 1 (old).....	—	—	—	—	—	—	2 56½	—
Nor. Duluth No. 1 (old).....	—	—	—	—	—	—	2 56½	—
Oats (per bush.)—								
Canadian.....	1 28½—1 30½	—	—	—	—	—	—	—
Chilian white.....	1 33½—1 34½	—	—	—	—	—	—	—
“ tawny.....	—	—	—	—	1 28½—1 30½	—	—	—
“ black.....	1 31½—1 34½	—	—	—	—	—	—	—
Flour (per 280 lb.)—								
Canada spring patents.....	15 33—15 57	15 33—15 57	15 33—15 57	15 33—15 57	—	—	—	—
American soft winter patents.....	15 21—15 45	15 21—15 45	15 21—15 45	15 21—15 45	—	—	—	—
Kansas patents.....	15 33—15 57	15 33—15 57	15 33—15 57	15 33—15 57	—	—	—	—
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21
“ middle cut.....	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21
“ fine cut.....	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21
“ pinhead.....	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21	15 09—15 21

IV. Average Prices of British-grown Grain, 1916.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
October 7.....	59 2	1.797	54 5	1.589	30 9	0.815
“ 14.....	59 7	1.812	53 10	1.572	31 6	0.835
“ 21.....	60 9	1.848	53 8	1.567	31 11	0.846
“ 28.....	62 10	1.911	54 6	1.591	32 10	0.871
Average.....	60 7	1.842	54 1	1.580	31 9	0.842
November 4.....	66 7	2.025	56 2	1.640	34 0	0.901
“ 11.....	69 8	2.119	58 0	1.694	35 8	0.945
“ 18.....	70 9	2.152	59 8	1.742	37 8	0.998
“ 25.....	70 8	2.150	61 8	1.801	39 7	1.049
Average.....	69 5	2.112	58 11	1.719	36 9	0.973
December 2.....	71 3	2.167	63 1	1.842	41 4	1.096
“ 9.....	72 1	2.192	65 6	1.912	44 1	1.169
“ 16.....	73 2	2.225	66 5	1.939	45 10	1.215
“ 23.....	74 8	2.271	67 3	1.964	46 5	1.231
“ 30.....	75 10	2.307	67 5	1.969	47 4	1.255
Average.....	73 5	2.232	65 11	1.925	45 0	1.193

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AGRICULTURAL VALUES IN CANADA, 1916.

Compiled from Returns of Correspondents, January 31, 1917.

This report on agricultural values in Canada for the year 1916 is compiled from returns made by crop-reporting correspondents of the Census and Statistics Office at the end of January, 1917. It includes estimates of (1) average values of farm land; (2) average wages paid for farm help and (3) average values of farm live stock and of wool throughout Canada. The averages obtained by similar inquiries for the years 1908 to 1910 and 1914 and 1915 are given for comparison in the accompanying tables.

AVERAGE VALUES OF FARM LAND.

For the whole of Canada the average value of farm land held for agricultural purposes, whether improved or unimproved, and including the value of dwelling houses, farms, stables and other farm buildings, is approximately \$41 per acre, as compared with \$40 last year. The average values by provinces are as follows: Prince Edward Island \$39; Nova Scotia \$33.6; New Brunswick \$29.4; Quebec \$52; Ontario \$52.5; Manitoba \$32; Saskatchewan \$23; Alberta \$22; British Columbia \$118.5. In the last-named province the higher average is due to orcharding and fruit growing.

AVERAGE WAGES OF FARM HELP.

The average wages paid for farm help during 1916 have reached a higher level than in any previous year for which returns have been collected. For the whole of the Dominion the wages per month during the summer, including board, averaged \$43.23 for male and \$22.46 for female help, as compared with \$37.10 and \$20.20 in 1915. For the year 1916, including board, the wages averaged \$397 for males and \$228 for females, as compared with \$341 and \$200 in 1915. The average value of board per month is returned as \$17 for males and \$13 for females, the corresponding figures of 1915 being \$14.57 and \$11.45. By provinces the average wages per month for males and females respectively in the summer season, including board, are as follows: Prince Edward Island \$31.35 and \$17.81; Nova Scotia \$38.77 and \$19.11; New Brunswick \$35.74 and \$16.66; Quebec \$40.79 and \$19.70; Ontario \$39.41 and \$20.58; Manitoba \$48.37 and \$26.97; Saskatchewan \$48.55 and \$25.66; Alberta \$52.28 and \$29.12; British Columbia \$49.86 and \$28.66.

AVERAGE VALUES OF FARM LIVE STOCK AND OF WOOL.

The average value of horses in Canada is about the same as a year ago, but milch cows, other cattle, sheep and swine show a substantial increase and return values that are higher than in any year

since these records began to be collected in 1909. Horses three years old and over average for Canada \$159 as against \$160 in 1915, milch cows are \$70 as compared with \$62, cattle between 1 year old and three years average \$43 against \$38, sheep average \$10.48 against \$7.96 and swine \$11.98 per 100 lb. live weight as against \$8.58. The average value of wool attains a record of 37 cents per lb. for unwashed and 50 cents per lb. for washed wool. Using the numbers of live stock as estimated last June, and the average values now returned, the total value of the farm animals of Canada may be estimated at \$798,544,000, as compared with \$746,246,000 in 1915, the values of each description being as follows: Horses \$374,831,000 as against \$370,378,000 in 1915; milch cows \$181,813,000 as against \$164,224,000; other horned cattle \$170,254,000 as against \$151,477,000; sheep \$20,588,000 as against \$16,225,000 and swine \$51,058,000 as against \$43,942,000.

Census and Statistics Office,
Ottawa, March 5, 1917.

ERNEST H. GODFREY,
Editor.

I. Average Values per acre of Occupied Farm Lands in Canada, as estimated by Correspondents, 1908-1910, 1914, 1915, 1916.

Provinces.	1908.	1909.	1910.	1914.	1915.	1916.
	\$	\$	\$	\$	\$	\$
Canada.....	35.70	38.60	38.45	38.41	39.70	40.95
Prince Edward Island.....	33.70	32.07	31.24	38.65	37.64	39.13
Nova Scotia.....	25.00	30.50	24.72	27.99	28.00	33.67
New Brunswick.....	21.40	23.77	18.50	25.61	22.48	29.45
Quebec.....	41.90	43.37	42.50	47.00	51.36	52.13
Ontario.....	47.30	50.22	48.00	54.45	52.49	52.59
Manitoba.....	27.30	28.94	28.67	31.67	30.36	32.03
Saskatchewan.....	20.40	21.54	22.00	23.82	24.20	23.07
Alberta.....	18.20	20.46	24.00	21.03	23.15	22.18
British Columbia.....	76.10	73.44	74.00	150.00	125.00	118.51

II. Average Wages of Farm Help in Canada as estimated by Correspondents, 1909, 1910, 1914-1916.

Provinces.		Per month in summer season, including board.		Per year, including board.		Average value of board per month.	
		Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Canada.....	1909..	33 69	19 08	336 29	206 08	10 00	8 00
	1910..	35 15	20 70	347 70	209 69	12 49	9 56
	1914..	35 55	18 81	323 30	189 35	14 27	11 24
	1915..	37 10	20 20	341 00	200 00	14 57	11 45
	1916..	43 23	22 46	396 88	227 86	16 90	13 06

**II. Average Wages of Farm Help in Canada, as estimated by Correspondents,
1909, 1910, 1914-1916—con.**

Provinces.		Per month in summer season, including board.		Per year, including board.		Average value of board per month.	
		Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
P. E. Island.....	1909..	25 27	13 87	226 47	144 27	8 00	6 00
	1910..	26 60	15 00	244 89	149 25	10 15	7 60
	1914..	24 71	13 48	220 93	135 89	10 12	7 62
	1915..	26 67	14 59	237 52	136 80	10 28	9 44
	1916..	31 35	17 81	301 35	166 79	12 63	9 22
Nova Scotia.....	1909..	31 20	15 00	310 85	165 13	10 00	7 00
	1910..	33 70	16 90	321 30	175 60	11 50	7 90
	1914..	31 20	14 80	301 00	155 47	11 48	8 11
	1915..	32 95	15 85	309 78	168 81	11 66	8 36
	1916..	38 77	19 11	364 91	194 88	15 84	11 29
New Brunswick.....	1909..	32 59	16 02	239 55	172 13	10 00	8 00
	1910..	33 90	16 70	289 40	151 65	11 25	7 50
	1914..	31 93	15 10	301 55	164 79	11 23	7 76
	1915..	33 73	16 11	307 96	153 44	14 17	8 48
	1916..	35 74	16 66	328 02	163 91	13 58	9 61
Quebec.....	1909..	33 33	16 75	330 97	176 89	10 00	8 00
	1910..	36 40	18 98	313 41	177 94	11 56	8 00
	1914..	33 56	15 65	296 35	152 38	13 29	9 37
	1915..	33 08	16 44	301 00	159 00	13 37	9 60
	1916..	40 79	19 70	370 92	195 79	15 77	10 95
Ontario.....	1909..	31 52	18 22	331 56	203 37	10 00	8 00
	1910..	31 40	20 10	335 84	211 10	12 00	9 60
	1914..	32 09	16 67	297 29	172 00	13 09	10 43
	1915..	31 09	17 12	304 00	179 00	13 30	10 58
	1916..	39 41	20 58	360 43	205 81	16 43	12 59
Manitoba.....	1909..	35 95	23 97	365 55	261 84	11 00	9 00
	1910..	40 00	25 00	400 00	282 00	14 70	11 30
	1914..	39 13	22 35	364 41	225 61	15 49	12 98
	1915..	45 18	27 29	390 47	244 79	15 21	12 75
	1916..	48 37	26 97	454 29	283 16	18 14	14 61
Saskatchewan.....	1909..	38 30	24 23	389 90	263 86	16 00	10 00
	1910..	40 00	24 50	402 50	263 60	14 00	13 00
	1914..	40 51	22 96	365 90	234 93	16 50	13 96
	1915..	42 22	23 81	386 03	240 90	16 78	13 97
	1916..	48 55	25 66	433 53	278 10	18 19	15 33
Alberta.....	1909..	40 08	26 16	421 62	285 12	15 00	12 00
	1910..	40 00	27 50	416 00	300 00	16 70	13 90
	1914..	40 26	23 63	364 80	236 32	16 36	13 91
	1915..	44 02	24 25	404 00	253 00	16 94	14 17
	1916..	52 28	29 12	501 27	299 21	19 52	16 39
British Columbia.....	1909..	45 50	25 27	428 33	265 00	15 00	10 00
	1910..	57 40	38 00	—	—	20 00	17 00
	1914..	47 85	31 18	459 72	324 44	21 40	17 58
	1915..	49 37	31 21	463 04	286 68	19 15	16 00
	1916..	49 86	28 66	542 91	325 09	21 86	18 38

III. Average Values of Farm Animals and of Wool, as estimated by Correspondents, 1909, 1910, 1914, 1915 and 1916.

Provinces		HORSES			Milk cows	OTHER HORNED CATTLE			Swine per 100 lb. live weight	Sheep	WOOL PER LB.	
		Under 1 year	1 year to under 3 years	3 years and over		Under 1 year	1 year to under 3 years	3 years and over			Un-washed	Washed
		\$	\$	\$	\$	\$	\$	\$ c.	\$ c.	\$ c.	\$ c.	
Canada	1909	49	106	150	36	10	23	33	7 90	5 89	0 17	0 24
	1910	54	119	171	42	12	26	39	7 85	6 30	0 18	0 24
	1914	55	114	165	57	16	37	54	7 24	7 07	0 19	0 26
	1915	54	111	160	62	17	38	55	8 58	7 96	0 28	0 38
	1916	54	109	160	70	20	43	63	11 98	10 48	0 37	0 50
P. E. Island	1909	34	87	126	31	8	19	28	7 33	4 55	0 16	0 22
	1910	44	102	140	32	8	19	28	6 70	5 82	0 17	0 24
	1914	46	95	143	39	11	23	35	7 14	6 05	0 21	0 27
	1915	42	92	136	42	11	25	37	8 02	6 97	0 32	0 40
	1916	37	76	112	52	14	31	46	12 27	9 13	0 37	0 47
Nova Scotia	1909	40	90	133	33	9	23	37	7 26	4 13	0 19	0 24
	1910	46	95	145	37	9	24	40	7 25	4 48	0 20	0 25
	1914	53	116	166	40	10	25	42	7 75	4 70	0 21	0 26
	1915	53	108	167	45	11	28	44	7 94	5 28	0 31	0 40
	1916	50	99	150	53	13	33	54	10 77	6 55	0 39	0 49
New Brunswick	1909	40	90	137	29	8	18	28	7 36	4 22	0 18	0 24
	1910	50	112	157	33	8	19	31	7 05	4 60	0 18	0 23
	1914	54	123	182	40	11	24	39	8 16	4 63	0 22	0 28
	1915	59	127	182	40	11	25	37	8 17	5 25	0 30	0 40
	1916	55	113	169	48	13	28	44	11 63	6 49	0 36	0 48
Quebec	1909	41	98	145	33	8	19	29	9 62	5 47	0 21	0 29
	1910	46	103	155	39	9	21	32	8 78	5 72	0 21	0 29
	1914	49	107	164	47	11	27	41	8 91	6 60	0 23	0 30
	1915	48	104	159	51	12	28	42	9 81	7 48	0 33	0 43
	1916	49	105	155	62	16	35	52	14 28	10 73	0 44	0 58
Ontario	1909	53	110	144	40	12	26	38	7 33	6 63	0 14	0 20
	1910	60	127	174	48	14	31	46	7 30	7 00	0 14	0 20
	1914	54	111	152	64	20	43	62	7 74	8 70	0 19	0 25
	1915	51	102	142	70	20	45	64	8 00	10 03	0 26	0 33
	1916	52	105	151	76	23	51	71	12 06	12 81	0 34	0 44
Manitoba	1909	63	132	187	34	10	21	30	7 00	7 08	0 09	0 14
	1910	68	146	207	40	11	24	36	6 50	6 50	0 10	0 13
	1914	61	126	176	62	17	38	56	6 28	8 76	0 14	0 18
	1915	63	124	178	65	18	41	60	7 75	8 56	0 21	0 29
	1916	61	123	171	74	21	47	67	10 83	11 57	0 31	0 37
Saskatchewan	1909	56	123	180	38	11	25	40	6 86	7 01	0 10	0 13
	1910	50	137	200	41	12	27	40	7 50	7 00	0 09	0 14
	1914	63	133	187	66	18	41	61	5 74	7 08	0 15	0 20
	1915	64	132	180	69	20	44	62	8 26	7 07	0 20	0 24
	1916	65	133	188	73	22	47	67	10 20	9 94	0 28	0 33
Alberta	1909	47	97	150	35	11	23	33	7 20	6 80	0 12	0 18
	1910	51	108	164	39	12	25	38	7 60	6 30	0 11	0 18
	1914	45	91	137	66	21	42	61	5 99	6 06	0 14	0 18
	1915	47	97	142	60	22	45	64	7 70	7 57	0 23	0 25
	1916	51	102	151	77	27	51	73	11 04	9 82	0 28	0 37
British Columbia	1909	44	111	165	51	12	26	38	7 50	6 72	0 10	0 15
	1910	63	144	225	57	13	28	43	-	-	0 10	0 15
	1914	46	93	162	89	22	48	73	8 00	8 33	0 15	0 16
	1915	42	93	136	91	21	48	67	9 09	7 86	0 19	0 20
	1916	48	87	114	90	24	48	72	12 89	10 67	0 29	0 45

IV. Numbers in June and Values in December of Farm Live Stock in Canada, as estimated by Correspondents, 1915 and 1916.

Farm animals	1915	1916	1915	1916	1915	1916
	No.	No.	\$ per head	\$ per head	\$	\$
Canada—						
Horses.....	2,996,099	2,990,635	124 50	127 50	373,381,000	380,884,000
Milch cows.....	2,666,846	2,603,345	61 50	69 00	163,919,000	180,185,000
Other cattle.....	3,399,155	3,313,519	44 85	54 50	152,461,000	180,689,000
Sheep.....	2,038,662	1,965,101	8 00	10 50	16,226,000	20,312,000
Swine.....	3,111,900	2,814,672	14 00	17 50	43,653,000	49,477,000
Prince Edward Island—						
Horses.....	36,898	38,562	106 00	87 00	3,911,000	3,355,000
Milch cows.....	47,043	46,032	41 50	52 00	1,952,000	2,394,000
Other cattle.....	59,503	57,260	27 50	34 50	1,636,000	1,975,000
Sheep.....	86,640	88,797	7 00	9 00	606,000	799,000
Swine.....	40,792	38,300	12 50	20 00	510,000	766,000
Nova Scotia—						
Horses.....	63,244	64,193	120 50	108 00	7,621,000	6,933,000
Milch cows.....	128,814	130,141	44 50	53 00	5,732,000	6,897,000
Other cattle.....	144,458	140,673	32 00	37 50	4,622,000	5,275,000
Sheep.....	205,542	200,979	5 50	6 50	1,130,000	1,306,000
Swine.....	53,402	51,928	18 00	18 00	961,000	935,000
New Brunswick—						
Horses.....	65,827	65,169	137 00	126 50	9,018,000	8,244,000
Milch cows.....	101,665	100,221	40 00	48 50	4,067,000	4,861,000
Other cattle.....	96,437	92,223	28 00	33 00	2,700,000	3,043,000
Sheep.....	111,026	105,997	5 00	6 50	555,000	689,000
Swine.....	72,533	70,683	17 50	17 00	1,269,000	1,202,000
Quebec—						
Horses.....	372,567	332,628	112 00	115 00	41,728,000	38,252,000
Milch cows.....	720,420	639,805	50 50	62 00	36,381,000	39,608,000
Other cattle.....	612,500	535,693	40 50	50 50	24,806,000	27,052,000
Sheep.....	554,491	497,711	7 50	10 50	4,159,000	5,226,000
Swine.....	632,729	531,303	14 50	17 00	9,175,000	9,032,000
Ontario—						
Horses.....	903,527	896,208	120 00	125 00	108,423,000	112,026,000
Milch cows.....	1,077,808	1,082,119	69 50	76 00	74,908,000	82,241,000
Other cattle.....	935,606	901,924	47 50	65 00	44,441,000	58,625,000
Sheep.....	611,789	589,581	10 00	12 50	6,118,000	7,370,000
Swine.....	1,469,573	1,404,618	14 00	18 00	20,574,000	25,283,000
Manitoba—						
Horses.....	317,847	318,387	133 00	128 00	42,274,000	40,754,000
Milch cows.....	157,494	159,274	65 00	73 50	10,237,000	10,114,000
Other cattle.....	246,603	239,205	44 00	51 00	10,851,000	12,199,000
Sheep.....	50,880	51,943	8 50	11 50	432,000	597,000
Swine.....	163,308	130,320	14 50	17 00	2,368,000	2,215,000
Saskatchewan—						
Horses.....	630,062	646,633	147 00	148 50	92,619,000	96,025,000
Milch cows.....	211,684	218,230	69 00	72 50	14,606,000	15,822,000
Other cattle.....	543,609	556,710	48 00	51 00	26,093,000	28,392,000
Sheep.....	133,311	138,350	8 00	10 00	1,066,000	1,384,000
Swine.....	411,324	334,489	13 00	17 00	5,347,000	5,686,000
Alberta—						
Horses.....	544,772	567,543	113 00	121 00	61,559,000	68,673,000
Milch cows.....	183,974	188,205	68 50	77 00	12,602,000	14,492,000
Other cattle.....	660,000	686,730	49 00	56 00	32,340,000	38,457,000
Sheep.....	238,579	245,474	7 50	10 00	1,789,000	2,435,000
Swine.....	229,696	215,202	12 50	17 00	2,871,000	3,658,000
British Columbia—						
Horses.....	61,355	61,312	101 50	108 00	6,228,000	6,622,000
Milch cows.....	37,944	39,318	90 50	94 00	3,434,000	3,696,000
Other cattle.....	100,439	103,101	49 50	55 00	4,972,000	5,671,000
Sheep.....	46,404	46,269	8 00	10 50	371,000	486,000
Swine.....	38,543	37,829	15 00	18 50	578,000	700,000

REPORTS FROM THE PROVINCES.

Maritime Provinces.—Prices of cattle, sheep and swine show substantial increases in all three provinces. There is little demand for horses, and values have declined considerably. Farm help is almost impossible to procure.

Quebec.—In all parts of the province farm help is very scarce and dear. There is a large demand for all classes of farm animals, with the exception of horses, and prices are high. Wool is also selling at a large price.

Ontario.—High prices prevail for all animals and their products except horses. Owing to the high value of dairy products there is a great demand for milch cows, and in places they have sold for as much as \$100 and \$120. Scarcity of grain feed caused many farmers to sell their swine, but good prices were everywhere realized. Good farm help is almost unobtainable, many farms having only one man on each farm.

Manitoba.—All live stock have increased in value, except horses, for which there is but a small market. All reports complain of the scarcity of labour and of the high wages asked by any available help, especially foreigners who have asked as high as \$4 and \$6 per day. Prospects for an increased acreage under crops are very poor.

Saskatchewan.—All animals are in healthy condition. There is a good demand for all classes of live stock at high prices, except for horses. Swine are said to have decreased in number owing to the high cost of feed. Wool prices have advanced. Labour at any price is hard to get, and unless the situation changes much land will lie idle in the coming season.

Alberta.—The winter has been severe, but live stock have come through in good condition. Cattle, sheep and swine are bringing high prices. The horse market seems to be improving. Wages are very high, and help is difficult to secure.

British Columbia.—Good prices are being paid for all classes of live stock. Labour is scarce and costly.

HAIL AND FROST IN THE PRAIRIE PROVINCES, 1916.

With a view of ascertaining as far as possible the nature and extent of the losses caused by hail and frost during the season of 1916, a series of questions was addressed to the Crop Correspondents of the Census and Statistics Office throughout Canada. The replies received from correspondents in the Maritime provinces and in Ontario and Quebec indicated that the losses from these causes in those provinces were not of general distribution nor of material consequence; but in the three prairie provinces both hailstorms and frosts were especially severe and of widespread occurrence.

With regard to hail, correspondents were asked to state the area totally destroyed, the extent of reduced yield in fields not totally destroyed, the dates of the hailstorms and the areas affected by them.

The answers received to the first question do not permit of any estimate of the total area destroyed by hail; but in certain localities large areas are reported as having been totally destroyed, and it is evident that the losses from hail were more severe in the southern halves of each province than in the northern, and also that the province of Saskatchewan suffered more than the other two. In areas that were not totally destroyed the losses of wheat per acre ranged from 2 to 17 bushels in Manitoba, 2 to 18 bushels in Saskatchewan and 2 to 20 bushels in Alberta.

In all three provinces the hailstorms occurred principally in July, August and September, the great majority being in July and August. The earliest hailstorm is recorded as occurring on June 3 in southern Saskatchewan, and the latest on September 14 in northern Alberta.

A statement of the losses from hail in various municipalities of Saskatchewan under the Hail Insurance Act, furnished by Mr. J. E. Paynter, Chairman of the Saskatchewan Municipal Hail Insurance Commission, showed that in 139 municipalities the areas affected were as follows: Loss of 25 per cent, or less, 583,765 acres; from 26 to 50 per cent 238,789 acres; from 51 to 75 per cent 144,131 acres; from 76 to 95 per cent 117,238 acres and 100 per cent 283,644 acres. Mr. Paynter estimates the total loss for the municipalities insured under the Act at about \$3,600,000, and the total loss for the province, including the municipalities not under the Act, at close upon \$5,000,000.

Frosts occurred in the three provinces at different dates in July, August and September; but the frost of worst and most general effect occurred from about the 10th to the 12th of August. The degrees of frost ranged from 2 to 29 in Manitoba, from 2 to 28 in Saskatchewan and from 2 to 20 in Alberta. In Manitoba, out of 41 replies to the question as to whether the frost reduced the weight of grain per measured bushel, 11 answered "Yes" and 30 "No"; in Saskatchewan out of 119 replies 93 were "Yes" and 26 were "No", and in Alberta out of 109 replies 104 were "Yes" and 5 "No", the reductions in the case of the affirmative replies ranging from 1 to 15 lb. per bushel. Answering the question as to whether early cutting is advisable in the case of wheat touched by frost, 64 correspondents replied from Manitoba, 17 affirmatively and 47 negatively; in Saskatchewan out of 141 replies to this question 37 said "Yes" and 104 "No"; and in Alberta out of 101 replies 48 were in the affirmative and 53 in the negative.

CROP REPORTS FROM THE DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during January has been very severe, with the thermometer registering below zero on fourteen different days, on three of which it did not reach above zero at all. The snowfall has been much heavier and the temperatures

have ranged much lower than for some years, the highest being 33, the lowest -20.2 , and the mean 10.9 degrees, compared with extremes of 42 and -16 , and a mean of 16.8 a year ago. The precipitation, consisting of 0.11 of an inch of rain and 39.5 inches of snow, totals 4.06 inches; while for the previous January it aggregated 4.19 inches, made up of 2.02 inches of rain and 21.75 inches of snow. The bright sunshine recorded during the month is considerably less than for some years past, and averages 2.47 hours a day, compared with 2.81 hours a day in the corresponding period of 1916.

Charlottetown, P.E. I.—J. A. Clark, Superintendent, reports: "The first half of January was very moderate. Light falls of snow occurred during the opening week; this was followed by heavy rains on the 6th, 10th and 12th, when almost all of the frost came out of the ground. During this period the temperature ranged from 30 to 48 degrees. The third week was slightly colder, with a light shower of rain and a flurry of snow. The weather became very severe on the 20th and has continued so, with temperatures from zero to 21 below until the 31st. The first sleighing in the new year began with a snowstorm on the 22nd; other storms followed; so that the snow on the ground is a foot deep at the close of the month. Notwithstanding the very stormy, changeable weather, successful Short Courses were held at New Glasgow, the Hillsboro Consolidated School, Vernon River, Bonshaw and Mount Stewart. All classes of live stock are doing well, and the mild weather during the greater part of the month has helped materially in keeping down the cost of production. The exceptionally high prices realized from the sale of stock and its products should result in excellent profits for the winter's feeding. The port of Charlottetown was closed to navigation following the last trip of the S.S. *Prince Edward Island* on January 11; she then went on the Georgetown-Pictou route. Ice conditions in "The Straits" continued to get worse until the 29th, when the ice-boat service was started at 'The Capes' to carry mails."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The mean temperature for January is 18.85 , which is lower than during any corresponding period of the three previous years. The coldest spell was from the 20th to the 29th, 15 below zero being recorded at the Station during the night of the 29th, and 24 below in the town of Kentville, less than a mile away,—the difference, possibly, being due to the Station instrument being located at a higher level. The precipitation, consisting of 2.33 inches of rain and 16 inches of snow, totals 3.93 inches, compared with an average of 3.12 inches for the same time during 1914, 1915 and 1916. The sunshine aggregates 84.2 hours, or a little less than the average, 8.61 , for this time during the three previous years. There has been good sleighing since January 22nd, and, as a result of a heavy rainfall on the 30th, unaccompanied by any very mild spell, the roads are now splendid for hauling, which is a very welcome condition."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"January, for the most part, has been fine and mild, zero temperatures being recorded on only a few occasions; but on one of these days,

the 29th, the thermometer dropped to -23. Comparatively little snow fell until the last few days of the month, but seven inches were recorded on the 26th and four inches on the 30th. Market prices for all farm produce, especially eggs, remain very high. The work that has been engaged in at the Farm, other than caring for the live stock and the poultry, has included the cutting down and burning of brush along the line fence and the cutting of poles for a new fence, hauling manure to compost, picking over turnips and potatoes, crushing grain for cattle, and hauling hay from marsh. All classes of live stock are in very good condition and doing nicely. The steers in the experimental feeding tests are making satisfactory gains. The Experimental Farm poultry are progressing well. The eggs are graded before being shipped to the market; grade No. 1 sells for 50 cents per dozen, while the small ones and the cracked ones bring 25 cents."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"January has been a real winter month with six snowstorms, four rains, much high wind and a mean temperature of 10.3 degrees, which is 8.7 degrees lower than January, 1916, and 1.7 degree lower than the average mean for January for the past forty-two years. The snow in exposed places drifted very much, and heavy rains on the 6th and 13th took it nearly all off the fields, leaving a good deal of ice and making conditions bad for clover and grasses. Since the 21st there has been a good blanket of snow, and now, on the 31st, there is about 12 inches in the fields and 28 inches in the woods, with tremendous drifts wherever the wind got a sweep. Conditions have been favourable for lumbering operations, but the blustery weather has been a hindrance to such operations as can be done on the farm. Live stock generally are healthy and are consuming more fodder than in milder weather."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "During January, a lower mean temperature and a much heavier snowfall have been experienced than for some years. The highest temperature recorded is 38.6, the lowest -28.2 and the mean 8.2, compared with a mean temperature of 12.1 for January, 1916. The bright sunshine averages 3.4 hours a day, against 2.6 hours a day for this month last year. There has been no rain, but the snowfall totals 31 inches, very heavy falls having been experienced on the 13th and the 24th. The wind in the latter case caused so much drifting that railroads and rural districts were almost completely tied up for days. Barn yards and poultry yards are being obstructed by enormous piles of snow as never seen before. Besides the care of stock, the work engaging attention has included the hauling of manure and wood for fuel, the maintenance of roads and yards, and the cleaning and grading of seed grain."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "Compared with the average for the same month during the last five years, the present January has been colder, and there has been more precipitation with less sunshine, the figures being 7.9 and 9.8 degrees, respectively, for the mean temperature, 5.07 and 4.41 inches

for the precipitation and 55.1 and 57.7 hours for the sunshine. To sum up, it can be said that this has been one of the roughest months for the past ten years. It has not been easy to keep roads in shape, on account of the strong winds causing heavy drifts, and very little hauling of hay, straw, or produce could be advantageously done. At the Station, the care of live stock and poultry has been the main work, although a good deal of attention has been given to the cleaning and grading of seed oats, barley, wheat and peas, besides a great number of vegetable and flower seeds. An exhibit made at the Quebec Seed Fair elicited praise from all interested parties, including officials of the Provincial Department of Agriculture. Besides over 150 different kinds of seed, all grown at this Station, there were charts showing the comparative yields of cereals tried here for three years or more, as well as others showing the time to come to maturity of some of the important vegetables; also enlarged photographs giving details regarding allied subjects."

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—"The temperature during January has ranged much lower than for the corresponding period of last year, the highest recorded being 43, the lowest -40, and the mean 7.11, compared with extremes of 49 and -28 and a mean temperature of 21.98 in 1916. The bright sunshine recorded amounts to 69.5 hours, compared with 61.5 hours last year. The precipitation amounts to 3.59 inches, while a year ago it aggregated 3.63 inches. This month is notable for its steady cold weather, and quite a quantity of snow has fallen, which has put the roads in very poor condition for traffic. This, with the scarcity of labour, has kept farmers from doing much with their teams outside of their actual farm work. The work at the Experimental Station has included the hauling of gravel for the roads; the drawing of hay, straw and manure; the preparation of seed for spring and caring for the live stock."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "January has been very cold and stormy. The mean temperature for the month is 9.8 degrees below zero, and a minimum of 49 degrees below zero was reached. The cold waves were alternated by stormy spells; so that, on the whole, the month has been one of the most unpleasant that has been experienced in years. Work on the Experimental Farm has consisted chiefly in the caring for the stock, which has involved the drawing of feed to the farm to replace that destroyed in the fire of December 6th."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "January commenced with cold weather, and it has continued so to the end of the month, the last four days being extremely cold. Snow has been recorded on seven days, with a total fall of 14½ inches; it has remained on the fields as it fell, very little wind having been experienced during the month. Roads are in good condition for teaming, but very little grain has been moved since last report. The work on the Experimental Farm has consisted chiefly in cleaning and picking seed grain, drawing hay, straw, and manure, and caring for the live stock and poultry."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—“Although the average temperature for January is higher than is usual for the first month of the year, and, although the lowest is sixteen degrees higher than for the corresponding period of 1916, the cold has been felt more severely than ordinarily, as an instance of which it may be mentioned that the water pipes in the Superintendent's residence froze for the first time since the house was built in 1909. The dairy cattle at the Station were tested for tuberculosis during the month by an officer of the Health of Animals Branch, and were found to be free from the disease; the herd consists of two Holstein cows, one grade Holstein cow, two grade Shorthorn cows, two Holstein calves and two grade Shorthorn calves. The steers being fed for the winter made very satisfactory gains during January. The sand points installed in December are continuing to give a sufficient supply of water. The work at the Station during the month has consisted chiefly in caring for the stock and hauling manure.”

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—“The weather during January, with the exception of two or three brief cold snaps, has been fairly moderate. On the 11th and 12th, a blizzard of unusual severity was experienced. The last two or three days of the month have been quite cold. The snowfall has been about the average amount for January, namely, six inches. At present there is only sufficient snow for first class sleighing. Live stock is doing well, as there is a plentiful supply of feed. A large number of animals are running at large, and, in districts where the crop was frozen, some uncut fields furnish an abundant supply of feed. Many farmers who usually keep one or more men during the winter time are obliged to do the work themselves, consequently a serious shortage of farm help may be expected in the spring. At the Station, the work of preparing seed grain for sale in limited quantities is now occupying attention. The demand for this seed is increasing each year.”

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—“The weather throughout January has been moderate on the whole, although the low temperature of -49.9 was reached on the 31st. During the month, 7.5 inches of snow has fallen, making the total depth about twelve inches on the level. All roads are now in splendid condition for sleighing. Hogs reached a price of \$13.35 per 100 lb. off cars at Calgary. Receipts, however, have not been heavy during the last week of January, due largely to a dip in temperature. All classes of live stock are wintering well in the open, and another month of favourable weather should assure feeders making good gains and other stock being in good spring condition.”

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—“Except from the 28th to the 31st, the weather during January has not been particularly cold. The mean temperature for the month is 13.2 degrees, as compared with -8.9 degrees for the corresponding period last year. The precipitation has been light, amounting to 0.73 of an inch; and there has been very little sleighing. Large

quantities of hay in the district are being baled and shipped out; the demand for the same appears still to be strong. Numerous inquiries are reaching the district as to the possibility of obtaining good seed grain and seed potatoes. Both are available in a limited measure, and those farmers having the same are anticipating good prices in the spring."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"The temperature for January has been about normal. The very light snowfall to date has been insufficient to afford adequate protection for the fruit trees and fodder crops. A movement is on foot to start a creamery in this district, and the same is receiving the cordial support of the local Agricultural Society. At the Experimental Station, notwithstanding the cold weather, the returns from the poultry have been especially good. The results were obtained with dry hopper feeding, snow being used in place of water."

Summerland, B.C.—R. H. Helmer, Superintendent, reports: "January has been considerably milder than in 1916, the mean temperature being 23.39, compared with 11.14 a year ago. Nearly all the snow that came in December has disappeared, and while there is no sleighing on the lake levels, on the upper benches it is fairly good. The last week of the month has been very cold, -10 being recorded, which is the lowest so far this winter. The cattle being fed at this Station are making good gains. Organization meetings in connection with the "United Farmers of British Columbia" are being held, and a convention is to be held in Victoria on February 16 and 17."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"The first ten days of January were warm, cloudy and misty, with considerable rain and very little sunshine. From the 11th to the 19th, conditions were almost the reverse, the weather being cooler, dry and bright, with no precipitation. The latter part of the month has been different still; considerable snow fell, and on the 30th the temperature dropped to zero, with a very strong wind, and the following night to -1. The dry period of the month afforded an excellent opportunity to do some land clearing, and the wood burned remarkably well. All classes of live stock on the Farm are in good health. Fewer cows are milking now than last month, as several have been dried up previous to freshening."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The closing days of January have been characterized by a heavy snowfall and low temperature. Earlier in the month much fine weather was experienced, enabling landscape planting, road improvement and fence building to be carried on without hindrance. The forage crop, consisting of oats, barley and vetches,—which has been a continual source of green feed all winter— was much broken down by the weight of snow on the 31st. The dairy herd and the laying poultry have kept up their high standards of production. The farmers of the district have employed their time in the care of their dairy stock and poultry, in the packing and shipping of apples, and in the moving of feed and wood. Considerable orchard pruning and cleaning up work has been accomplished during the month."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of January are given in the following table:—

Meteorological Record for January, 1917.

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.	33.0	-20.2	10.90	4.06	285	76.8
Charlottetown, P.E.I.	48.0	-21.0	15.05	4.13	281	114.8
Kentville, N.S.	45.0	-15.0	18.85	3.93	286	84.2
Nappan, N.S.	45.0	-23.0	15.83	1.96	285	98.7
Fredericton, N.B.	44.0	-22.5	10.30	4.01	283	119.5
Ste. Anne de la Pocatière, Que.	38.6	-28.2	8.20	3.10	278	106.3
Cap Rouge, Que.	37.0	-21.8	7.90	5.07	278	55.1
Lennoxville, Que.	43.0	-40.0	7.11	3.59	285	69.5
Brandon, Man.	38.0	-49.0	-9.80	2.00	268	88.7
Indian Head, Sask.	40.0	-43.0	-7.00	1.45	266	39.2
Rosthern, Sask.	34.5	-38.0	-9.25	0.95	252	75.0
Scott, Sask.	43.2	-41.0	-7.05	0.60	255	78.3
Lacombe, Alberta.	42.8	-49.9	5.80	0.75	257	73.8
Lethbridge, Alberta.	49.0	-42.0	13.20	0.73	269	80.9
Invermere, B.C.	40.0	-25.0	12.30	0.15	266	80.1
Summerland, B.C.	47.0	-10.0	23.39	0.34	268	69.9
Agassiz, B.C.	48.0	-1.0	31.46	10.10	271	43.5
Sidney, Vancouver I., B.C.	49.0	9.0	35.44	4.07	273	57.6

Ottawa, February 14, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (February 1) that the cold weather prevailing throughout nearly the whole of January hindered all cultivation of the land and wheat sowing, although some little progress was made early in the month. The hard state of the ground, however, enabled farmers to cart manure. Early sown wheat looks well, although it has been everywhere somewhat cut by the keen winds and frosts; but that sown late is generally a poor plant, and much of it is still not yet showing above ground. Winter oats are generally a stronger plant than wheat, and have stood the severe conditions better; while beans are generally satisfactory. Ewes have done fairly well considering the hard weather, but much hand-feeding has been necessary. Lambing prospects are considered quite favourable, and the early flocks of Dorsetshire and neighbouring counties have given satisfactory results; there are, perhaps, not quite so many twins as usual, but the lambs appear to be healthy. Live stock have done fairly well, except in the hilly districts where deep snow has rendered the conditions difficult. Considerable inroads have been made into the supplies of roots and hay; but there appears to be sufficient keep for the rest of the winter, apart from a few

localities where turnips are beginning to get scarce. Little labour has been wanted during the month, but it is everywhere very scarce, and the lack of it will be felt when heavy work is resumed on the land.

Ireland.—The Irish Agricultural Department estimated (January 13) that the total flax crop in 1916 was 2,318,652 stones of 14 lb. from 91,454 acres, as compared with 1,546,267 stones from 53,143 acres in 1915. The average production per acre of fibre was 25·4 stones in 1916 as against 29·1 stones in 1915. The Department also reported on the same date that the total production in Ireland in 1916 of turnips was 165,607,344 bushels from 262,814 acres, as compared with 190,065,269 bushels from 265,122 acres in 1915. Of mangolds the production was 60,772,469 bushels from 80,434 acres, as against 67,455,696 bushels from 82,728 acres in 1915. The yields per acre were for turnips 631 bushels in 1916 against 717 bushels in 1915, and for mangolds 754 bushels against 814 bushels.

New South Wales.—The Government Statistician reports (January 15) that the wheat production of the State for the season 1916-17 is estimated at 42,817,000 bushels of grain from 3,755,695 acres, as compared with 67,323,390 bushels from 4,235,074 acres in 1915-16. Of wheat hay the total production in 1916-17 is 918,600 tons from 631,683 acres, as compared with 1,242,400 tons from 897,093 tons in 1915-16. The average yield per acre of grain in 1916-17 is 11·4 bushels as against 15·9 bushels in 1915-16. The reports from almost all of the principal wheat-growing districts indicate that harvesting operations have been much delayed by rain, and that, owing to the excessive moisture, the grain in many districts is of poor quality, small and pinched. The crops, in addition to the actual damage caused by wind and hailstorms, were considerably affected by rust, smut, take-all, etc., and much of the hay is of an inferior quality and discoloured. On the other hand some excellent samples of grain and hay have been harvested.

France.—The Journal Officiel of January 30 gives the usual annual report by the French Department of Agriculture of the areas sown to winter crops and their condition on January 1, 1917. The following statement shows the areas sown for 1917 in comparison with 1916:

Crop.	1916.	1917.	Increase (+) Decrease (—)
Wheat.....	12,441,000	10,569,000	—1,872,000
Meslin.....	237,000	240,000	+ 3,000
Rye.....	2,276,000	2,046,000	— 230,000
Barley.....	246,000	270,000	+ 24,000
Oats.....	1,693,000	1,608,000	— 85,000

For the total of these cereals the areas sown show a net decrease of 2,160,000 acres; but as compared with the areas sown in the fall

of 1914 the decrease exceeds 3,954,000 acres. As was to be expected the heaviest loss is for wheat, the decrease being 15 per cent, as compared with the area sown in the fall of 1915. The following is the condition of these crops on January 1, 1917, as compared with January 1, 1916, for which the figures are placed within brackets: wheat 61 (69); meslin 69 (73); rye 69 (68); barley 67 (71); oats 70 (71). In this scale of numerical expression 100=very good, 80 = good, 60 = fairly good and 50 = fair. On February 1 the condition of wheat was 62, as compared with 70 on February 1, 1916, and there are only four departments instead of 30 as on February 1, 1916, in which the condition of wheat is indicated as "good." Fears are expressed that the frosts and thaws of February will accentuate an already unfavourable prospect for the harvest of 1917.

Under the heading of "Let us sow spring wheat," M. H. Hitier, in the, 'Journal d'Agriculture Pratique,' of February 8, 1917, deals with the existing wheat situation. He states that normally France requires 338 million bushels for home consumption; in 1912 334 million bushels were harvested, and it was not necessary to import; in 1914, owing to the war, only 283 million bushels were harvested, in 1915 only 223 million bushels and in 1916 not more than 214,622,000 bushels. Consequently large quantities of wheat have had to be imported.

Unfortunately the harvest of 1916 was poor, and the autumn of 1916 was unfavourable for the seeding of fall wheat, which in normal years constitutes by far the largest proportion of the total wheat area of France. French farmers are therefore being urged to sow as much wheat this spring as possible, the ordinary French varieties of spring wheat up to their limit of sowing, which is the end of March, and Manitoba wheat in the month of April. According to experiments made by M. Schribaux in 1916 it is possible to sow Manitoba spring wheat not only in those parts of France best favoured by sufficient moisture, but also throughout the whole of the country.

To encourage French farmers to grow wheat the French Government will grant a bounty of 3 francs per quintal (16 cents per bushel) for wheat harvested in France and also a bounty of 20 francs per hectare (\$1.56 per acre) for increased areas under wheat, as compared with the previous year. The maximum price of wheat grown in France remains fixed at 33 francs per quintal (\$1.73 per bushel).

According to the 'Journal d'Agriculture Pratique' of February 22, 1917, a bill before the French Parliament proposes to increase the bounty of 3 francs to 5 francs (26 cents) and to grant a bounty of 20 francs per hectare for all areas sown to wheat for 1917 on and after February 15.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The following table showing the area and yield of field crops in the southern hemisphere is taken from the February issue of the International Crop Report and Agricultural Statistics, published by the International Institute of Agriculture, the metric weights and measures being converted into those of Canada:—

Area and Yield of Cereal Crops in Southern Hemisphere, 1915-16 and 1916-17.

Crops and Countries	1915-16	1916-17	Per cent of 1915-16	Per cent of average ¹	1915-16	1916-17	Per cent of 1915-16	Per cent of average ¹	1915-16	1916-17
	000 acres	000 acres	p.c.	p.c.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre	bush. per acre
Wheat—										
*Argentina.....	16,420	16,089	98.0	100.2	172,651	77,394	44.8	52.0	10.56	4.76
Union of South Africa.....	557	432	77.6	—	4,857	3,575	73.6	—	8.77	8.33
*Australia.....	11,500	12,531	109.0	164.8	143,002	143,477	100.3	158.5	12.49	11.45
*Total.....	27,920	28,620	102.5	121.0	315,653	220,871	70.0	92.3	11.30	7.73
Rye—										
Australia.....	—	10	—	—	—	134	—	—	—	13.54
Barley—										
Union of South Africa.....	64	57	86.6	—	—	1,000	—	—	—	17.47
Australia.....	—	180	—	—	—	4,189	—	—	—	23.23
Oats—										
Argentina.....	2,565	2,525	98.5	105.4	70,853	31,633	44.6	60.1	27.55	12.60
Union of South Africa.....	377	250	—	66.4	—	6,517	—	—	—	25.98
Australia.....	—	724	—	—	—	19,530	—	—	—	27.03
Corn—										
Australia.....	—	319	—	90.2	—	8,500	—	—	—	26.61
Linseed—										
Argentina.....	4,001	3,207	80.2	82.9	39,266	5,280	13.4	16.7	9.88	1.59

¹Average of five years 1909-10—1913-14.

On March 19 the Canadian Commissioner of the Institute, Department of Agriculture, issued the following cablegram received from Rome: "Total production of wheat in Argentina, Australia and New Zealand is estimated at 226,274,000 bushels, being 70 per cent of last year's production of the three countries and 92.3 per cent of their five years' average. The total production of corn in Spain, Italy, Russia-in-Europe, Switzerland, Canada, United States, Japan and Egypt is 2,841,514,000 bushels, 86.6 per cent of the production of the same countries last year and 95 per cent of their five years' average. The production of rice in Spain, Italy, United States, India and Japan is 141,336,000 short tons, 103.5 per cent of last year and 117.5 per cent of the five years' average. Area sown to wheat in Spain is 10,134,000 acres, or 103 per cent of last year's area; in Japan 1,236,000 acres, or 99.6 per cent of last year."

NEW STATISTICAL PUBLICATIONS.

1. MORTALITY FROM CANCER THROUGHOUT THE WORLD.¹

Review by PETER H. BRYCE, M.D., Chief Medical Inspector, Immigration Branch, Department of the Interior, Ottawa.

A large work on this subject by Dr. F. L. Hoffman, the well-known Statistician of the Prudential Insurance Co. of America, has recently been issued. It is by far the most comprehensive treatise on the subject, and, as stated in the preface, is published because of the practical importance of cancer to life insurance companies. In 1914, 7.5 per cent of the total mortality, for which insurance was paid by the Prudential, was on account of deaths due to cancer. It is further stated in the preface that the "actual frequency of malignant (cancerous) diseases throughout the civilized world has been ascertained to be much more of a menace to the welfare of mankind than has generally been assumed to be the case, and that in contrast to a marked decline in the general death-rate, cancer remains one of the few diseases actually and persistently on the increase in practically all the countries and large cities for which trustworthy data are obtainable."

There are seven chapters under which various questions in connection with the study of cancer are discussed. These include the increase in cancer; mortality in different occupations; the geographical incidence of cancer; and conclusions and observations on the cancer problem. During the last twenty-five years vital statisticians everywhere have had their attention directed to the increasing number of deaths registered as due to cancer, and many investigations of hospital statistics and death returns have been made with a view to determining, if possible, whether the disease is actually on the increase, or whether it is simply because of the increase in opportunities for better diagnosis and more complete registration of deaths due to this disease that its prevalence seems greater. In different countries cancer research institutions have been established within recent years, and experimental work of the most interesting character has been carried on; yet nothing seems to be made more plain by Dr. Hoffman than that the extrinsic causative agent, if there be one, of cancer has not yet been discovered. Almost innumerable have been the suggested causative agents, and yet the following quotations sum up most of the truth regarding the matter: "The statement is frequently made that cancer is primarily a function of age; but as elsewhere pointed out it would be more correct to say that cancer is a function of senility and even presenility, as made evident by the more common occurrence of sarcoma among the young." Dr. Hastings Guilford is quoted as saying: "Just as innocent tumours show themselves to be true errors of growth by

¹The Mortality from Cancer throughout the World. By FREDERICK L. HOFFMAN, LL.D., F.S.S., F.A.S.S., Statistician of the Prudential Insurance Company of America. The Prudential Press, Newark, New Jersey, U.S.A., 1915. 8vo. 811 pp.

terminating at some period of their career, so the malignant tumours indicate that they are errors of development by continuing, like normal developments, while life lasts." Dr. Hoffman's studies further make it clear that native races are remarkably free from cancer as also, it would seem, are peoples who live on a simple and largely vegetable diet; but that there is nothing specific in the vegetable diet, which creates immunity, is seen in the fact that North American Indians, very largely meat-eaters, are unusually free from this disease. Statistics seem to point to the fact that the well-fed and over-fed in all countries suffer more than the poorer working classes, and the statistics quoted seem to make it evident that it is the peculiar tissue qualities and blood conditions of the individual, whether inherited or induced by habits of life, which play a more prominent part than anything else in the occurrence of the disease. A quotation is given from Rodmann that "such pre-cancerous conditions are inflammatory, inasmuch as a mild low grade chronic inflammation due to long standing irritation resulting in either ulceration, hyperplasia or cicatricial tissue is present in all of them", and "this in turn means diminished arterial supply with lessened physiological resistance of the cells." These latter quotations regarding the exciting causes of cancer are of much interest, since they fit in very well with the conditions of industrial and social life under which so many people to-day are existing as compared with the simple rural life of former times and under which native races live to-day.

The whole study seems to point to several fairly well determined conclusions:

- (1) That civilized life tends with its high tension to wear out the normal physiological functions of tissues, by which nutrition is lessened and degeneration follows, and therewith the possibility of growth of foreign cells, as microbes, and even of those normally present in the body as epithelial cancer cells, is increased.
- (2) That particular occupations, in which certain portions of the body are subjected to irritation through constant pressure on some particular part, or those where the materials handled, as in the coal tar industries, cause skin irritations, tend to hyperplasias and later local degeneration of tissue, thereby promoting the creation of cancerous processes.
- (3) That it is essentially a disease not alone of old age, but of tissues which have become old through hereditary or over work and loss of function.
- (4) That there is no evidence that can be substantiated that the disease is in any way hereditary, except so far as that a certain hereditary type of tissue in a family does seem to mark the time of life at which old age tends to supervene.
- (5) That simplicity of life, good sanitary surroundings, ample exercise and adequate nutrition, all of which tend to delay the advance of old age, seem further to be the best guarantees of immunity from cancer, as from other diseases of degeneration.

2. STATISTICAL YEAR BOOK OF QUEBEC, 1916.

The third annual volume of the Quebec Statistical Year Book has now been issued by the Bureau of Statistics of the Quebec Provincial Government. It is a volume of 608 large octavo pages, divided into eight parts comprising (1) a chronological summary of the history of New France and especially of the economic life of the province of Quebec since Confederation; (2) Colonization of Quebec under the English régime, 1760-1791; (3) Climatology; (4) Area and population; (5) Administration; (6) Production; (7) Labour and (8) Provident Institutions. In a prefatory letter signed by the Chief of the Bureau, Mr. G. E. Marquis, the following are indicated as special features of the new volume: Colonization of New France under the English domination from 1760 to 1791, this article supplementing that which appeared in the previous volume on colonization under the French domination from 1608-1760; a statistical study of psychiatry, or the medical treatment of mental disease in relation to crime; pulp and newsprint; the forests of Quebec and pisciculture and the fur trade. Other subjects receiving new or special treatment in the Year Book of 1916 are education, municipal statistics and provident institutions. The whole volume forms an excellent compendium of present and past statistical information of comprehensive character relating to the province of Quebec.

3. MINERAL PRODUCTION OF ONTARIO, 1916.

The Ontario Department of Lands, Forests and Mines has issued its preliminary report on the mineral production of Ontario in 1916. It shows that the total value of the mineral production of the province in 1916 is \$64,843,597, as compared with \$54,245,679 in 1915. The metallic production amounted in value to \$54,936,605, as compared with \$44,109,679 in 1915 and the non-metallic to \$9,906,992, as compared with \$10,136,000. The increase in value of \$10,597,918 is due chiefly to expansion in the production of gold, nickel, copper, cobalt, molybdenite and lead. This was in large part a result of the war and consequent high prices for metals. The increase in value is confined to metallic products. Of gold the total production in 1916 was 497,836 oz. of the value of \$10,339,259; the silver production was 19,874,970 oz. of the value of \$12,622,849. The output of silver showed a decrease of 4,871,563 oz., or nearly 20 per cent, as compared with 1915; but the value exceeds that of 1915 by \$448,537. Copper in matte produced 22,430 tons of the value of \$8,299,051 and nickel in matte 41,299 tons of the value of \$20,649,279.

WEATHER OF THE YEAR 1916.

Weather of the year 1916 at Representative Stations, compared with Normal Annual Averages for the period 1888 to 1907.

Station.	Degrees of temperature, F.						Hours of sunshine.	
	mean winter	mean summer	lowest in year	highest in year	mean annual	normal (1888-1907)	1916	normal annual
British Columbia—								
Victoria.....	38.3	57.7	15	86	57.5	50.3	2,025	1,822
Vancouver.....	37.8	61.2	6	83	48.0	49.1	1,699	1,815
Kamloops.....	21.7	65.7	-28	95	42.9	47.7	2,027	1,868
Alberta—								
Calgary.....	17.3	59.7	-41	87	37.4	37.4	—	—
Edmonton.....	12.2	58.2	-45	81	34.8	36.7	2,066	2,081
Saskatchewan—								
Battleford.....	7.2	61.1	-61	89	33.3	34.4	—	2,101
Prince Albert.....	8.0	60.9	-58	86	40.4	32.1	—	—
Qu'Appelle.....	7.9	61.1	-46	89	40.6	34.5	2,307	—
Manitoba—								
Minnedosa.....	6.1	61.5	-40	91	32.2	34.1	—	—
Winnipeg.....	6.2	65.1	-41	95	33.7	34.9	2,159	2,178
Ontario—								
Port Arthur.....	13.2	62.0	-27	99	35.7	35.7	—	—
White River.....	5.9	59.0	-51	95	30.6	32.3	—	—
Parry Sound.....	21.4	67.7	-24	98	42.2	41.3	—	—
Southampton.....	25.5	65.8	-19	91	43.6	43.8	—	—
Toronto.....	27.8	69.4	-9	100	46.4	45.5	2,081	2,048
Kingston.....	24.3	67.2	-16	88	44.2	43.7	2,009	1,989
Stonecliff.....	16.5	66.2	-30	98	39.4	38.5	—	—
Ottawa.....	19.3	68.2	-18	97	41.9	43.0	2,089	1,874
Quebec—								
Montreal.....	20.6	68.8	-18	92	42.9	42.3	1,895	1,805
Quebec.....	17.0	66.1	-24	92	39.5	38.7	1,802	1,762
Sherbrooke.....	18.9	66.0	-20	89	40.7	—	1,772	1,843
Father Point.....	17.8	57.5	-17	80	36.3	35.1	—	—
New Brunswick—								
Chatham.....	20.7	65.2	-19	96	41.1	40.3	—	—
Fredericton.....	26.0	64.4	-20	94	43.3	40.5	1,973	1,978
St. John.....	24.3	58.6	-12	80	40.8	41.6	—	—
Nova Scotia—								
Yarmouth.....	29.4	58.1	-10	79	42.7	40.2	—	—
Halifax.....	27.8	62.6	-14	89	43.7	44.3	—	—
Sydney.....	27.2	61.5	-25	88	42.7	42.4	—	—
Prince Edward Island—								
Charlottetown.....	23.7	63.6	-16	88	41.7	40.2	1,667	1,896

Precipitation in inches.

Station.	1916			Normal (1888-1907).		
	rain.	snow.	total.	rain.	snow.	total.
British Columbia—						
Victoria.....	21.64	78.2	29.46	31.41	11.6	32.57
Vancouver.....	48.03	80.5	56.08	57.88	23.2	60.20
Kamloops.....	6.57	32.7	9.84	8.00	26.2	10.62
Alberta—						
Calgary.....	9.37	46.3	14.00	11.70	46.0	16.30
Edmonton.....	15.33	57.1	21.04	14.18	40.2	18.20
Saskatchewan—						
Battleford.....	15.46	22.5	17.71	11.05	27.4	13.79
Prince Albert.....	15.89	36.3	19.52	11.62	49.8	16.60
Qu'Appelle.....	18.50	80.4	26.54	13.44	54.0	18.84
Manitoba—						
Minneapolis.....	14.36	61.1	20.47	12.79	45.7	17.36
Winnipeg.....	15.54	86.5	24.19	15.62	51.9	20.81
Ontario—						
Port Arthur.....	24.21	51.4	29.35	19.01	44.5	23.46
White River.....	16.48	116.2	28.10	17.36	93.5	26.71
Parry Sound.....	33.15	150.0	48.15	29.38	115.6	40.94
Southampton.....	30.25	131.2	43.37	21.64	116.0	33.24
Toronto.....	25.24	67.3	31.97	25.28	61.0	31.38
Kingston.....	31.54	58.8	37.42	24.01	74.8	31.49
Stonecliff.....	24.07	67.4	30.81	21.69	82.6	29.95
Ottawa.....	27.43	119.6	39.09	24.70	87.0	33.40
Quebec—						
Montreal.....	28.98	98.3	38.81	29.37	122.7	41.64
Quebec.....	33.63	91.0	42.75	27.17	132.9	40.46
Sherbrooke.....	26.83	111.0	37.93	—	—	—
Father Point.....	21.25	117.1	32.96	25.21	109.6	34.17
New Brunswick—						
Chatham.....	31.11	94.9	40.60	27.65	110.9	39.64
Fredericton.....	26.20	95.9	35.79	33.73	104.6	44.19
St. John.....	28.17	99.9	38.16	36.68	84.3	45.11
Nova Scotia—						
Yarmouth.....	31.27	117.2	42.99	42.46	84.2	50.88
Halifax.....	36.37	91.9	45.56	49.43	76.7	57.10
Sydney.....	34.34	108.5	45.19	41.10	92.8	50.38
Prince Edward Island—						
Charlottetown.....	25.03	92.4	31.27	29.97	101.8	40.15

THE WEATHER DURING JANUARY.

The Dominion Meteorological Office reports that the temperature was below the normal in nearly all parts of the Dominion, the only exceptions being southern Alberta and southwestern Saskatchewan, where the normal value was just reached. Negative departures of 5° to 7° were recorded in the interior of British Columbia, the greater portion of Saskatchewan and Manitoba, and in northern Ontario. In southern and eastern Ontario, the southern districts of Quebec, and in the Maritime provinces it was for the most part from normal to 3° below. The precipitation was above the average over the greater portion of British Columbia, especially in the northern portion where the snowfall was very heavy. In the western provinces, where it was confined to snow, the average amount was everywhere exceeded, except locally in southern Alberta. In northern Alberta, the Qu'Appelle Valley and in parts of Manitoba, the positive departure ran from 12 to 18 inches. In the far northern portions of Ontario the

precipitation was deficient, whereas elsewhere in the province it was rather more than the average in some localities, and somewhat less in others. Over the greater part of Quebec the average amount was well exceeded, while very locally it was not maintained. In the Maritime provinces there was a small negative departure throughout, except in a few places in Prince Edward Island. At the close of the month British Columbia was snow-covered to a depth varying from 15 inches in the southern parts to 57 inches in the northern parts. In the western provinces the depth varied from 3 to 8 inches in Alberta, from 6 to 18 inches in Saskatchewan and Manitoba; in Ontario from 6 to 8 inches on the shores of Lakes Erie and Ontario, and from 23 to 26 inches in more northern districts; in Quebec from 27 to 39 inches, and in the Maritime provinces from 3 to 4 inches in southern Nova Scotia, and 18 to 36 inches in northern New Brunswick.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada, and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade	Jan. 6		Jan. 13		Jan. 20		Jan. 27	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	1 77½	—1 83½	1 81½	—1 86½	1 80½	—1 84½	1 68½	—1 80½
No. 2 Nor.....	1 74½	—1 80½	1 78½	—1 83½	1 77½	—1 81½	1 65½	—1 77½
No. 3 Nor.....	1 69½	—1 77½	1 74½	—1 79½	1 72½	—1 77½	1 60½	—1 72½
No. 4.....	1 56½	—1 63½	1 58½	—1 65½	1 60½	—1 63½	1 48½	—1 60½
No. 5.....	1 36½	—1 42½	1 38½	—1 41½	1 40½	—1 43½	1 27½	—1 37½
No. 6.....	1 09½	—1 12½	1 06½	—1 07½	1 07½	—1 11½	0 96½	—1 07½
Feed.....	0 90	—0 94	0 85	—0 90	0 90	—0 95	0 90	—0 95
Oats—								
No. 2 C.W.....	0 54½	—0 57½	0 56½	—0 58½	0 56½	—0 57½	0 54½	—0 57½
No. 3 C.W.....	0 51½	—0 55½	0 54½	—0 56½	0 55½	—0 56½	0 52½	—0 55½
No. 1 Feed Ex.....	0 51½	—0 55½	0 54½	—0 56½	0 55½	—0 56½	0 52½	—0 55½
No. 1 Feed.....	0 50½	—0 53½	0 52½	—0 54½	0 53½	—0 54½	0 51½	—0 54½
No. 2 Feed.....	0 49½	—0 52½	0 51½	—0 53½	0 52½	—0 53½	0 50½	—0 53½
Barley—								
No. 3 C.W.....	0 97	—1 00	1 00	—	0 99	—1 00	0 96	—0 99
No. 4 C.W.....	0 93½	—0 94	0 94	—	0 93	—0 94	0 90	—0 93
Rejected.....	0 72	—0 77	0 77	—0 78½	0 79	—	0 79	—0 80
Feed.....	0 72	—0 76	0 77	—0 78½	0 79	—	0 79	—0 80
Flax—								
No. 1 N.W.C.....	2 58½	—2 60½	2 58½	—2 60½	2 61½	—2 64½	2 62½	—2 64½
No. 2 C.W.....	2 55½	—2 57½	2 55½	—2 57½	2 58½	—2 61½	2 59½	—2 61½
No. 3 C.W.....	2 38½	—2 40½	2 29½	—2 40½	2 40½	—2 44½	2 43	—2 44½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916 and 1917.

Grade and Market	October		November		December		January	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 58	— 1 95	1 77	— 1 96	1 68	— 1 87	1 83	— 2 06
Chicago.....	1 57½	— 1 88	1 74	— 1 89½	1 67	— 1 80½	1 74	— 2 00
New York (f.o.b. afloat).....	1 64½	— 2 00½	1 78½	— 2 02½	1 63	— 1 90½	1 46	— 2 05
Corn, No. 2, mixed—								
St. Louis.....	0 86½	— 1 11	0 91	— 1 07½	0 88½	— 0 94½	0 94½	— 1 02
New York (f.o.b. afloat).....	0 97½	— 1 20	1 06	— 1 18	1 00	— 1 14	—	—
Corn, No. 2—								
Chicago.....	0 88½	— 1 11	0 90	— 1 10	0 88	— 0 96	0 93½	— 1 03
Oats, No. 2—								
St. Louis.....	0 46	— 0 54	0 52	— 0 59	0 55	— 0 56	0 54	— 0 59
Chicago.....	0 45½	— 0 53½	0 51½	— 0 59	0 46½	— 0 54	0 53½	— 0 58½
Rye, No. 2—								
Chicago.....	1 24	— 1 41	1 40	— 1 53	1 30	— 1 51	1 38	— 1 48½

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description	Jan. 1		Jan. 8		Jan. 15		Jan. 22		Jan. 29	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1 old.....	2 70½	— 2 73½	2 70½	— 2 73½	2 70½	— 2 73½	2 70½	— 2 73½	2 70½	— 2 73½
“ No. 1 new.....	2 64½	— 2 67½	2 64½	— 2 67½	2 64½	— 2 67½	2 64½	— 2 67½	2 64½	— 2 67½
“ No. 2 new.....	2 62	— 2 64½	2 62	— 2 64½	2 62	— 2 64½	2 62	— 2 64½	2 62	— 2 64½
“ No. 3 new.....	2 59	— 2 62	2 59	— 2 62	2 59	— 2 62	2 59	— 2 62	2 59	— 2 62
American hard winter.....	—	—	2 38½	— 2 41½	2 38½	— 2 41½	2 38½	— 2 41½	2 38½	— 2 41½
“ red winter.....	—	—	2 32½	— 2 35½	2 32½	— 2 35½	2 32½	— 2 35½	2 32½	— 2 35½
Indian.....	2 55½	— 2 58	2 49½	— 2 52½	2 52½	— 2 55½	2 55½	— 2 58	2 58	— 2 60½
Australian.....	2 47½	— 2 50½	2 44½	— 2 47½	2 47½	— 2 50½	2 50½	— 2 53½	2 56	— 2 59
Oats (per bush.)—										
Canadian.....	1 37	— 1 39½	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37
American.....	1 29½	— 1 31½	1 29½	— 1 31½	1 29½	— 1 31½	1 29½	— 1 31½	1 29½	— 1 31½
Chilian.....	1 31½	— 1 34½	1 31½	— 1 34½	1 31½	— 1 34½	1 34½	— 1 37	1 37	— 1 39½
Flour (per 280 lb.)—										
Canadian good.....	15 33	— 15 57	15 33	— 15 57	—	—	15 09	— 15 33	15 09	— 15 33
“ first bakers’.....	14 60	— 14 84	14 60	— 14 84	14 60	— 14 84	14 60	— 14 84	14 60	— 14 84
“ common.....	14 36	— 14 60	14 36	— 14 60	14 36	— 14 60	14 36	— 14 60	14 36	— 14 60
American spring, good.....	15 09	— 15 33	15 09	— 15 33	15 09	— 15 45	15 09	— 15 45	15 09	— 15 45
“ common.....	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09
Californian.....	14 60	— 14 84	14 60	— 14 84	—	—	—	—	—	—
Australian.....	14 11	— 14 36	14 11	— 14 36	14 36	—	14 11	— 14 36	14 36	— 14 48

LIVERPOOL.

Description	Jan. 2		Jan. 9		Jan. 16		Jan. 25		Jan. 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1 old.....	2 64	— 2 65½	2 64	— 2 64½	2 64	— 2 64½	2 64	— 2 64½	2 64	—
“ No. 2 old.....	2 61	—	2 61	—	—	—	2 61	—	2 61	—
“ No. 3 old.....	2 58	—	2 58	—	2 58	—	2 58	—	2 58	—
Man. Feed.....	2 10	— 2 11½	2 11½	— 2 13	2 16½	— 2 19	2 22½	—	2 25	—
Hard winter No. 2 choice.....	2 54½	—	—	—	—	—	—	—	—	—
Hard winter No. 2.....	2 53	—	2 53	— 2 53½	—	—	—	—	—	—
Nor. Duluth No. 1 old.....	2 58	—	2 58	—	2 58	—	2 58	—	2 58	—
Nor. Chicago No. 1 old.....	2 58	—	2 58	—	2 58	—	2 58	—	2 58	—
Durum.....	—	—	—	—	2 48½	—	2 48½	—	2 48½	—
Outmeal (per 240 lb.)—										
Canadian rolled oats.....	15 09	— 15 21	15 81	—	15 81	— 16 30	15 81	— 16 30	17 03	—
“ middle cut.....	15 09	— 15 21	15 81	—	15 81	— 16 30	15 81	— 16 30	16 30	—
“ fine cut.....	15 09	— 15 21	15 81	—	15 81	— 16 30	15 81	— 16 30	16 30	—
“ pinhead.....	15 09	— 15 21	15 81	—	15 81	— 16 30	15 81	— 16 30	16 30	—

[illegible]

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

THE WHEAT OUTLOOK FOR 1917.

With the approach of the spring seeding of 1917, attention is directed to the importance of securing as large an acreage under wheat as can possibly be sown. In Europe it is recognized that the outcome of the present gigantic conflict is as dependent upon ability to maintain food supplies for the armies at the front and for the nations at home, as it is upon the supply of men, guns and ammunition. It is remarkable that although harvest yields vary a great deal in different countries of the world there is frequently a general result of world-wide application. Thus, in 1914, the world's harvests were generally below average, in 1915 they were excellent and in 1916 they were again poor. In a previous article (Census and Statistics Monthly, December, 1916, page 321), it was shown that whilst the world's estimated aggregate surplus of wheat from the harvest of 1915-16 was as much as 617,180,000 bushels out of a total crop of 4,379,006,000 bushels, the surplus from the smaller total of 1916, for the countries of the northern hemisphere, amounting to 3,225,015,000 bushels, was not expected to be more than 158,493,000 bushels, including the carry over from the previous year, but not including any exportable surplus from the harvests of the southern hemisphere for 1916-17. Unfortunately, since then, the Argentine wheat crop has turned out to be only about half of the previous year's yield, and only half of a five years' average.

So far as reports go at present the outlook for 1917 is none too favourable. The winter wheat crop of the United States, the area of which is between 65 and 70 per cent of the total, has come badly through a severe winter, and its condition on April 1, is reported as only 63.4 per cent of the normal as against the decennial average on the same date of 86.2 per cent. Consequently the United States Department of Agriculture anticipates a production of only 430 million bushels of fall wheat, as compared with 481,744,000 bushels in 1916 and 673,947,000 bushels in 1915.

In France not only does the acreage sown to winter wheat show a further considerable decline, but its condition this spring is much below average. Winter wheat being the main crop, it is certain that France, instead of being a self-sufficing country as before the war, will have to depend still more largely upon imported supplies. In Great Britain the fall seeding season was unfavourable, and the area under fall sown wheat will probably be less than in 1916. In Canada the winter wheat crop is relatively insignificant, but the acreage sown last fall showed a decrease, and it is probable that the May

report will indicate a larger area to have been winter-killed than in either of the two previous years.

Taking these facts into consideration it is evident that the spring seeding season for the current year is of critical importance, and that in Canada, which has now become one of the world's chief wheat-exporting countries and an important source of supply for the mother country, every effort should be made to overcome difficulties and sow as large an area as possible to spring wheat for the harvest of 1917.

Census and Statistics Office,
Ottawa, April 14, 1917.

ERNEST H. GODFREY,
Editor.

WHEAT RUST IN 1916.

Owing to the serious losses sustained last year by the agricultural interests of Canada through the outbreak of grain rust in the prairie provinces, especially Manitoba and Saskatchewan, inquiries have been instituted by the Dominion Government with the object of ascertaining any factors that may have contributed to the severity of the outbreak and, if possible, of eliminating such contributory factors in future. Experience has shown that severe outbreaks of grain rust in the United States and the Dominion of Canada occur periodically at irregular intervals, the last severe attack of the kind having taken place in 1904. In 1916 the yield per acre of the wheat crop, owing to rust in Manitoba and Saskatchewan, was reduced by at least 10 bushels in Manitoba and 5 bushels in Saskatchewan, which represents a loss to the farmers of these provinces of about \$50,000,000.

In co-operation therefore with the Botanical Division of the Experimental Farms Branch of the Department of Agriculture, a schedule of questions, to which answers were desired by practical farmers who have observed the effects of rust during the season of 1916, was issued last November by the Census and Statistics Office to its crop reporting correspondents and to others in a position to furnish information. Upwards of 450 detailed replies to the schedule reached the Census and Statistics Office, together with a large number of rusted specimens for botanical examination. The answers received, which in the aggregate comprised a large body of valuable information, were first classified and compiled in the Census and Statistics Office and then referred to the Botanical Division at the Central Experimental Farm for expert examination. The information thus obtained will be included in a report to be issued as soon as the work is finally completed.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—February has been very cold, with a lighter snowfall than usual. The highest temperature recorded is 37, the lowest —25.2, (which point was reached on two occasions), and the mean 6.24; while a year ago the extremes were 41 and —19.4 and the mean temperature 11.6. The precipitation totals 1.95 inch, consisting of 19.5 inches of snow; while in the previous February it amounted to 4.25 inches, made up of 42.5 inches of snow. The bright sunshine recorded averages 4.77 hours a day, compared with 3.94 hours daily in February, 1916.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "The first week of February was very cold, with light falls of snow. The balance of the month, though very changeable, has been moderate. There have been four different thaws, the first being on the 9th, when most of the snow disappeared; the others, which were of short duration, being on the 18th, 24th and 27th. Only a very small quantity of the snow water drained off, as the weather suddenly turned cold after each mild spell; this has given a thick, heavy sheet of ice over the fields everywhere. At the close of the month, it looks as if this ice sheet is likely to do considerable damage to meadows and small fruits. On the other hand, it has enabled farmers to get their winter's hauling done, and large quantities of oyster shell mud have been lifted from the rivers and bays. Short Courses have been held at Montague and Kensington. There is an abundant supply of feed, and the live stock are doing very well. Some localities are reporting that straw is getting scarce. The ice-boat service at "The Capes" was continued throughout the month, and the car-ferry remained on the Georgetown-Pictou route."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "On the whole, the temperature during February has been about normal, the mean temperature being 18.33, as compared with an average of 19.52 for this period of the three previous years. The thermometer registered below zero on four nights only, the coldest being -7 on the 4th. The snowfall has been light and, while sleighing has been quite general during the month, the roads in many places were not good for lack of snow. A rainfall of slightly over three-quarters of an inch, on the 24th, took off most of the snow and stopped the use of sleighs. At the end of the month, the fields, generally, are bare, and much ice has formed in low places and in spots where the snow had not entirely melted. The snowfall totals 11 inches, while the average for February in 1916, 1915 and 1914 is 19.52 inches. The rainfall amounts to 2.59 inches, as compared with an average of very slightly under one inch in the three previous years. The sunshine recorded aggregates 95.5 hours, while the average for this time during the three previous years is 92.9 hours."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "The weather conditions during February have been somewhat more changeable than earlier in the winter. The first few days were fine and cold, but on the 5th and 6th light falls of snow were recorded, and on the 9th a fairly heavy fall of rain much depleted the snow. Towards the middle of the month, it became somewhat colder. On the 23rd, the thermometer dropped to -10, but moderated rapidly, and on the 24th there was rain, which turned to snow towards the afternoon. The last few days of the month have been fair. In 1916, the February rainfall was 0.36 of an inch, and the snowfall 26 inches, making a total precipitation of 2.96 inches; while for this month the rainfall is 1.44 inch and the snowfall 14 inches, the total precipitation being 2.84. The mean temperature is 9.57, while for February a year ago, it was 16.54. There has been more continuous cold weather than during the same period last year, but the lowest reading of the ther-

momometer is only —16 compared with —24 a year ago. All feeding tests with beef cattle have been making most satisfactory progress, and the grade experiment with dairy cows is coming along nicely and with most encouraging results, notwithstanding the fact that a very high percentage of the calves this year have been bulls. Prices for dairy produce and beef have been abnormally high, especially for the latter. Feed stuffs have also been abnormally high, and at the present time there is practically nothing in this line to be had on the market. It is impossible to get bran, oilcake, shorts, oats, or even corn, at present. Bran is selling at from \$38 to \$40 a ton; feed oats from 85 to 95 cents a bushel; corn 55 cents a bushel and shorts 40 cents. Hay is practically the only feed available at a reasonable price; it ranges at from \$14 to \$15 a ton on the car. Lambs are high, very few being offered. Pork is the highest it has ever been on this market, selling for from 14 to 15 cents per lb. live weight. A ready market is found for all poultry produce; eggs have been bringing from 50 to 60 cents a dozen."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "The weather during February has been steadily cold, with considerable wind and 29 inches of snowfall. On only four days did the thermometer get above 32 degrees, and then but for a few hours. There has been an average amount of sunshine, and, in so far as the work out in the country is concerned, whether on the farm or in the woods, the weather has been favourable. There has been a good covering of snow over most of the province during the month. Water is very low in streams, rivers and wells. The prices of all farm products, except hay, are at such a high pitch that everything is moving to market. Live stock is being further depleted, as buyers are paying high prices and taking everything on which they can lay their hands. Tens of thousands of tons of hay are stored along the St. John Valley, with no outlet for any volume of it, and not sufficient live stock to consume it."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "February has been exceedingly cold, except a few days at the close of the month. Unusually high winds have caused the snow to pile up in larger drifts than for several years, while railway traffic has been difficult and considerably delayed. There has been no rain, but the snowfall totals 24 inches, of which very little remains in the fields, as high winds drifted most of it to the bushes and ravines. The highest temperature of the month is 34.4, the lowest —19, and the mean 6.22, while the lowest mean temperature recorded in previous years at this Station was 9.2. The bright sunshine averages 3.91 hours a day, against 4.5 hours a day for this month last year. Winter work has been delayed by storms and drifts, but a great deal is being done throughout the country, at the present time, in hauling fuel, pulp and lumber woods. All classes of stock are in good condition and doing well; two litters of pigs arrived during the month and are vigorous."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "February has been colder, with more snow and less sunshine, than

the average for the corresponding period of the last five years, the figures being, respectively, 6 and 8.16 for the mean temperature, 27 and 23.8 inches for the snowfall, 74 and 82.9 hours for the sunshine. The total precipitation for the month, 2.7 inches, is lower than the average of the past five years, which is 2.92, but there has been no rain this year. The snow is now 56 inches deep on the level, which is quite more than usual. At the Station, the work has included the care of live stock and poultry and the cleaning of grain, vegetable and flower seeds for sale and distribution. Five yearling and weanling French-Canadian fillies are wintering in fine shape, outside, with a single-boarded shed as shelter. There seems no doubt that heifers, older than six months, could be kept the same way and only brought in a short while before calving; they might thus better resist diseases of all kinds. A few Barred Rock chicks were hatched during the month to see if the pullets will moult next fall; if they do not, they probably will be more profitable than the later ones, even taking into consideration the high value of eggs used for incubation."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "February has been one of the coldest months on record, the thermometer registering above zero on only six days. The highest temperature recorded is 40 and the lowest —36, compared with 44 and —19 for 1915. The precipitation amounts to 0.85 of an inch, compared with 2.43 inches last year. The bright sunshine totals 105.5 hours, compared with 83 hours a year ago. There is quite a scarcity of good seed in this district, and it is necessary to depend on outside sources for a considerable part of the oats, barley and wheat required for sowing. It is felt that the farmers of this district will endeavour to sow more wheat this year, especially where they have suitable land, such as that on which they raised roots and corn last year. The farmers of the Eastern Townships seem awake to the responsibility that rests upon them in helping in every possible way to keep up the food supply this coming year. This year a much greater number of inquiries than before are being received in regard to the best varieties of grain and potatoes to plant, how to treat seed to combat the fungus diseases, etc., which cause so much loss if not looked after."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "February has been very cold and stormy. The mean temperature for the month is —6.8, or over eight degrees lower than February of last year, and on one occasion the thermometer dropped to —44. While the total snowfall has not been heavy, it came with a great deal of wind, and there were some very disagreeable days. Work on the Experimental Farm has consisted chiefly in earing for the stock and drawing out feed to replace that destroyed by the fire."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The weather during February has been clear and cold. Snow has fallen on five days during the month, the whole amounting to ten inches. Very little wind has been experienced, and the snow has remained on the fields to a great extent. Roads are in good condition, but very little teaming has been done owing to lack of elevator space.

The work on the Experimental Farm has included cleaning seed grain, drawing straw and manure, and caring for stock and poultry."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "High winds have prevailed for the greater part of February, and have drifted the little bit of snow to such an extent as to leave the roads in very poor shape. Less snow covers the ground than has been the case at this season for several years. The greatest trouble during the month has been the difficulty in obtaining help, and it seems quite impossible to get efficient office assistance at all, and if present conditions are any indication of what are to prevail during the coming summer, then much land is likely to go unworked. This is the first occasion since the Station was established that there has been any trouble whatever in obtaining help for the winter. The live stock is wintering well, and the seventy-three feeding steers are making satisfactory gains."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The weather has been unusually cold during February, with an average mean temperature of -5.86 . The amount of sunshine recorded is 127.4 hours, which is about the average. The precipitation totals 0.15 of an inch, which is also about normal. There is just sufficient snow on the ground to make first class sleighing. A considerable quantity of grain is still on the farmers' hands; some of this is low grade wheat, which will require careful attention in order to prevent it spoiling once the warm weather sets in. At the Experimental Station, the work has included preparing seed grain for use on the Station and for sale to farmers, among whom the demand is increasing every year. An experiment to determine the comparative merits of a straw shed and a frame shed, opening on a yard enclosed by a high board fence, for housing feeder steers, is being carried on. Up to the present, the steers in the straw shed have made the best gains."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "The weather during February has been colder than during the previous month, and the low temperatures have been accompanied by high winds, which is quite unusual. The somewhat extreme cold has been responsible for a continued heavy drain on forage, the consumption being unusually heavy. Where abundance of feed has been supplied, all stock are wintering well; but where only the ordinary ration has been available, there is some shrinkage in the weight of animals. Prices for finished cattle, hogs, mutton and lamb continue to advance, while offers have already been made in some districts for the wool clip of the coming season."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The mean temperature for February is 11.1 , which is 7.3 degrees greater than for the corresponding period a year ago. The snowfall has been light, the total precipitation (actually melted snow) being 0.27 of an inch. During the last half of the month the ground has had a light covering of snow, but there has been no really good sleighing. The weather during this fortnight has been rather severe, and many farmers in this district, depending on artificial reservoirs

for water for their stock, have been having trouble, because many of the smaller reservoirs, and particularly some of the shallow ones, have frozen down completely. Some losses from dogs have been suffered by sheep men in the neighbourhood; in fact, some sheep in the Station flock have been killed. Live stock generally, in the southern part of the province, has been doing well, as there is ample feed available. The steers in the feeding test at the Station have been making good gains, as have the lambs up to the time of the visit of the dogs. Since then, however, the latter appear to be making rapid recovery from the set-back."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "Except for the first two or three days, the early part of February was exceptionally mild, and there was every indication of a very early spring. On the 20th, however, a cold wave was experienced, and it has not spent itself at the end of the month, while the average minimum temperature for the last eight days has been -9.5 . The local stockmen, whose industry is the most important in the district, have lately organized a Stock Breeders' Association, which is doing good work. The annual meeting, held this month, was largely attended, and important resolutions were passed and useful discussions held."

Summerland, B.C.—R. H. Helmer, Superintendent, reports: "February was very cold in the early part, but it became much milder towards the middle of the month, when a very light shower of rain was experienced. Towards the end, the weather got much colder again, and for several nights the thermometer registered but a few degrees above zero. At the Station, the teams have been kept busy gravelling roads and hauling manure to the plots set aside for rotation crops, where needed. The steers, numbering 41, have made good gains. This has been a heavy winter on hay for the cattle-owner in this section. Potatoes and onions, both locally and throughout the province, are bringing high prices, and there are many complaints respecting the scarcity of good seed potatoes."

Agassiz, B.C.—W. H. Hicks, in charge, reports: "February has had the same amount of precipitation as in 1916, with a little less sunshine. The highest temperature is 10 degrees lower, the lowest 7 degrees lower, and the mean temperature 3.34 degrees lower than for the corresponding period last year. Frost has been experienced on the first two days and the last twelve days of the month. The period in between these dates was warmer and brought practically all of the precipitation. The dairy cattle are all healthy. Three pure-bred cows freshened during February, giving two fine heifers and one bull calf. Two of the Holstein heifers finished their lactation period during the month, one giving 14,643 lb. of milk and the other 10,281 lb. The total milk yield for February is 2,687 lb. less than for January. The sheep are doing well, but are consuming more roughage than usual for this time of the year, as the snow has prevented the pasture being of much use. The February lambs are quite successful. The hens are laying quite well. Eggs are selling

for around 40 cents a dozen, wholesale. The demand for settings for hatching is quite brisk."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "February opened with indications of an early spring, and mild weather was enjoyed during the early days of the month, so much so that gardening was done. All of this was changed by a heavy snowstorm and a cool spell experienced during the last week. The month closed with considerable snow on the ground and no spring work of any consequence accomplished. At the Experimental Station, considerable tree and shrub planting, some orchard pruning, and some manure hauling and spreading have been done. The farmers of the district have been employed at pruning, manure and wood hauling, and grain cleaning. The apple crop has been largely disposed of, and but fifteen per cent of the potato crop still remains on the farms. Prices for horses are now increasing; many have been sold and shipped to Alberta. Dairy cows, sheep and swine are in demand for local trade, at high prices. Eggs for hatching and day-old chicks are moving briskly at prices slightly higher than a year ago. Live stock throughout the district is in the usual spring condition. Feed is selling at higher prices than for sometime past."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of February are given in the following table:—

Meteorological Record for February, 1917.

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.....	37.0	-25.2	6.24	1.95	292	133.7
Charlottetown, P.E.I.....	45.0	-16.0	14.82	3.95	289	128.4
Kentville, N.S.....	49.0	- 7.0	18.33	3.69	292	95.5
Nappan, N.S.....	41.0	-16.0	9.57	2.84	292	122.0
Fredericton, N.B.....	38.5	-19.0	9.60	2.90	290	129.2
Ste. Anne de la Pocatière, Que.....	34.4	-19.0	6.22	2.40	288	109.6
Cap Rouge, Que.....	35.0	-21.8	6.00	2.70	287	74.0
Lennoxville, Que.....	40.0	-30.0	4.48	0.85	291	105.5
Brandon, Man.....	30.0	-44.0	-6.80	0.90	283	120.8
Indian Head, Sask.....	34.0	-50.0	5.75	1.00	282	85.6
Rosthern, Sask.....	34.2	-44.8	-6.93	0.90	275	140.3
Scott, Sask.....	40.0	-48.8	-5.86	0.15	276	127.4
Lacombe, Alta.....	42.3	-45.7	3.10	0.52	278	119.1
Lethbridge, Alta.....	53.5	-41.5	11.10	0.27	284	96.7
Invermere, B.C.....	40.0	-26.0	14.30	0.36	282	99.8
Summerland, B.C.....	43.0	- 2.0	24.29	0.58	283	51.1
Agassiz, B.C.....	52.0	8.0	32.53	4.92	285	81.7
Sidney, Vancouver I., B.C.....	48.0	19.0	35.94	2.97	286	41.8

Ottawa, March 15, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (March 1) that severe frosts experienced during February prevented work on the land throughout the country until the last week or so, when farmers became very busy with the preparation for spring sowings, and in some districts a certain amount of wheat was got in. All cultivation is, however, very backward for the time of year. Autumn sown wheat appears to have taken little harm from the severe weather, and comparatively little re-sowing is thought to be necessary. That sown late is generally a poor plant, the earlier sown, as has been the case throughout the winter, looking much the better. A good deal of the late sown has still not yet germinated. In all parts of the country reporters state that top dressing would be of benefit to at least half the crop. Seeds were cut by the frosts, but by the end of the month were nearly everywhere beginning to show signs of recovery; and in only a few districts is it thought that they have been seriously damaged, although they are often stated to be backward, and they are hardly as promising as on January 1. Ewes have had a trying time, and have not always maintained their condition, which is, however, satisfactory considering the circumstances, especially where they have been well fed. Early flocks are lambing, and the fall appears to be nearly average so far; only in a very few districts is any unusual loss of lambs or ewes mentioned. Live stock have generally done fairly well during February. Considerable inroads have been made in the supplies of winter keep, but it is generally thought that there is enough for the requirements of the rest of the season. A good many roots in the fields have been lost through the frosts. Labour is still very scarce, especially horsemen. Until the last week or so there was not very much to be done, but when work was resumed on the land the scarcity was more severely felt.

New Zealand.—The Government Statistician estimates (February 13) the total yield of wheat in New Zealand for the year 1916-17 at 5,400,000 bushels as compared with 7,108,360 bushels in 1915-16 and of oats at 5,600,000 bushels as compared with 7,653,208 bushels in 1915-16.

South Africa.—According to a report of the Imperial Trade Correspondent at Johannesburg the estimated area under corn in the Union is about 5 per cent less than last year. It is not improbable, however, that favourable rains following the insufficiency of rain at the usual ploughing season tempted many farmers to plough considerably beyond the time recognized as safe to mature the crops, and that 5 per cent may thus not be a true decrease in comparison with last year. The area under corn in 1916 was estimated to be 6 per cent greater than in 1915. A 5 per cent decrease in the area under cultivation in 1917, as compared with 1916, therefore, still represents an increase over the area under the crop in 1915, when the yield was a record one; so that, judged only by the areas sown, the yield in 1917 would be greater than in any previous year.

United States.—The Crop-Reporting Board of the U.S. Department of Agriculture estimated (March 8) that the amounts of grain in farmers' hands on March 1, 1917, compared with the three previous years, were approximately in thousands of bushels as follows:

Grain in Farmers' Hands in United States on March 1, 1914-17.

Grain.	In farmers' hands March 1, 1914.	Per cent of 1913 crop.	In farmers' hands March 1, 1915.	Per cent of 1914 crop.	In farmers' hands March 1, 1916.	Per cent of 1915 crop.	In farmers' hands March 1, 1917.	Per cent of 1916 crop.
	000 bush.	p.c.	000 bush.	p.c.	000 bush.	p.c.	000 bush.	p.c.
Wheat.....	151,809	19.9	152,903	17.2	244,448	23.8	101,305	15.8
Corn.....	866,392	35.4	910,894	34.1	1,116,559	37.3	789,416	30.6
Oats.....	419,476	37.4	379,369	33.2	598,148	38.6	393,985	31.5
Barley.....	44,126	24.8	42,889	22.0	58,301	25.5	32,841	18.2

The proportion of the 1916 crop of corn which is merchantable is about 84 per cent (equivalent to 2,169,725,000 bushels), against 71.1 per cent (2,127,965,000 bushels) of the 1915 crop and 84.5 per cent (2,259,755,000 bushels) of the 1914 crop.

SUGGESTIONS OF CROP REPORTING CORRESPONDENTS.

Cultivation of Potatoes.—First of all, we never plant potatoes two years in succession upon the same field; we always plant them after a crop of grain. We prepare the ground in the fall and thoroughly dig in the manure. In the following spring, as soon as the ground is sufficiently dry, we use the disc harrow both ways and twice over if necessary, then the spring harrow until the ground is perfectly friable. Knowing by experience that the yield of a field of potatoes is in proportion to the time that the haulms remain green, we always plant as soon as the ground is ready, even in April if possible; but this we have done only twice.

We space the rows from 26 to 28 inches; at this distance apart we can earth up the haulms more firmly and the yield is larger. We plant the sets 13 inches apart and at a depth of from 3 to 4 inches. A potato planter is a great advantage, and we can do the work more rapidly. Thus, one man with two horses can plant 10 bushels per hour; we have even done 12 bushels per hour. A few days after the planting, we use the diamond harrow to break up clods, aerate the soil and destroy weeds. As soon as the plants begin to show we give a second diamond harrowing, but as lightly as possible, and with the teeth of the harrow turned back in order not to break too much the stalks that are just appearing. This second harrowing has the same object as the previous one. When the lines are easily distinguishable we use the horse hoe to aerate the soil and destroy weeds.

This we do at two different times. After this work there remain only a few weeds round the base of the potatoes, and those are easily removed by the hand hoe. After a few days we again use the horse-hoe once a week until after the flowering either to aerate the soil or to earth up the haulms and destroy weeds. Owing to this work we find on digging scarcely two or three armfuls of weeds per acre. The weeds are thus entirely removed from our vegetable crops, and for this reason those who visit our cereal crops, which are sown after a crop of vegetables, are surprised to find so few weeds.

We use the Bordeaux mixture to combat the leaf disease of potatoes known as "mildew"; at the same time this keeps the haulms green longer. We spray the mixture with a six jet sprayer when the tops are 5 or 6 inches high; again when they are in flower and a third time if there should still be any potato beetles. We only poison the mixture with Paris Green when there are potato beetles. In this way, we keep the tops green until their first frosts, and so greatly increase the yield.

This system of cultivation has always given us good results. Since we began in 1901 the yield has been from 18 to 28 bushels (minots) to one bushel of seed, excepting the two years 1915 and 1916 which owing to droughts gave inferior yields.—FRÈRE CHRYSTOTÈLE, Juvénat de Lévis, Quebec.

Dairying in Quebec.—In my parish a branch of agriculture, which is one of the most important, was until lately either quite neglected, or the farmers took but little interest in it. I mean the dairying industry. But last year a cheese factory was installed by a small group of settlers, who, as a reward for their courage and good example, received for their milk a price far in excess of the prices received by the settlers who made their butter at home. This year everybody will follow, and another factory of the same kind is being established for the next season. The farmers, in order to complete the work, intend to sow a good deal of green fodder and mangolds for cattle feeding. Let us hope that in a few years our parish, which used to be neglected, will be amongst the most prosperous.—ADELARD ST PIERRE, St. Perpétue, Quebec.

A Farmer's Experience in Saskatchewan.—Last year my flax went 21 bushels on breaking done the year before. This year I had wheat on that flax stubble, and wheat went 33 bushels per acre, No. 1. My wheat last year was on fall ploughing and went 42 bushels per acre. I had flax on that wheat stubble this year and it went 20½ bushels per acre. Last year I received on an average 88 cents per bushel for wheat and \$1.50 for flax. I have sold no grain this year; just got threshing done December 8. I started to farm in 1914 with oxen and have them yet, but will get horses this winter. I plough more deeply than anyone around here. I treat all my seed, including potatoes, for smut, wilt, scab, etc. I sow all grain as early as possible. The frost never bothers me. Even this year it did not, and there was practically no rust in my crop and no wilt in flax. Lots of flax around here was full of wilt and badly frozen. I escaped.—R. H. CROSSMAN, Fairmont, Sask.

Threshing of Grain.—Our crying difficulty is to get our threshing done seasonably at prices which are less than extortionate. By "seasonably" I mean as soon after the grain is stooked as it is in condition for threshing.—A. McKELLAR, Berry Creek, Alberta.

Eradication of Wild Oats.—Up till 12 years ago the farmers in this locality did not know what wild oats were, and many farms became badly infested through ignorance. When I found the invaders could not be got rid of by the ordinary method of summer fallow I fenced off my land into about 50 acre fields, and after fallowing in the ordinary way I put cattle and horses in to pasture at night. This proved very effective for the extermination of the wild oat; but other weeds such as Stink Weed, Blue Burr and Thistle not being eaten seeded down, and so I abandoned this method. I have at last discovered that when a field becomes badly infested it should be fall ploughed two years in succession and then left until late seeding and put into a green feed crop, double disking just before seeding and drag harrowing on a very hot day to kill any plant which might still take root. By this method the extermination will be thorough; anyway it has proved so in my experience.—JOHN H. RIDDALL, Yarbo, Sask.

Farm Help.—As a labourer for 14 years I learned that regular pay was most attractive to a working man. In July, 1911, I took up farming. My hired help varies from two to three. I pay every Saturday night, and I was never stuck yet for a man, while some neighbours complain very much.—M. H. CONNOLLY, Buckingham, Quebec.

THE WEATHER DURING FEBRUARY.

The Dominion Meteorological Office reports that the mean temperature was below the normal throughout the Dominion, the negative departures ranging from 2° in southern Alberta to about 10° in northern Ontario. While the normal precipitation for February was exceeded in some sections of the west and in the Maritime provinces, the total fall over the Dominion was as a whole rather lighter than usual and was for the most part in the form of snow. The ground was snow-covered at the close of the month in nearly all parts of the Dominion. In the southern districts of Ontario and the Maritime provinces the depth was only a few inches, except in drifts, while in Manitoba and the greater part of Saskatchewan it was from 10 to 17 inches, and in northern British Columbia, northern and eastern Ontario and throughout the province of Quebec, where there was very little melting, it was from 30 to 50 inches.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the

prices are taken from Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	Feb. 3.	Feb. 10.	Feb. 17.	Feb. 24.
	\$ c. \$ c.	\$ c. \$ c.	\$ c. \$ c.	\$ c. \$ c.
Wheat—				
No. 1 Nor.....	1 57½—1 70½	1 65 —1 69½	1 67½—1 70½	1 72½—1 75½
No. 2 Nor.....	1 54½—1 67½	1 62 —1 66½	1 64½—1 67½	1 68½—1 72½
No. 3 Nor.....	1 49½—1 62½	1 57 —1 61½	1 59½—1 62½	1 63½—1 67½
No. 4.....	1 38½—1 50½	1 47½—1 52½	1 50½—1 53½	1 55½—1 58½
No. 5.....	1 17½—1 29½	1 27½—1 32½	1 30½—1 34½	1 36½—1 40½
No. 6.....	0 92½—1 01½	1 01½—1 06½	1 04½—1 09½	1 09½—1 12½
Feed.....	0 80 —0 92	0 90 —0 94	0 93 —0 94	0 96 —0 97
Oats—				
No. 2 C.W.....	0 51½—0 55½	0 53½—0 55½	0 55 —0 56½	0 57½—0 58½
No. 3 C.W.....	0 49½—0 53½	0 52½—0 54½	0 53½—0 55½	0 55½—0 56½
No. 1 Feed Ex.....	0 49½—0 53½	0 52½—0 54½	0 56½—0 55½	0 55½—0 56½
No. 1 Feed.....	0 48½—0 52½	0 50½—0 53½	0 53½—0 54½	0 55½—0 56½
No. 2 Feed.....	0 47½—0 51½	0 49½—0 52½	0 52½—0 53½	0 54½—0 55½
Barley—				
No. 3 C.W.....	0 85½—0 96	0 91½—0 95	0 95 —0 96	0 96 —0 97
No. 4 C.W.....	0 80½—0 90	0 86½—0 90	0 90 —0 91	0 91 —0 92
Rejected.....	0 70 —0 80	0 72 —0 78	0 78 —0 80	0 80 —
Feed.....	0 70 —0 80	0 75 —0 78	0 78 —0 80	0 80 —
Flax—				
No. 1 N.W.C.....	2 51 —2 63½	2 53½—2 55	2 50 —2 54½	2 52½—2 53½
No. 2 C.W.....	2 48 —2 60½	2 50½—2 52	2 37 —2 51½	2 49½—2 50½
No. 3 C.W.....	2 31½—2 44½	2 34½—2 36	2 31½—2 35½	2 33½—2 35½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916-1917.

Grade and Market.	November.	December.	January.	February.
	\$ c. \$ c.	\$ c. \$ c.	\$ c. \$ c.	\$ c. \$ c.
Wheat, Red Winter, No. 2—				
St. Louis.....	1 77 —1 96	1 68 —1 87	1 83 —2 06	1 71 —2 02
Chicago.....	1 74 —1 89½	1 67 —1 80½	1 74 —2 00	1 66½—1 85½
New York (f.o.b. afloat).....	1 78½—2 02½	1 63 —1 90½	1 46 —2 05	1 70 —2 03½
Corn, No. 2, mixed—				
St. Louis.....	0 91 —1 07½	0 88½—0 94½	0 94½—1 02	0 95½—1 01
New York (f. o. b. afloat).....	1 06 —1 18	1 00 —1 14	—	—
Corn, No. 2—				
Chicago.....	0 90 —1 10	0 88 —0 96	0 93½—1 03	0 96½—1 02½
Oats, No. 2—				
St. Louis.....	0 52 —0 59	0 55 —0 56	0 54 —0 59	0 53 —0 63
Chicago.....	0 51½—0 59	0 46½—0 51	0 53½—0 58½	0 51½—0 56½
Rye, No. 2—				
Chicago.....	1 40 —1 53	1 30 —1 51	1 38 —1 48½	1 40 —1 52

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	Feb. 5.		Feb. 12.		Feb. 19.		Feb. 26.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1 old.....	2 70½	— 2 73½	2 70½	— 2 73½	2 70½	— 2 73½	2 70½	— 2 73½
“ No. 1 new.....	2 64½	— 2 67½	2 64½	— 2 67½	2 64½	— 2 67½	2 64½	— 2 67½
“ No. 2 new.....	2 62	— 2 64½	2 62	— 2 64½	2 62	— 2 64½	2 62	— 2 64½
“ No. 3 new.....	2 59	— 2 62	2 59	— 2 62	2 59	— 2 62	2 59	— 2 62
“ Feed, new.....	2 35½	— 2 41½	2 35½	— 2 41½	2 35½	— 2 41½	2 35½	— 2 41½
American hard winter.....	2 38½	— 2 41½	2 38½	— 2 41½	2 41½	— 2 44½	2 41½	— 2 44½
“ red winter.....	2 32½	— 2 35½	2 32½	— 2 35½	2 38½	— 2 41½	2 38½	— 2 41½
Indian.....	2 58½	— 2 61½	2 58½	— 2 61½	2 58½	— 2 61½	2 58½	— 2 61½
Australian.....	2 56	— 2 59	2 56	— 2 59	2 56	— 2 59	2 56	— 2 59
Oats (per bush.)—								
Canadian.....	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37
American.....	1 29½	— 1 31½	1 29½	— 1 31½	1 29½	— 1 31½	1 29½	— 1 31½
Chilian.....	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37	1 34½	— 1 37
Flour (per 280 lb.)—								
Canadian good.....	15 09	— 15 33	15 09	— 15 33	15 09	— 15 33	15 33	— 15 57
“ first bakers'.....	14 60	— 14 84	14 60	— 14 84	14 60	— 14 84	14 84	— 15 09
“ common.....	14 36	— 14 60	14 36	— 14 60	14 36	— 14 60	14 60	— 14 84
American spring, good.....	15 09	— 15 45	15 33	— 15 57	15 33	— 15 57	15 33	— 15 57
“ common.....	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09
Kansas.....	—	—	15 09	— 15 33	15 33	— 15 57	15 33	— 15 45
Nebraska.....	—	—	14 60	— 14 84	14 84	— 15 09	14 84	— 14 96
Australian.....	14 84	— 15 09	14 84	— 15 09	14 84	— 15 09	14 96	— 15 09
Californian.....	14 60	— 14 84	14 60	— 14 84	14 60	— 14 84	14 72	— 14 84

LIVERPOOL.

Description.	Feb. 6.		Feb. 13.		Feb. 20.		Feb. 27.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Choice Man. (old).....	—	—	2 66½	— 2 66½	—	—	2 67½	—
Nor. Man. No. 1 (old).....	2 62½	—	—	—	—	—	—	—
“ No. 3 (old).....	—	—	—	—	2 57½	—	2 57½	—
Man. Feed.....	2 25½	— 2 26½	2 25½	— 2 26½	2 25½	— 2 26½	2 25½	— 2 26½
Hard winter No. 2 Chicago.....	—	—	—	—	—	—	2 58½	—
No. 1 Nor. Chicago (old).....	2 57½	—	2 57½	—	2 57½	—	2 57½	—
No. 1 Nor. Duluth (old).....	2 57½	—	2 57½	—	2 57½	—	2 57½	—
Australian.....	2 64	—	2 64	—	2 64	—	2 64	—
Oats (per bush.)—								
Chilian white.....	—	—	—	—	1 44	— 1 47	1 44	— 1 47
“ tawny.....	1 30½	— 1 31½	1 30½	— 1 31½	1 30½	— 1 31½	—	—
Flour (per 280 lb.)—								
Manitoba export.....	15 45	— 15 81	15 57	— 15 81	15 57	— 15 81	15 57	— 15 81
Kansas export.....	15 45	— 15 81	15 57	— 15 81	15 57	— 15 81	15 57	— 15 81
Oatmeal (per 240 lb.)—								
Canadian rolled oats.....	17 03	—	17 03	—	17 03	—	—	—
“ middle cut.....	16 30	—	16 30	—	16 30	—	—	—
“ fine cut.....	16 30	—	16 30	—	16 30	—	—	—
“ pinhead.....	16 30	—	16 30	—	16 30	—	—	—

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EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

STOCKS ON HAND AND QUALITY OF CROPS OF 1916.

Report for the month ended March 31, 1917.

The following report gives the results of inquiries as to (a) the stocks of agricultural produce remaining in farmers' hands on March 31, 1917, and (b) the proportion of the crops of 1916 that proved to be of merchantable quality.

STOCKS IN FARMERS' HANDS ON MARCH 31, 1917.

Out of the total estimated wheat production of 1916, 21 per cent, or 45,638,000 bushels, remained in farmers' hands at the end of March. In 1916, at the corresponding date, the proportion was 23 per cent, in 1915 it was 12½ per cent and in 1914 it was 16½ per cent. Of the remaining field crops, the proportions and quantities estimated to be in farmers' hands at March 31 are as follows: Oats 39 p.c., or 136,179,000 bushels; barley 26 p.c., or 10,559,000 bushels; rye 28 p.c., or 813,500 bushels; buckwheat 18 p.c., or 1,103,000 bushels; corn for husking 13 p.c., or 814,000 bushels; flax 20 p.c., or 1,413,000 bushels; potatoes 26 p.c., or 15,969,000 bushels; turnips, etc., 14 p.c., or 5,843,000 bushels; hay and clover 32 p.c., or 4,802,000 tons. For corn the quantity on hand at the end of March is smaller and for hay and clover it is larger than in any previous year on record. The stock of potatoes, viz., 15,969,000 bushels, compares with 12,960,800 bushels at March 31, 1916, both years being lower than in any previous year since the records began in 1909.

MERCHANTABLE QUALITY OF 1916 CROPS.

The returns received from crop correspondents show that of the total estimated wheat crop in 1916, viz., 220,367,000 bushels, 85 p.c., or 187,857,000 bushels, proved to be of merchantable quality. This loss of 15 p.c. is greater than in any previous year on record since 1909, and contrasts with last year's high proportion of 95 p.c. merchantable or only 5 p.c. loss. The proportions of the other crops of 1916 which proved to be of merchantable quality are as follows: Oats 89 p.c. (312,798,000 bushels out of 351,174,000 bushels); barley 84 p.c. (34,558,000 bushels out of 41,318,000 bushels); rye 92 p.c. (2,659,000 bushels out of 2,896,400 bushels); buckwheat 78 p.c. (4,606,000 bushels out of 5,976,000 bushels); corn for husking 58 p.c. (3,648,000 bushels out of 6,282,000 bushels); flaxseed 93 p.c. (6,596,000 bushels out of 7,122,300 bushels); potatoes 78 p.c. (47,814,000 bushels out of 61,128,000 bushels); turnips, etc., 75 p.c. (31,099,000 bushels out of 41,274,000 bushels) and hay and clover 90 p.c. (13,371,000 tons out of 14,799,000 tons).

Census and Statistics Office,
Ottawa, April 18, 1917.

ERNEST H. GODFREY,
Editor.

I. Produce in Farmers' Hands on March 31, 1917, and Quantities of Merchantable Quality, 1916.

Field crops.	Total production in 1916.	In farmers' hands March 31, 1917.		Yield of 1916 harvest merchantable.	
	bush.	p.c.	bush.	p.c.	bush.
Canada—					
Wheat.....	220,367,000	21	45,638,000	85	187,857,000
Oats.....	351,174,000	39	136,679,000	89	312,798,000
Barley.....	41,318,000	26	10,559,000	84	34,558,000
Rye.....	2,896,400	28	813,500	92	2,659,000
Buckwheat.....	5,976,000	18	1,103,000	78	4,606,000
Corn for husking.....	6,282,000	13	814,000	58	3,648,000
Flaxseed.....	7,122,300	20	1,413,000	93	6,596,000
Potatoes.....	61,128,000	26	15,969,000	78	47,814,000
Turnips, etc.....	41,274,000	14	5,843,000	75	31,099,000
	tons.		tons.		tons.
Hay and clover.....	14,799,000	32	4,802,000	90	13,371,000
P. E. Island—	bush.		bush.		bush.
Wheat.....	578,000	28	162,000	86	497,000
Oats.....	7,413,000	38	2,817,000	94	6,968,000
Barley.....	105,000	25	26,000	93	98,000
Buckwheat.....	68,000	21	14,000	87	59,000
Potatoes.....	6,386,000	29	1,852,000	81	5,173,000
Turnips, etc.....	3,816,000	15	572,000	84	3,205,000
	tons.		tons.		tons.
Hay and clover.....	338,000	27	91,000	93	314,000
Nova Scotia—	bush.		bush.		bush.
Wheat.....	261,000	19	50,000	87	227,000
Oats.....	4,031,000	23	927,000	89	3,588,000
Barley.....	123,000	17	21,000	88	108,000
Rye.....	5,400	10	500	94	5,000
Buckwheat.....	245,000	14	34,000	83	203,000
Potatoes.....	6,935,000	24	1,664,000	82	5,687,000
Turnips, etc.....	3,636,000	13	473,000	79	2,872,000
	tons.		tons.		tons.
Hay and clover.....	995,000	26	259,000	90	896,000
New Brunswick—	bush.		bush.		bush.
Wheat.....	242,000	21	51,000	86	208,000
Oats.....	6,039,000	30	1,812,000	89	5,375,000
Barley.....	45,000	19	9,000	85	38,000
Buckwheat.....	1,206,000	21	253,000	83	1,001,000
Potatoes.....	7,488,000	24	1,797,000	81	6,065,000
Turnips, etc.....	3,165,000	15	475,000	86	2,722,000
	tons.		tons.		tons.
Hay and clover.....	850,000	29	247,000	85	723,000
Quebec—	bush.		bush.		bush.
Wheat.....	960,000	18	173,000	83	797,000
Oats.....	24,411,000	27	6,591,000	81	19,773,000
Barley.....	1,456,000	19	277,000	85	1,238,000
Rye.....	118,000	20	24,000	80	94,000
Buckwheat.....	1,919,000	18	345,000	79	1,516,000
Corn for husking.....	322,000	12	39,000	78	251,000
Flaxseed.....	5,300	18	1,000	79	4,000
Potatoes.....	14,672,000	23	3,375,000	73	10,711,000
Turnips, etc.....	2,650,000	12	318,000	85	2,253,000
	tons.		tons.		tons.
Hay and clover.....	5,224,000	39	2,037,000	89	4,649,000

I. Produce in Farmers' Hands on March 31, 1917, and Quantities of Merchantable Quality, 1916—concluded.

Field crops.	Total production in 1916.	In farmers' hands March 31, 1917.		Yield of 1916 harvest merchantable.	
	bush.	p.c.	bush.	p.c.	bush.
Ontario—					
Wheat.....	17,931,000	17	3,048,000	78	13,986,000
Oats.....	50,771,000	28	14,216,000	75	38,078,000
Barley.....	7,498,000	19	1,425,000	79	5,923,000
Rye.....	1,208,000	16	193,000	88	1,063,000
Buckwheat.....	2,538,000	18	457,000	72	1,827,000
Corn for husking.....	5,960,000	13	775,000	57	3,397,000
Flaxseed.....	42,000	8	34,000	64	27,000
Potatoes.....	8,113,000	19	1,541,000	66	5,355,000
Turnips, etc.....	20,467,000 tons.	13	2,661,000 tons.	67	13,713,000 tons.
Hay and clover.....	6,118,000	31	1,897,000	92	5,629,000
Manitoba—					
Wheat.....	bush. 27,714,000	16	bush. 4,434,000	85	bush. 23,557,000
Oats.....	41,625,000	39	16,234,000	90	37,463,000
Barley.....	13,815,000	22	3,039,000	83	11,466,000
Rye.....	560,000	39	218,000	99	554,000
Flaxseed.....	237,000	15	36,000	96	228,000
Potatoes.....	4,760,000	35	1,696,000	87	4,141,000
Turnips, etc.....	1,297,000 tons.	8	104,000 tons.	86	1,115,000 tons.
Hay and clover.....	316,000	33	104,000	93	294,000
Saskatchewan—					
Wheat.....	bush. 123,448,000	21	bush. 25,924,000	90	bush. 111,103,000
Oats.....	135,971,000	45	61,187,000	94	127,813,000
Barley.....	10,062,000	33	3,320,000	92	9,257,000
Rye.....	482,000	48	232,000	98	472,000
Flaxseed.....	5,724,000	18	1,030,000	93	5,323,000
Potatoes.....	5,280,000	37	1,954,000	87	4,594,000
Turnips, etc.....	3,245,000 tons.	24	779,000 tons.	83	2,693,000 tons.
Hay and clover.....	148,000	28	41,000	94	139,000
Alberta—					
Wheat.....	bush. 48,738,000	24	bush. 11,697,000	76	bush. 37,041,000
Oats.....	77,283,000	42	32,459,000	91	70,328,000
Barley.....	8,090,000	30	2,427,000	78	6,310,000
Rye.....	523,000	28	146,000	90	471,000
Flaxseed.....	1,114,000	28	312,000	91	1,014,000
Potatoes.....	4,602,000	36	1,657,000	82	3,774,000
Turnips, etc.....	1,148,000 tons.	24	276,000 tons.	83	953,000 tons.
Hay and clover.....	343,000	22	75,000	88	302,000
British Columbia—					
Wheat.....	bush. 495,000	20	bush. 99,000	89	bush. 441,000
Oats.....	3,630,000	12	436,000	94	3,412,000
Barley.....	124,000	12	15,000	97	120,000
Potatoes.....	2,892,000	16	463,000	80	2,314,000
Turnips, etc.....	1,850,000 tons.	10	185,000 tons.	85	1,573,000 tons.
Hay and clover.....	467,000	11	51,000	91	425,000

II. Produce in Farmers' Hands on March 31, 1914-1917.

Field crops.	Per cent of total yield on hand.				In farmers' hands, March 31.			
	1914.	1915.	1916.	1917.	1914.	1915.	1916.	1917.
Canada—	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Wheat.....	17	13	23	21	38,353,000	20,247,000	90,497,000	45,638,000
Oats.....	40	27	45	39	161,537,000	85,843,000	236,900,000	136,679,000
Barley.....	30	21	35	26	14,440,000	7,430,000	21,594,500	10,559,000
Rye.....	19	17	31	28	398,000	343,700	732,700	813,500
Buckwheat.....	22	21	22	18	1,860,000	1,792,500	1,747,000	1,103,000
Corn for husking.....	26	21	24	13	4,308,500	2,928,000	3,453,000	814,000
Flaxseed.....	13	10	25	20	2,295,000	740,700	2,700,300	1,413,000
Potatoes.....	35	38	21	26	27,426,000	32,310,000	12,960,800	15,969,000
Turnips, etc....	17	15	15	14	11,230,000	10,267,000	9,952,000	5,843,000
Hay and clover	25	21	23	32	2,675,000	2,173,000	2,524,000	4,802,000
P. E. Island—					bush.	bush.	bush.	bush.
Wheat.....	46	38	37	28	286,000	308,000	242,000	162,000
Oats.....	53	42	40	38	3,237,000	3,201,000	2,737,000	2,817,000
Barley.....	27	27	21	25	30,000	32,000	22,000	26,000
Buckwheat.....	43	23	25	21	28,000	19,500	19,000	14,000
Potatoes.....	40	43	24	29	2,466,000	2,903,000	857,000	1,852,000
Turnips, etc....	18	14	14	15	716,000	509,000	507,000	572,000
Hay and clover	28	31	30	27	94,000	105,000	104,000	91,000
Nova Scotia—					bush.	bush.	bush.	bush.
Wheat.....	22	19	26	19	59,000	50,000	63,000	50,000
Oats.....	29	25	31	23	956,000	880,000	1,068,000	927,000
Barley.....	25	18	23	17	33,000	24,400	30,000	21,000
Rye.....	30	13	16	10	2,000	700	700	500
Buckwheat.....	19	15	18	14	52,000	38,000	40,000	34,000
Corn for husking.....	11	—	—	—	400	—	—	—
Potatoes.....	31	34	26	24	1,675,000	2,401,000	1,230,000	1,604,000
Turnips.....	21	16	17	13	903,000	566,000	607,000	473,000
Hay and clover	25	21	26	26	222,000	206,000	254,000	259,000
New Brunswick—					bush.	bush.	bush.	bush.
Wheat.....	24	18	24	21	64,000	41,000	65,000	51,000
Oats.....	38	29	32	30	2,236,000	1,865,000	1,772,000	1,812,000
Barley.....	24	19	22	19	18,000	12,000	10,000	9,000
Buckwheat.....	23	20	22	21	410,000	332,000	284,000	253,000
Corn for husking.....	7	—	—	—	100	—	—	—
Potatoes.....	39	44	26	24	4,147,000	4,609,000	1,479,000	1,797,000
Turnips, etc....	15	13	14	15	513,000	324,000	357,000	475,000
Hay and clover	21	19	19	29	149,000	148,000	152,000	247,000
Quebec—					bush.	bush.	bush.	bush.
Wheat.....	28	23	24	18	295,000	228,000	337,000	173,000
Oats.....	37	32	33	27	14,584,000	13,630,000	13,726,000	6,591,000
Barley.....	26	23	22	19	579,000	526,000	493,000	277,000
Rye.....	23	24	20	20	36,000	37,000	29,000	24,000
Buckwheat.....	24	22	21	18	619,000	535,000	537,000	345,000
Corn for husking.....	17	16	17	12	101,000	81,000	86,000	39,000
Flaxseed.....	27	20	18	18	2,000	1,700	1,300	1,000
Potatoes.....	37	39	27	23	7,560,000	8,574,000	4,800	3,375,000
Turnips, etc....	16	14	15	12	521,000	497,000	457,000	318,000
Hay and clover	26	23	22	39	1,058,000	808,000	812,000	2,037,000

II. Produce in Farmers' Hands on March 31, 1914-1917—con.

Field crops.	Per cent of total yield on hand.				In farmers' hands, March 31.			
	1914.	1915.	1916.	1917.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Ontario—								
Wheat.....	18	17	27	17	3,592,000	2,997,000	8,120,000	3,048,000
Oats.....	31	29	39	28	32,137,000	28,846,000	47,736,000	14,216,000
Barley.....	24	23	29	19	3,469,000	3,193,000	4,494,000	1,425,000
Rye.....	14	13	23	16	214,000	178,000	355,000	193,000
Buckwheat.....	20	21	24	18	751,000	868,000	867,000	457,000
Corn for husking.....	26	21	24	13	4,207,000	2,847,000	3,367,000	775,000
Flaxseed.....	21	15	20	8	34,000	13,000	12,000	34,000
Potatoes.....	31	42	24	19	5,607,000	10,775,000	3,483,000	1,544,000
Turnips, etc....	16	15	14	13	7,013,000	7,442,000	6,321,000	2,661,000
Hay and clover	22	20	23	31	880,000	725,000	939,000	1,897,000
Manitoba—					bush.	bush.	bush.	bush.
Wheat.....	16	13	21	16	8,464,000	4,833,000	17,031,000	4,434,000
Oats.....	46	29	46	39	26,001,000	9,148,000	29,533,000	16,234,000
Barley.....	32	20	33	22	4,526,000	1,922,000	6,860,000	3,039,000
Rye.....	—	9	44	39	—	90,000	68,000	218,000
Flaxseed.....	19	6	23	15	120,000	22,000	87,000	36,000
Potatoes.....	33	24	31	35	1,680,000	774,000	956,000	1,666,000
Turnips, etc....	25	11	16	8	248,000	113,000	181,000	104,000
Hay and clover	35	23	28	33	84,000	47,000	86,000	104,000
Saskatchewan—					bush.	bush.	bush.	bush.
Wheat.....	15	11	21	21	17,979,000	7,923,000	50,328,000	25,024,000
Oats.....	47	24	48	45	53,393,000	15,126,000	31,812,000	61,187,000
Barley.....	36	15	40	33	3,722,000	743,000	4,211,000	3,320,000
Rye.....	—	7	33	48	—	4,000	25,000	232,000
Flaxseed.....	12	10	23	18	1,943,000	638,000	2,094,000	1,030,000
Potatoes.....	35	19	32	37	1,779,000	759,000	1,435,000	1,954,000
Turnips, etc....	19	14	21	24	636,000	439,000	609,000	779,000
Hay and clover	31	21	29	28	35,000	26,000	27,000	41,000
Alberta—					bush.	bush.	bush.	bush.
Wheat.....	22	13	33	24	7,572,000	3,838,000	23,215,000	11,697,000
Oats.....	40	22	56	42	28,474,000	12,802,000	57,374,000	32,459,000
Barley.....	32	20	47	30	2,044,000	970,000	5,450,000	2,427,000
Rye.....	37	9	55	28	146,000	34,000	255,000	146,000
Flaxseed.....	17	11	45	28	196,000	66,000	506,000	312,000
Potatoes.....	37	28	42	36	1,616,000	1,005,000	2,184,000	1,657,000
Turnips, etc....	11	15	35	24	138,000	182,000	472,000	276,000
Hay and clover	31	15	24	22	85,000	46,000	74,000	75,000
British Columbia					bush.	bush.	bush.	bush.
Wheat.....	11	8	18	20	42,000	29,000	96,000	99,000
Oats.....	19	11	26	12	519,000	345,000	1,142,000	436,000
Barley.....	21	8	23	12	19,000	8,000	24,500	15,000
Potatoes.....	29	19	34	16	896,000	510,000	1,332,000	463,000
Turnips, etc....	23	13	25	10	452,000	195,000	441,000	185,000
Hay and clover	22	18	19	11	68,000	62,000	76,000	51,000

III. Produce of Merchantable Quality, 1913-1916.

Field crops.	Per cent of total yield merchantable.				Yield of harvest merchantable.			
	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.
Canada—	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Wheat.....	97	94	95	85	224,810,000	150,973,000	407,036,000	187,857,000
Oats.....	95	91	92	89	382,754,000	285,991,000	484,057,000	312,798,000
Barley.....	96	88	88	84	46,185,000	32,022,000	53,659,000	34,558,000
Rye.....	91	90	88	92	1,936,000	1,815,800	2,118,500	2,659,000
Buckwheat....	82	84	83	78	6,895,000	7,279,000	6,512,000	4,606,000
Corn for husk- ing.....	79	80	78	58	13,224,000	11,100,000	11,142,000	3,648,000
Flaxseed.....	95	89	95	93	16,634,000	6,370,000	10,144,000	6,596,000
Potatoes.....	82	87	73	78	64,682,000	74,165,000	45,630,000	47,814,000
Turnips, etc....	81	87	86	75	54,087,000	60,218,000	55,266,000	31,099,000
Hay and clover	88	89	86	90	9,577,000	9,094,000	9,400,000	13,371,000
P. E. Island—					bush.	bush.	bush.	bush.
Wheat.....	88	94	90	86	551,000	758,000	589,000	497,000
Oats.....	82	96	93	94	5,024,000	7,262,000	6,382,000	6,968,000
Barley.....	86	95	92	93	96,000	113,000	99,000	98,000
Buckwheat....	85	88	81	87	55,000	75,000	61,000	59,000
Potatoes.....	69	84	63	81	4,320,000	5,689,000	2,239,000	5,173,000
Turnips, etc....	69	84	80	84	2,759,000	2,980,000	2,841,000	3,205,000
Hay and clover	91	95	92	93	311,000	319,000	322,000	314,000
Nova Scotia—					bush.	bush.	bush.	bush.
Wheat.....	87	90	86	87	232,000	235,000	212,000	227,000
Oats.....	88	93	89	89	2,903,000	3,227,000	3,088,000	3,588,000
Barley.....	90	92	86	88	120,000	127,000	110,000	108,000
Rye.....	100	96	78	94	8,000	4,800	3,500	5,000
Buckwheat....	83	84	82	83	229,000	218,000	182,000	203,000
Corn for husk- ing.....	75	-	-	-	2,000	-	-	-
Potatoes.....	82	81	65	82	4,428,000	5,778,000	3,116,000	5,687,000
Turnips, etc....	84	86	81	79	3,937,000	3,013,000	2,907,000	2,872,000
Hay and clover	93	90	89	90	812,000	881,000	854,000	896,000
New Brunswick—					bush.	bush.	bush.	bush.
Wheat.....	91	92	94	86	244,000	215,000	251,000	208,000
Oats.....	86	95	92	89	5,105,000	6,155,000	5,093,000	5,375,000
Barley.....	89	95	91	85	66,000	61,000	44,000	38,000
Buckwheat....	87	84	86	83	1,552,000	1,411,000	1,130,000	1,001,000
Corn for husk- ing.....	87	-	-	-	1,000	-	-	-
Potatoes.....	81	86	82	81	8,639,000	9,048,000	4,721,000	6,065,000
Turnips, etc....	88	83	85	86	2,933,000	2,034,000	2,226,000	2,722,000
Hay and clover	88	89	91	85	617,000	695,000	720,000	723,000
Quebec—					bush.	bush.	bush.	bush.
Wheat.....	89	92	92	83	937,000	914,000	1,292,000	797,000
Oats.....	87	92	92	81	34,069,000	38,880,000	39,035,000	19,773,000
Barley.....	90	93	92	85	2,032,000	2,101,000	2,060,000	1,238,000
Rye.....	85	81	83	80	132,000	126,000	120,000	94,000
Buckwheat....	83	84	84	79	2,113,000	2,070,000	2,137,000	1,516,000
Corn for husk- ing.....	75	83	83	78	442,000	427,000	421,000	251,000
Flaxseed.....	66	88	85	79	6,000	7,200	6,000	4,000
Potatoes.....	79	85	80	73	16,284,000	18,474,000	14,041,000	10,711,000
Turnips, etc....	86	85	87	85	2,808,000	2,914,000	2,737,000	2,253,000
Hay and clover	84	88	88	89	3,411,000	3,161,000	3,240,000	4,649,000

III. Produce of Merchantable Quality, 1913-1916—con.

Field crops.	Per cent of total yield merchantable.				Yield of harvest merchantable.			
	1913.	1914.	1915.	1916.	1913.	1914.	1915.	1916.
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Ontario—								
Wheat.....	91	88	82	78	19,688,000	15,511,000	24,916,000	13,986,000
Oats.....	93	88	86	75	97,850,000	87,850,000	105,138,000	38,078,000
Barley.....	95	89	87	79	13,906,000	12,441,000	13,334,000	5,923,000
Rye.....	90	91	87	88	1,410,000	1,220,000	1,356,000	1,063,000
Buckwheat....	80	85	81	72	2,946,000	3,505,000	2,982,000	1,827,000
Corn for husk- ing.....	79	80	77	57	12,779,000	10,673,000	10,721,000	3,397,000
Flaxseed.....	82	85	79	64	134,000	72,000	49,000	27,000
Potatoes.....	88	93	58	66	15,165,000	23,968,000	8,267,000	5,355,000
Turnips, etc....	80	89	87	67	34,918,000 tons.	43,615,000 tons.	38,401,000 tons.	13,713,000 tons.
Hay and clover	91	87	81	92	3,576,000	3,147,000	3,289,000	5,629,000
Manitoba—					bush.	bush.	bush.	bush.
Wheat.....	97	95	95	85	51,550,000	36,733,000	75,796,000	23,557,000
Oats.....	97	91	93	90	55,085,000	28,983,000	59,743,000	37,463,000
Barley.....	96	85	82	83	13,674,000	8,393,000	16,990,000	11,466,000
Rye.....	—	80	99	99	—	80,000	154,000	554,000
Flaxseed.....	96	88	81	96	609,000	296,000	304,000	228,000
Potatoes.....	90	85	75	87	4,631,000	2,695,000	2,325,000	4,141,000
Turnips, etc....	88	83	90	86	885,000 tons.	870,000 tons.	1,043,000 tons.	1,115,000 tons.
Hay and clover	93	93	90	93	222,000	187,000	277,000	294,000
Saskatchewan—					bush.	bush.	bush.	bush.
Wheat.....	98	94	98	90	118,642,000	69,364,000	238,319,000	111,103,000
Oats.....	98	92	97	94	111,465,000	56,679,000	166,148,000	127,813,000
Barley.....	97	86	96	92	10,142,000	4,205,000	10,090,000	9,257,000
Rye.....	—	88	98	98	—	47,000	74,000	472,000
Flaxseed.....	95	89	97	93	14,794,000	5,441,000	8,765,000	5,323,000
Potatoes.....	91	75	83	87	4,693,000	3,065,000	3,659,000	4,594,000
Turnips, etc....	92	75	88	83	3,031,000 tons.	2,408,000 tons.	2,573,000 tons.	2,693,000 tons.
Hay and clover	91	85	96	94	104,000	104,000	90,000	139,000
Alberta—					bush.	bush.	bush.	bush.
Wheat.....	95	93	92	76	32,636,000	26,718,000	65,162,000	37,041,000
Oats.....	96	95	93	91	68,716,000	53,948,000	95,226,000	70,328,000
Barley.....	96	93	94	78	6,065,000	4,490,000	10,825,000	6,340,000
Rye.....	97	94	89	90	386,000	338,000	411,000	471,000
Flaxseed.....	94	90	91	91	1,091,000	554,000	1,020,000	1,014,000
Potatoes.....	93	90	81	82	4,026,000	3,271,000	4,164,000	3,774,000
Turnips, etc....	88	88	82	83	1,081,000 tons.	1,096,000 tons.	1,117,000 tons.	953,000 tons.
Hay and clover	92	89	81	88	254,000	272,000	253,000	302,000
British Columbia—					bush.	bush.	bush.	bush.
Wheat.....	86	93	95	89	330,000	345,000	499,000	441,000
Oats.....	94	95	96	94	2,537,000	3,007,000	4,204,000	3,412,000
Barley.....	96	94	92	97	84,000	91,000	98,000	120,000
Potatoes.....	80	81	78	80	2,496,000	2,177,000	3,098,000	2,314,000
Turnips, etc....	87	85	82	85	1,735,000 tons.	1,288,000 tons.	1,421,000 tons.	1,573,000 tons.
Hay and clover	88	93	91	91	270,000	328,000	355,000	425,000

STOCKS OF GRAIN IN CANADA ON MARCH 31, 1917.

In 1915 and 1916 inquiries were instituted by the Census and Statistics Office, in co-operation with the Grain Inspection Division of the Department of Trade and Commerce, for the purpose of determining as nearly as possible the total quantity of wheat in Canada at a given time, the date being fixed for February 8 in 1915 and for March 31 in 1916.¹ This year a similar inquiry was carried out for March 31, 1917, but was extended to include oats, barley and flax as well as wheat. The inquiry was conducted by means of schedules issued by the Census and Statistics Office to the managers of elevator, flour mill and railway companies requesting the actual quantities of wheat, wheat flour, oats, oatmeal, rolled oats, barley, barley meal, flax and linseed meal on hand or in transit on the morning of Saturday, March 31, 1917. The quantities of grain in the terminal elevators at Fort William and Port Arthur and in the interior terminal elevators of the Dominion Government at Calgary, Moosejaw, Saskatoon and Vancouver and of the Canadian Pacific Railway at Transcona, were furnished by the Board of Grain Commissioners for Canada. The grain in the eastern public elevators was ascertained, partly from schedules returned direct and partly from the returns published by the Grain Inspection Division of the Department of Trade and Commerce in the Weekly Bulletin of April 9, 1917. For the quantity of grain estimated to be in farmers' hands on March 31, use was made of the replies to the annual schedule addressed to the crop-reporting correspondents of the Census and Statistics Office, as compiled in Table I on page 76 of this issue.

In the following statement (Table I) the results are given of the compilation of the returns received for wheat, and wheat flour expressed as wheat, as compared with the results of the similar inquiry of March 31, 1916:

I. Stocks of Wheat in Canada on March 31, 1916 and 1917.

Wheat in	March 31, 1916.	March 31, 1917.
	bush.	bush.
Terminal elevators.....	25,528,440	22,827,186
Hospital elevators.....	534,876	1,614,613
Winter storage in vessels.....	2,447,386	89,245
Interior terminal elevators of the Dominion Government—		
Calgary.....	629,956	948,087
Moosejaw.....	2,820,523	1,843,987
Saskatoon.....	1,632,692	1,632,915
Vancouver.....	—	3,237
Interior terminal elevator of the C.P.R. at Transcona.....	633,327	740,016
Public elevators.....	3,326,417	2,516,461
Country elevators.....	43,996,131	30,549,209
Flour mills.....	5,277,196	4,884,825
Transit by rail.....	23,369,809	12,862,356
Farmers' hands.....	86,854,000	45,638,000
Totals.....	197,050,753	126,150,137

¹ The reports on these inquiries were published in the Census and Statistics Monthly of February, 1915, (Vol. 8, No. 78, p. 56) and April, 1916, (Vol. 9, No. 92, p. 112).

Adopting the simpler classification of elevators, flour mills, in transit by rail and in farmers' hands, the results of the inquiry for each of the three years 1915, 1916 and 1917 in respect of wheat are as shown in Table II.

II. Stocks of Wheat in Canada on February 8, 1915, and on March 31, 1916 and 1917.

Description.	February 8, 1915.	March 31, 1916.	March 31, 1917.
	bush.	bush.	bush.
Elevators.....	30,843,877	81,549,748	62,764,956
Flour mills.....	6,160,840	5,277,196	4,884,825
In transit by rail.....	12,571,876	23,369,809	12,862,356
In farmers' hands.....	29,554,000	86,854,000	45,638,000
Totals.....	79,130,593	197,050,753	126,150,137

For oats, barley and flax, including quantities of oatmeal, rolled oats, barley meal and linseed meal, expressed as grain, the quantities returned as in Canada on March 31, 1917, were as in Table III.

III. Stocks of Oats, Barley and Flax in Canada on March 31, 1917.

Grain in	Oats.	Barley.	Flax.
	bush.	bush.	bush.
Terminal elevators.....	10,092,265	1,281,042	1,601,705
Hospital elevators.....	454,942	19,174	5,500
Winter storage in vessels.....	101,331	—	—
Interior terminal elevators of the Dominion Government—			
Calgary.....	1,254,259	114,727	13,649
Moosejaw.....	705,937	22,834	101,965
Saskatoon.....	569,343	29,487	121,812
Vancouver.....	56,719	—	—
Interior terminal elevator of the C.P.R. at Transcona	108,426	—	—
Public elevators.....	5,335,850	197,062	—
Country elevators.....	17,357,846	1,682,570	2,024,195
Flour mills.....	1,104,931	85,928	62,444
Transit by rail.....	10,279,581	879,460	318,004
Farmers' hands.....	136,679,000	10,559,000	1,413,000
Totals.....	184,099,930	14,871,284	5,662,274
RECAPITULATION.			
Elevators.....	36,036,418	3,346,896	3,868,826
Flour mills.....	1,104,931	85,928	62,444
In transit by rail.....	10,279,581	879,460	318,004
In farmers' hands.....	136,679,000	10,559,000	1,413,000
Totals.....	184,099,930	14,871,284	5,662,274

The total number of elevators licensed in Canada for the year 1916-17 is 3,360, and the replies received this year represent a total of 2,950 elevators. Schedules were also mailed to upwards of 550 flour mills, and replies were received from 300, or 50 more than last year. All the large flour mills replied, and the aggregate represented by the smaller mills who failed to do so would not be very large.

The compilation of the returns actually received from elevators, flour mills, railway companies and crop correspondents shows that on March 31, 1917, the quantity in Canada of wheat, and wheat flour expressed as wheat, was in round figures 126 million bushels, as compared with 197 million bushels on March 31, 1916, and 79 million bushels on February 8, 1915. The total for 1917 includes 67½ million bushels in the elevators, flour mills and in winter storage in vessels, 45,638,000 bushels in farmers' hands and 12,862,000 bushels in transit by rail. Of oats, including oat products expressed as oats, the total quantity in Canada on March 31, 1917, was about 184 million bushels, comprising 37 million bushels in elevators and flour mills, 137 million bushels in farmers' hands and 10 million bushels in transit by rail. Of barley the total quantity in Canada on March 31, 1917, was about 14,871,000 bushels, of which 3,433,000 bushels were in elevators, etc., 10½ million bushels in farmers' hands and 879,000 bushels in transit by rail. Of flaxseed the total quantity in Canada on March 31, 1917, was 5,662,000 bushels, including 3,931,000 bushels in elevators and mills, 318,000 bushels in transit and 1,413,000 bushels in farmers' hands.

EXPORTABLE SURPLUS OF WHEAT AND OATS.

The inquiry into the stocks of wheat and oats in Canada, the results of which are given in the preceding article provide data for estimates of the quantities available for export during the remainder of the current crop year ending on August 31 next, thus bringing up to date for wheat previous calculations published in the Census and Statistics Monthly of October, 1916. (Vol. 9, No. 98, p. 272) and January, 1917 (Vol. 10, No. 101, p. 15).

With regard to wheat, the home requirements for the five months ending August 31 next may be estimated at 47¼ million bushels, consisting of 26¼ million bushels for the seeding this spring of, say, 15 million acres and 21 million bushels for food. Deducting these quantities from the stocks in Canada on March 31 we get 79¾ million bushels, or, say, 80 million bushels as approximately the surplus of wheat available for export from April 1 to August 31, 1917. The actual exports of wheat, and wheat flour expressed as wheat, during the seven months ended March 31, 1917, were 93,219,202 bushels, and the imports during the same period were 171,240 bushels, making the net exports to be 93,047,962 bushels. Consequently, the total exports of wheat from Canada for the crop year ended August 31, 1917, may now be estimated at about 173 million bushels, as compared with 289,794,162 bushels in 1916 and 84,821,922 bushels in 1915.

As to oats there are no definite data available to show the quantities annually required for home use, oats being used mainly for the feeding of live stock and only to a comparatively small extent for human food. The seeding requirements for oats may however be placed at 30 million bushels for, say, 12 million acres at the average rate of $2\frac{1}{2}$ bushels per acre. Deducting this quantity from the stocks in farmers' hands at March 31, 1917, viz. 136,679,000 bushels, we have a remainder of 106,679,000 bushels. The actual exports of oats and of oatmeal expressed as oats, during the seven months ended March 31, 1917, were 26,852,150 bushels, and the imports during the same period were 1,135,970 bushels. For the fiscal year ended March 31, 1917, the exports of oats were 67,277,852 bushels, as compared with 27,745,452 bushels for the year 1915-16. The previous largest export of oats was for the year 1913-14, viz., 36,111,934. For the crop year ended August 31, 1916, the exports of oats, including meal, were 63,508,855 bushels. Upon the assumption that the quantity in elevators, in flour mills and in transit, viz., 47,420,930 bushels (see Table III on page 83) is available for purposes of human food in Canada and for export, and that a proportion of the quantity in farmers' hands (less allowance for seed), viz., 106,679,000 bushels, can be devoted to like purposes, it may not unreasonably be estimated that a further quantity of from 35 to 40 million bushels of oats will be available for export during the five months ending August 31 next.

REPORTS OF CROP CORRESPONDENTS.

Month ended March 31, 1917.

Maritime Provinces.—Live stock are everywhere in good condition, the shortage in grain and mill feed being largely balanced by the abundance of good hay. Exceptionally high prices prevail for all classes of farm animals except horses, for which there is little demand. Prices for horses range from \$70 to \$200, milch cows \$45 to \$125, beef cattle \$7 to \$10 per cwt. live weight, sheep \$8 to \$15 and hogs dressed \$15 to \$18.50 per cwt. Mill feed is very dear, and from Nova Scotia and New Brunswick come complaints that it is sometimes unobtainable owing to freight congestion. Stocks of potatoes have been reduced through rot.

Quebec.—Live stock are reported to be in good condition and in great demand. Horses are a little thin, on account of shortage of oats, and there are a few cases of strangles and distemper. There is a great demand for beef cattle. All classes are selling well. The price of horses varies from \$90 to \$300, milch cows, \$60 to \$100, other cattle \$30 to \$100, according to weight. Sheep are scarce, and their condition is not so good as is desired. Swine are thin and scarce, bringing high prices, viz., \$20 per cwt. and \$10 for young pork of 4 weeks. A large percentage of the farmers are obliged to buy seed, and potatoes are very scarce. There is plenty of hay for sale, but transportation is very difficult. The prospects are bright for a good cheese season, and cheese makers are offering big prices for milk. The prices for butter are high. There is a great shortage of

labour. The agricultural outlook is promising. More attention is being paid to the raising of pure bred cattle.

Ontario.—Farm stock have come through the winter in healthy condition, though some reports speak of them as being poorer in flesh than usual as a result of the smaller amount of feed grain and silage available this year. The market for horses has been dull, but improvement is looked for, especially in the case of heavy work horses. Prices range from \$50 to \$250. Milch cows are in great demand at remarkably high prices owing to the excellent prices of dairy produce. Quotations range from \$50 for poorer animals to as high as \$150 for the best grades. Beef cattle are selling at from \$50 to \$100 according to age and condition, sheep at \$10 to \$25, hogs as high as \$20 to \$22 per cwt. dressed. The latter have decreased in number and prices are likely to go higher. Much seed will have to be purchased, especially for oats and potatoes.

Manitoba.—The winter was a severe one, but live stock have come through in fair condition. Some reports state that the rusted straw does not appear to contain nutriment equal to unrusted straw, and as a result, though larger amounts were consumed, animals were somewhat poorer in flesh. The horse market, which has been dull, shows signs of improvement with the spring work coming on. Prices are quoted from \$50 to \$300. Prices for other farm animals are said to be unprecedented. Milch cows are selling from \$40 to \$110, beef cattle \$7 to \$9.50 per cwt. live weight and sheep \$8 to \$20. Swine, which are said to be fewer in number, are selling from \$10 to \$15 per cwt. live weight. Much seed is being imported from further west as most of the home grown wheat was rusted. Labourers are asking wages which farmers cannot afford to pay. This, combined with the high cost of seed, may result in reduced acreages.

Saskatchewan.—Supplies of hay and green feed have proved sufficient, and stock are in good condition. Some few losses amongst horses have been reported, resulting from distemper and swamp fever. The market for work horses is very fair, prices ranging from \$125 to \$300. Milch cows are in good demand at the high prices of from \$65 to \$125 and the supply is inadequate. Beef cattle find a ready market at \$6 to \$9 per cwt. live weight, and sheep are quoted at \$10 to \$30. Swine are everywhere fewer in number owing to sales at the high prices prevailing and the increasing cost of grain feed. Hogs are bringing from \$12 to \$14.50 per cwt. live weight. Complaints are made from various districts that elevators are full and cars are unprocurable. Some reports from Saskatchewan north speak of potatoes being frozen in cellars and pits. Seed of good germinating power is none too plentiful. The only help offering is at prohibitive prices.

Alberta.—The winter was long and severe, but rough feed was plentiful; so that animals have come through in fair condition. Horses and cattle which ran on the ranges are said to be somewhat thin, as heavy snows made foraging difficult. In a few cases, distemper and influenza have left horses in poor shape. The market for heavy work horses is good, the demand is small for lighter types. Prices

range from \$65 for poor range stock to \$350 for the best class of animals. Cows are selling from \$75 to \$125 and cattle at \$7 to \$9 per cwt. live weight, with a limited supply of both. Sheep are bringing from \$10 to \$20. Swine have decreased in numbers owing to the high prices of feed grain, even \$13 to \$15 per cwt. live weight not inducing farmers to raise them. From this province too come reports of full elevators and no cars, leaving much grain in the hands of farmers who often have not proper storage accommodation. Fears are expressed that much grain may be lost unless relief comes.

British Columbia.—All stock are in good condition, and are commanding high prices. Horses are selling from \$45 to \$250 according to class and condition; cows at from \$75 to \$150, beef cattle at as high as 9 cents per lb. live weight; and hogs at from \$18 to \$20 per cwt. dressed. The long cold winter has depleted the supply of fodder, and hay and seed grain are being imported. Mr. S. Le C. Grant, our crop correspondent at Bella Coola, sends particulars of his work in operating for the provincial Department of Agriculture during the last three seasons an experimental plot of 5 acres. Many useful tests have been carried on with various grains, grasses, roots, potatoes and vegetables, and results of value to the development of farming in the district have been obtained.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—There has been a good deal of cold weather during March, and some of the heaviest snowfalls of the winter have been experienced. The highest temperature recorded during the month is 50.4, the lowest -3.0 and the mean 24.13. For the corresponding period in 1916 the extremes were 52, -17.2 and the mean temperature 17.36. The precipitation totals 3.79 inches, comprising 0.59 of an inch of rain and 32 inches of snow, while a year ago the amount was 2.67 inches, made up of 26.7 inches of snow. The bright sunshine recorded averages 5.6 hours a day, compared with 6.33 hours in March, 1916.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports: "March has been very fine, with seventeen days of westerly wind, which is very unusual. The only snow-storm of the month was on the 6th, when nine inches fell, blocking all traffic for the day, on account of the heavy gale that accompanied it. There have been three other light flurries of snow, and rain fell on six different days. On seven days no sunshine has been recorded. Temperatures were moderate in the first half of the month, and above the average toward the close. A heavy sheet of ice lay over the whole surface of the country, making excellent roads for hauling until the 24th; but a rain on the evening of that day broke up the roads, except on the ice, where travelling is still good on the 31st. The fat stock at the Station were disposed of at auction on the 15th, bringing good prices. The steers sold at from 9 $\frac{3}{4}$ cents to 11 $\frac{3}{4}$ cents, with an average of \$10.55 per cwt., showing an average profit over first cost and cost of

feed of \$34.70 each. The lambs sold at 14 $\frac{1}{4}$ cents per lb., and returned an average profit over the first cost and cost of feeding of \$3.22 each. The sale was largely attended by butchers and feeders, and information regarding methods and feeds was posted up before each pen. The grass and clover in the meadows have come out from under the sheet of ice very much better than was expected."

Kentville, N.S.—W. S. Blair, Superintendent, reports: "The weather during March has been ideal, with a mean temperature of 28.52, as compared with 22.09 a year ago, and 26.81 degrees in 1915. It will be seen, therefore, that the temperature averages considerably less than the corresponding time during the two previous years. The snowfall amounts to only 14.5 inches, 14 inches of which fell on the 5th and 6th. There was a rainfall on the 9th, and the snow quickly disappeared. Except for three days, there has been no sleighing during the month. The March snowfall totalled 40.5 inches in 1916, 9.5 inches in 1915 and 6 inches in 1914. Rain has fallen on five days during the month and amounts to 1.56 inch, compared with only a trace in 1916, none in 1915 and 3.13 inches in 1914. There have been only four days on which the sun did not shine. The sunshine recorded for the month is 166.3 hours, as compared with 120.4 hours a year ago, 103.1 hours in 1915 and 118.2 hours in 1914."

Nappan, N.S.—W. W. Baird, Superintendent, reports: "The weather during the past month has been exceptional for March. Quite a heavys now, accompanied by a strong wind, began during the afternoon of the 5th and continued until the evening of the 6th, resulting in drifting the roads quite badly. Most of this snow, however, disappeared towards the end of that week. The remainder of the month has been mostly fine, but a few light snow flurries and rainfalls have been recorded. The total precipitation is 2.10 inches, while the number of hours of sunshine recorded is 166.30. In the Maritime Provinces, feed for stock has been very scarce, owing to the railroad blockade. Work carried on at this Farm during the month has included composting manure, hauling straw for bedding and hay from the marsh, cleaning and picking over seed grain, spraying, and chopping poles for fencing. The price of eggs dropped towards the last of the month, and they are now retailing for about 40 cents a dozen. All live stock at this Station is in good condition."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports: "March has been seasonable with a little more than the average sunshine, some pretty cold snaps, but nearly every day ranging between 30 and 40 degrees. There has been considerable high wind, but only two days on which snow fell and four days with light rains. The mean temperature of 24.8 is slightly below the 42-year average of 26 degrees for the month. The precipitation totals only 2.27 inches against a 42-year average of 4.1 inches. Snow was deep in the woods and deeply drifted on the roads; so that teaming operations have been more or less difficult: nevertheless, both farm and lumber operations have been well advanced. Live stock has come through fairly well. There has been an abundance of cheap hay, but turnips

have been mostly sold for export and cattle have missed them. Grain feeds have been very high and scarce owing to the freight blockade. At the end of the month, the fields are well covered with snow, and, as there is but little frost in the ground, and thus far no ice over it, grasses and clovers should have wintered well. Prices for all farm and live stock produce have been high. Thirty steers were sold from the Station farm on March 17th at $9\frac{1}{2}$ cents per lb., live weight, for the local market, and all kinds of live stock, except horses, have been in active demand at high prices."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports: "March has been a seasonable month, rather mild, with neither very high nor very low temperatures, the highest being 44.6, the lowest 8.2 and the mean 24.6 degrees, compared with 45.4 and —9.2 and a mean of 13.2 degrees for March, 1916. The precipitation totals 3.88 inches, consisting of equal parts of snow and rain. The bright sunshine averages 4.6 hours a day, against 6.8 hours a day for this month last year. Good sleighing continued until the 24th and, although the mild spell after the 15th had caused the snow to settle gradually, there was no decided thaw before the 24th, when a good rain and a very high wind from the south almost entirely melted the snow in three days without any freshet, since all ditches and brooks had been opened. There has been considerable hauling of pulp-wood, lumber and fuel, for the roads during the month have been the best of the season. All classes of live stock have wintered well and are in very good condition. The crop of lambs at the Station this spring so far numbers thirty-two from eighteen ewes."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports: "March has been warmer, wetter and duller than the average of the corresponding month for the past five years, the figures being, respectively, 22.9 and 19.73 degrees for the mean temperature, 4.17 and 2.33 inches for the precipitation, and 125.3 and 141.5 hours for the sunshine. There is still plenty of snow, though it is soft and will go away fast when the sun shines strongly on it. The prices of everything which the farmer has to sell, with the exception of hay, are far above normal, but feed for stock, labour, and all that is required by the tiller of the soil, have gone up, so that profits are not much greater than they used to be. The main work at the Station has been the care of live stock and poultry, the preparation of seeds for sale and distribution and attending to the roads. The demand for Banner oats has been very large, so much so that a man has been occupied all winter in cleaning and grading."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The mean temperature for March is 23.71, the maximum 53, and the minimum —20, compared with a mean of 15.4, maximum of 58 and minimum of —22 for the same period last year. The bright sunshine recorded aggregates 153.4 hours, compared with 197.3 hours in 1916; and the precipitation amounts to 1.60 inch. The long spell of cold weather, which has continued throughout the winter, ended on the 24th, and the snow, which was comparatively light, disappeared very rapidly, so that wagons were resumed for the first

time on the 26th. This spring the snow has melted away with the sun without any overflow of the river, and there is every prospect of the young clover and grasses having come through the winter in good condition. With very little frost in the ground, early seeding is expected. This year farmers seem to be taking more pains than usual in connection with preparatory work for spring, such as selecting and cleaning seed, attending to implements, etc."

Brandon, Man.—W. C. McKillican, Superintendent, reports: "March has been a month of pleasant, moderate weather. Since the 4th, there has been no severe cold, nor any very rapid thaw. The snow has melted gradually, and by the end of the month it has mostly gone, except in places where there had been big drifts. The last few days have been quite windy. Work on the Experimental Farm has been the care of stock and the preparation of seed."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports: "The weather during March has been clear and moderately cold, with very little snow or wind. Roads remained good up to the 26th, when they cut up considerably where much teaming was being done. Very little grain has been moved during the month, owing to lack of space in elevators. Prospects at present are for a late spring. The work on the Experimental Farm has included the cleaning and picking of seed grain, caring for stock and poultry, sowing seeds in hot-house and preparing for spring operations."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports: "The snowfall during the winter has been remarkably light, the heaviest storm of the season occurring on March 30th, when three inches fell. At the end of the month, there is still an average of about a foot of snow on the ground and sleighing is good. The prospects are that the season will be late. The feeding steers are continuing to make satisfactory gains, although not so good as in former years. The quality of the feed, especially that of the meal, is poorer this season than in previous years. The labour question is creating some concern in the district, although at the Station it seems to be getting solved satisfactorily."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "Favourable weather conditions have prevailed during March. The precipitation has been unusually light, with less wind than is usually experienced during this period. The total amount of snowfall recorded during the four winter months is 12.8 inches. At the end of March, two-thirds of the snow has melted, and wheeled vehicles are in use. Farmers are busy preparing for spring work. A number have found it necessary to change all or part of their seed grain, owing to poor germination. All of the surplus seed grain at the Station has been sold to farmers in different parts of North-western Saskatchewan. The supply of labour appears sufficient for immediate requirements. Wages are high, however, men receiving from \$50 to \$60 per month, with board."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports: "March came in cold and has continued rough and stormy, there being more snow on the ground at the close of the month than has

been the case for ten years past. Only a few of the higher fields are free from snow, and present indications are that seeding operations will be delayed beyond the usual dates. Prices for hogs and sheep have gained in strength during the month, but the demand for cattle, even with a somewhat limited supply in sight, is not so active as during the closing weeks of February. It is expected, however, that the shortage of grain-fed cattle will force the market to higher levels by the first weeks of May. The unusually severe weather which has prevailed during the past winter is responsible for the feed shortage in some quarters, and, while few actual losses are expected, the result will be that stock will go on the pastures thin."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports: "The weather during March has been much colder than usual, the mean temperature being 26·3, as compared with 31·6 for the corresponding period last year. There are as yet, that is up to the 31st, no signs of spring. There has been very little snow and the precipitation amounts to only 0·10 of an inch. Range stock, particularly sheep, are reported to be in somewhat poorer condition than usual. The demand for hay has continued all through the month."

Invermere, B.C.—G. E. Parham, Superintendent, reports: "Temperatures have been exceptionally low during March, and as yet no work has been possible on the land, the country being covered with snow. This is likely to be beneficial for the range cattle, as, when spring weather sets in early in March, it is generally succeeded by a dry period before vegetation makes any real start. This year the snow is remaining so late, that when it goes the spring herbage will be nourished by its moisture. At the Station, very satisfactory results have been obtained both as regards poultry and apiculture. The egg yield has been constant, and the experiments in wintering bees have been most successful. Bees wintered in the open with double cases, in the cellar, and buried in a trench, have apparently come out of winter quarters in good condition."

Summerland, B.C.—R. H. Helmer, Superintendent, reports: "The month has been the coldest March on record for the last ten years. Frost is still in the ground in many places on the 31st. At the Station, working the land was only started during the last week of March. Farmers in the district are complaining of the long feeding season, and are getting short of hay, as there is no feed on the ranges. Pruning is the general order of the month and is now nearly completed in the district. Apple trees are showing up well for fruit this year. The roads at this Station have been improved by grading and graveling."

Agassiz, B.C.—W. H. Hicks, in charge, reports: "March has been another wet, cool month, although it has been considerably drier than in the corresponding period of 1916, which was the wettest month in the history of the Farm, with 13·78 inches of precipitation, as compared with 5·6 inches this year. The sunshine amounts to about double that recorded in the same month last year. Very little work has been done on the land in this district. The hay land on

the Farm has been rolled to make the soil firm around the clover roots, which had heaved a little with the frost. Some ploughing and a very little seeding have been done by a number of farmers in the neighbourhood. There is a big demand in this district for all classes of live stock. Dairy cattle and swine are very high in price, especially good animals. Pure-bred swine are almost unobtainable. A considerable number of dairy cattle and horses have been shipped East from this point. The live stock on the Farm is all in good condition. The lamb crop is especially pleasing. In the poultry department, about 400 chicks have hatched, all of which are doing well."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports: "The weather conditions during March have been such that little land tillage other than ploughing has been accomplished. The soil remaining damp and cold, no growth of any consequence has been made by the common crops in the district. All autumn-sown crops have wintered well. At the Experimental Station, the plots of standard autumn wheats, of the spring wheat varieties that were sown in the autumn and of the winter varieties of barley, oats, peas and rye show much variation as to their ability to grow during the winter season. One variety of wheat, the Huron, made twelve inches of growth during the winter period. Potatoes, hay, oats and peas have sold at high prices during the month, and but small quantities of these products remain in the hands of the farmers. Live stock is in very fair condition. Poultry products were in good demand during the entire month, with prices for dressed poultry high and eggs at 28 to 40 cents per dozen, wholesale. Farm labour is very scarce and the wages demanded are high."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of March are given in the following table:—

Meteorological Record for March, 1917.

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Lowest.	Mean.		Possible.	Actual.
Ottawa, Ont.	50.4	— 3.0	24.13	3.79	370	173.8
Charlottetown, P.E.I.	51.0	4.0	26.60	2.59	370	178.2
Kentville, N.S.	57.0	9.0	28.53	3.01	370	166.3
Nappan, N.S.	56.0	— 7.0	27.38	2.10	370	166.3
Fredericton, N.B.	47.5	— 5.0	24.80	2.27	370	159.8
Ste. Anne de la Pocatière, Que.	44.6	8.2	24.60	3.88	370	143.4
Cap Rouge, Que.	51.0	— 6.0	22.90	4.17	368	125.3
Lennoxville, Que.	53.0	—20.0	23.71	1.60	370	153.4
Brandon, Man.	42.1	—27.0	20.30	0.10	370	123.5
Indian Head, Sask.	36.0	—30.0	14.97	0.42	370	111.8
Rosthern, Sask.	36.3	—34.0	14.06	0.35	369	148.4
Scott, Sask.	37.8	—31.2	13.80	0.03	367	194.3
Lacombe, Alberta.	46.0	—14.9	20.30	0.33	370	184.1
Lethbridge, Alberta.	59.0	—17.0	26.30	0.10	370	133.5
Invermere, B.C.	42.0	— 8.0	22.40	0.18	369	145.7
Summerland, B.C.	48.0	9.0	33.17	0.39	370	143.8
Agassiz, B.C.	55.0	12.0	39.22	5.60	370	103.3
Sidney, Vancouver I., B.C.	49.0	24.0	38.50	2.72	370	131.1

Ottawa, March 16, 1917.

J. H. GRINDALE,
Director, Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (April 1) that the unfavourable weather during March hindered operations in the field, although a good deal was done in preparation of the land for crops. Some spring grain was got in, but not much, and here and there a commencement was made with planting potatoes. The early sown wheat still continues satisfactory as a rule, but the late sown is a thin and poor plant. The area sown with wheat is estimated to be about 8 per cent below that of last year. The crop is very backward, and some damage seems to have been done by the March frosts. Winter oats and beans also suffered considerably. Seeds are very backward, and a good deal of damage was done by the frosts. There is generally a good plant, however, and in many districts it is expected that they will show a good recovery with warmer weather. The fall of lambs appears to be generally quite up to the average, but the very cold weather has been all against the lambs, and considerable mortality is reported among both ewes and lambs, particularly in the north. Ewes are mostly in poor condition, and, again more especially in the north, they are reported to be short of milk. The supply of labour is very deficient, but the situation has been greatly relieved in nearly all parts of the country by the temporary release of men from the Army for farm work.

India.—The second wheat forecast of the Indian Department of Statistics (March 12) states that the total areas sown to wheat for the year 1916-17 amount to 32,845,000 acres, as against 30,255,000 acres, the revised figure at the corresponding date of last year, or an increase of 8.6 per cent. The total area in the final forecast of last year (May, 1916) was 30,143,000 acres. The season has on the whole been favourable for the wheat crop. The present position [March] is that wheat prospects in the United Provinces, the Central Provinces and Bombay are satisfactory, rainfall having been sufficient. In the Punjab, however, where the unirrigated area is important, winter rain has been quite insufficient and the unirrigated crop is suffering. The irrigated crop is doing well. Owing to the unusual amount of moisture in the soil this year, the unirrigated crop so far has not suffered as much as it would have in an ordinary year in which the winter rains have been short, but the Punjab crop as a whole will be below average if further rain is not received in the unirrigated areas. The unirrigated crop in the Northwest Frontier Province and Delhi is also suffering through drought, and rain is badly wanted in these provinces. In Bengal the crop at first suffered from the heavy rain of November, and later through drought.

The second forecast (March) of the areas sown to winter oil seeds, including rape, mustard and linseed for 1916-17, shows that for rape and mustard the area is 3,999,000 acres, as compared with 3,638,000 acres last year, an increase of 361,000 acres, or 10 per cent. Under linseed the area amounts to 2,700,000 acres, as compared with 2,765,000 acres in 1915-16, a decrease of 65,000 acres, or 2 per cent.

The condition of these crops is generally reported to be good, except in the provinces of Assam for rapeseed and of Bengal for linseed.

United States.—The Crop Reporting Board of the U. S. Department of Agriculture reported (April 7) that the average condition of winter wheat on April 1 was 63.4 per cent of a normal, against 78.3 on April 1, 1916, 88.8 on April 1, 1915, and 86.2, the average condition for the past 10 years on April 1. There was a decrease in condition from December 1, 1916, to April 1, 1917, of 22.3 points, as compared with an average decline in the past 10 years of 4 points between these dates. Upon the assumption of average abandonment of acreage and average influences on the crop to harvest, the condition on April 1 forecasts a production of about 430,000,000 bushels, which compares with 481,744,000 bushels, the estimated production in 1916, and 673,947,000 in 1915. The average condition of rye on April 1 was 86 per cent of a normal, against 87.8 on April 1, 1916, 89.5 on April 1, 1915, and 89.6 the average condition for the past 10 years on April 1. The condition of rye forecasts a production of approximately 60,000,000 bushels; last year's estimated production was 47,383,000 bushels, the 1915 crop 54,050,000 and the average of the preceding five years 37,568,000 bushels.

PRICES OF BRITISH GRAIN AND POTATOES.

The British Government has announced that the following minimum prices for British-grown grain and potatoes will be payable to farmers. Wheat, per quarter of 504 lb.: 1917, 60s. (\$1.74 per bushel), 1918 and 1919: 55s. (\$1.59 per bushel), 1920, 1921 and 1922: 45s. (\$1.30 per bushel); oats per 336 lb.: 1917, 38s. 6d. (95 cents per bushel), 1918 and 1919: 32s. (79 cents per bushel), 1920, 1921 and 1922: 24s. (59 cents per bushel); potatoes per long ton, for 1917, £6 (78 cents per bushel).

INTERNATIONAL INSTITUTE OF AGRICULTURE.

From the March issue of the "International Crop Report and Agricultural Statistics" are taken the following statements showing (I) the areas sown to winter cereals in six countries of the northern hemisphere and (II) the production of potatoes in nine countries of the northern hemisphere for 1916 as compared with 1915 and the five years' average for 1909 to 1913.

I. Cereal Crops in the Northern Hemisphere, 1916-17.

Countries.	Wheat.		Rye.		Barley.		Oats.	
	000 acres.	p.c. of 1916.	000 acres.	p.c. of 1916.	000 acres.	p.c. of 1916.	000 acres.	p.c. of 1916.
Spain.....	10,134	103.0	1,829	90.0	3,839	89.0	1,168	98.0
France.....	10,569	85.0	2,046	89.9	270	109.7	1,608	95.0
Switzerland.....	119	105.0	63	105.0	5	106.0	-	-
United States.....	40,091	102.3	4,214	121.3	-	-	-	-
India.....	30,928	108.0	-	-	-	-	-	-
Japan.....	1,236	99.6	-	-	2,738	88.1	-	-

II. Acreage and Yield of Potatoes in Countries of the Northern Hemisphere 1915 and 1916, with Percentage Comparisons.

Country.	1915.	1916.	Five years' average 1909 to 1913.	Per cent of 1915.	Per cent of average.	1915.	1916.	Five years' average 1909 to 1913.	Per cent of 1915.	Per cent of average.
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.
France.....	3,324	3,222	3,822	97.0	84.3	345,354	335,510	484,965	97.1	69.2
England and Wales.....	463	428	434	92.3	98.6	106,702	93,478	99,890	87.6	93.6
Scotland.....	144	130	144	90.1	90.2	36,291	19,825	34,674	54.6	57.4
Ireland.....	594	586	588	98.6	99.7	138,509	90,845	119,874	65.6	75.8
Italy.....	725	729	709	100.5	102.8	56,769	54,278	60,807	95.6	89.3
Netherlands.....	424	413	411	97.3	100.4	87,757	73,686	87,574	84.0	84.1
Canada.....	479	449	476	93.8	94.4	62,605	61,129	72,570	97.6	84.2
United States.....	3,734	3,550	3,677	95.1	96.5	359,727	285,442	354,502	79.3	80.5
Japan.....	194	231	169	119.0	130.5	25,078	39,006	24,738	155.5	157.7
Totals and averages..	10,081	9,738	10,430	96.6	93.4	1,218,792	1,053,199	1,339,594	86.4	78.6

The yields per acre in 1916 range from the lowest of 74.5 bushels in Italy to the highest of 218.4 bushels in England and Wales. The average for the nine countries is 108.1 bushels, as compared with 120.9 bushels in 1915 and 128.5 bushels, the average of the five years 1909-1913. In Switzerland, which is not included in Table II the estimated yield of potatoes in 1916 was 22,046,000 bushels from 180,000 acres, as compared with 39,683,000 bushels from 159,000 acres in 1915.

¹ Four years' average 1910-13.

ANNUAL AGRICULTURAL STATISTICS IN CANADA.

It is gratifying to be able to announce that, as the result of recent negotiations, there is the prospect of instituting a system for the collection of annual statistics of field crops and live stock for Canada that will eventually place this important matter upon a permanent and satisfactory basis.

SITUATION IN THE PAST.

Up to the year 1908 the only agricultural statistics covering the whole of Canada were those of the decennial Census, which, although satisfactory as the careful compilation of data collected from individual farmers, became rapidly out of date, and were also apt to prove misleading for purposes of comparison, because of possible extremes of seasonal variation in the census years.

In Ontario agricultural statistics of complete character had been annually collected by the Provincial Government since 1882, and the prairie provinces had also collected annual estimates of the principal grain crops over a series of years, the earliest (Manitoba) starting

with the year 1883. In New Brunswick annual statistics of wheat, oats, barley, buckwheat and potatoes had been collected since 1898. For the remaining provinces, up to the year 1908, either no annual agricultural statistics had been collected at all, or none that could be regarded as furnishing complete information.

ANNUAL ESTIMATES OF CENSUS OFFICE.

Under these circumstances the Census and Statistics Office attempted in 1908 to supply an obvious need by instituting for the whole of Canada, by provinces, annual estimates of the areas sown to all the principal field crops and of the numbers of live stock by means of voluntary agricultural correspondents reporting percentages of increase or decrease as compared with the previous year, using the census data as a starting point. These estimates, in default of any better system, have undoubtedly served a useful purpose, being probably the nearest to the truth and being subject to periodical correction on the publication of the census data. But experience has shown that the system adopted led to considerable discrepancies, first as compared with the census data and, secondly, as compared with the results published by those provinces that undertook the issue of annual statistics or estimates.

RECENT EFFORTS TOWARDS REFORM.

The whole situation was thoroughly examined by the Departmental Commission on the Official Statistics of Canada in 1912 whose report, published early in 1913, presented definite recommendations for dealing with the subject on more satisfactory lines.¹

On March 26, 1914, an informal conference between representatives of the Dominion and Provincial Governments at Ottawa resolved unanimously in favour of annual statistics of crops and live stock, and agreed that the reform desired would be best secured by a well-considered scheme of co-operation between the Dominion and Provincial Governments, and that the Dominion Government, after consultation with each of the Provincial Governments, should draft a scheme as a basis for discussion at a further conference to be subsequently convened.²

Consideration of the matter was resumed after appointment of the present Dominion Statistician on July 1, 1915. A memorandum setting forth the whole situation and presenting alternative solutions of the difficulties to be overcome was next prepared by the Census and Statistics Office, and the provincial Governments were then notified of the readiness of the Office to proceed further in the matter.

CO-OPERATIVE COLLECTION OF AGRICULTURAL STATISTICS.

On March 14 and 15, 1917, statistical representatives of two of the larger and more easily accessible provinces (Ontario and Quebec)

¹ Census and Statistics, Monthly, December, 1912, Vol. 5, No. 54, pp. 391-394.

² Census and Statistics, Monthly, February and March, 1914, Vol. 7, No. 67, pp. 31-22.

were invited to confer with representatives of the Census and Statistics Office at Ottawa, when the lines of future co-operation were discussed and provisionally agreed upon. As regards the province of Ontario, discussions are still proceeding; but for Quebec, in which a Bureau of Statistics was established on November 11, 1913, a definite scheme for the co-operative collection of annual agricultural statistics has been inaugurated to take effect with the current year. The arrangement is that cardboard schedules for the return of areas sown to the principal field crops and of the numbers of farm live stock, printed by the Quebec Bureau of Statistics, shall be distributed to and collected from all the farmers of the province through the medium of the school teachers, the returns to be forwarded to the Census Office at Ottawa for compilation and the results to be available for simultaneous publication by the Quebec and Dominion Governments, in the latter case as part of the statistics for the whole of Canada.

During April the Dominion Statistician made a personal tour in the West and further discussed the possibilities of co-operation in the annual collection of agricultural statistics with the Agricultural Departments of Manitoba, Saskatchewan, Alberta and British Columbia. As a result, definite arrangements taking effect for the current year, have been concluded with Saskatchewan, Alberta and British Columbia, whilst for Manitoba the bases of an arrangement to take effect in 1918 have been agreed upon. In Saskatchewan and Alberta the arrangement contemplates the collection of the statistics, as in Quebec, through the medium of the school teachers. For Saskatchewan the schedules will be printed by the Census Office, distributed by the province and returned in special envelopes to the Census Office for compilation. For Alberta the schedules will be printed and distributed by the province and will be returned in special envelopes to the Census Office for compilation. For British Columbia the schedules will be printed and mailed direct by the Census Office to all the farmers of the province; but will be returned to the provincial Department of Agriculture for compilation and co-ordination with data obtained by the field officers of the Department.

Thus definite arrangements have been concluded with the provinces of Quebec, Saskatchewan, Alberta and British Columbia for the collection of annual agricultural statistics beginning with the current year, and similar co-operative arrangements are contemplated with the province of Manitoba beginning with the year 1918. The question remains to be discussed with the three Atlantic provinces. As the authorities of these provinces have already expressed their willingness to co-operate with the Census Office, it is hoped that plans mutually satisfactory may be adopted for the year 1918.

PROSPECTS OF SUCCESS FOR THE PLANS ADOPTED.

An essential part of the plans proposed is the collection of figures representing actual facts from every individual farmer in each province. In the case of farmers who for any reason fail to fill up the schedules they receive it will be necessary to estimate their areas

under crops and the numbers of farm live stock on the basis of the known total areas and of the returns received. It will therefore rest entirely with the farmers of Canada as to what extent it may be necessary to supplement actual statistics by estimates in the case of defaulters. It is certain that the present war has rendered more imperative than ever before the collection of trustworthy information respecting agriculture, the chief industry of the Dominion, and farmers themselves should be the first to benefit from an accurate knowledge of agricultural conditions. The arrangements proposed promise a satisfactory solution of a long-standing problem, and provided that the farmers of Canada will do their part in filling up the schedules received, there is no reason why Canada should not speedily possess a system of agricultural statistics that will place it in this respect upon terms of equality with the most progressive countries of the old world and in the forefront of civilized states that are able to take due account of their productive resources.

THE WEATHER DURING MARCH.

The Dominion Meteorological Office reports that the temperature was below the average in British Columbia, also in the very extreme southern portion of Alberta, and in the extreme southwestern portion of Saskatchewan and in Ontario from a line drawn southwards from the western shores of James Bay to the western half of Lake Erie, also in the extreme southeastern portion of Ontario and throughout the Maritime Provinces, except in the northern portion of New Brunswick. Elsewhere in the Dominion it was above the average. The chief negative departures occurred in British Columbia, and varied from 3° to 5° , whereas the chief positive departures were recorded in the northern portions of Saskatchewan and Manitoba, and in certain districts in Ontario varying from 3° to 6° and 3° to 5° respectively. The precipitation was above the average amount over Ontario and in northern British Columbia; elsewhere in the Dominion there was not as much as usual. The excess was quite marked in Ontario, with a very heavy snowfall in the Temiskaming District; on the other hand the deficiency was pronounced over the greater portion of the Maritime Provinces and more locally in Quebec. At the close of the month the snow still lay deep on the ground in northern British Columbia. In the western provinces it varied from 8 inches in the Qu'Appelle Valley to 9 and 15 inches respectively in the northern portions of Manitoba and Saskatchewan. On the north shore of Lake Superior and in Temiskaming, it was from 30 to 52 inches deep; in eastern Quebec from 20 to 42 inches, while in northern New Brunswick the covering was 6 inches.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British

markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	March 3.		March 10.		March 17.		March 24.		March 31.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.....	1 74½	-1 85	1 85½	-1 88½	1 81½	-1 86½	1 85½	-1 90½	1 88½	-1 92½
No. 2 Nor.....	1 71½	-1 82	1 82½	-1 86½	1 78½	-1 83½	1 82½	-1 87½	1 84½	-1 88½
No. 3 Nor.....	1 66½	-1 76½	1 77½	-1 80	1 72½	-1 77½	1 76½	-1 81½	1 78½	-1 82½
No. 4.....	1 56½	-1 65	1 65½	-1 68½	1 61½	-1 66½	1 65½	-1 71½	1 69½	-1 73½
No. 5.....	1 38½	-1 46	1 46½	-1 49½	1 43½	-1 48½	1 47½	-1 52½	1 50½	-1 53½
No. 6.....	1 11½	-1 15	1 13½	-1 17½	1 11½	-1 16½	1 15½	-1 20½	1 18½	-1 23½
Feed.....	0 97	-0 98	1 00	-1 01	0 95	-0 96	0 96	-1 00	1 00	-1 02½
Oats—										
No. 2 C.W.....	0 57½	-0 62½	0 61½	-0 63½	0 64½	-0 62½	0 62½	-0 64½	0 63½	-0 64½
No. 3 C. W.....	0 56½	-0 60½	0 59½	-0 60½	0 58½	-0 60½	0 60½	-0 61½	0 61½	-0 62½
No. 1 Feed Ex.....	0 56½	-0 60½	0 59½	-0 60½	0 58½	-0 60½	0 60½	-0 61½	0 61½	-0 62½
No. 1 Feed.....	0 55½	-0 59½	0 59½	-0 60½	0 57½	-0 59½	0 59½	-0 60½	0 60½	-0 61½
No. 2 Feed.....	0 55½	-0 58½	0 58½	-0 59½	0 56½	-0 58½	0 57½	-0 59½	0 58½	-0 61½
Barley—										
No. 3 C. W.....	0 98	-1 01	1 02	-1 05	1 03	-1 06	1 06	-1 07	1 07½	-1 10
No. 4 C. W.....	0 93	-0 96	0 98	-1 01	0 99	-1 01	1 00	-1 00	1 00	-1 01
Rejected.....	0 81	-0 83	0 83	-0 86	0 86	-0 87	0 87	-0 90	0 87	-0 88
Feed.....	0 81	-0 83	0 83	-0 86	0 86	-0 87	0 87	-0 90	0 87	-0 88
Flax—										
No. 1 N. W. C.....	2 52½	-2 55	2 58½	-2 65½	2 59	-2 62½	2 62½	-2 64½	2 62½	-2 67½
No. 2 C. W.....	2 49½	-2 52	2 55½	-2 62½	2 55½	-2 59½	2 58½	-2 60½	2 58½	-2 63½
No. 3 C. W.....	2 34	-2 36	2 39½	-2 46	2 39	-2 43½	2 43½	-2 45½	2 44½	-2 50½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	December.		January.		February.		March.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 68	-1 87	1 83	-2 06	1 71	-2 02	1 94	-2 20
Chicago.....	1 67	-1 80½	1 74	-2 00	1 66½	-1 85½	-	-
New York (f.o.b. afloat).....	1 63	-1 90½	1 46	-2 05	1 70	-2 03½	2 01½	-2 23½
Corn, No. 2, mixed—								
St. Louis.....	0 88½	-0 94½	0 94½	-1 02	0 95½	-1 01	1 01½	-1 23
New York (f. o. b. afloat).....	1 00	-1 14	-	-	-	-	-	-
Corn, No. 2—								
Chicago.....	0 88	-0 96	0 93½	-1 03	0 96½	-1 02½	-	-
Oats, No. 2—								
St. Louis.....	0 55	-0 56	0 54	-0 59	0 53	-0 63	0 67	-0 67½
Chicago.....	0 46½	-0 54	0 53½	-0 58½	0 51½	-0 56½	-	-
Rye, No. 2—								
Chicago.....	1 30	-1 51	1 38	-1 48½	1 40	-1 52	-	-

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	March 5.		March 12.		March 19.		March 26.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	2 64½	— 2 67½	2 64½	— 2 67½	2 56	—	2 56	—
“ No. 2.....	2 62	— 2 64½	2 62	— 2 64½	2 51½	—	2 51½	—
“ No. 3.....	2 59	— 2 62	2 59	— 2 62	2 44½	—	2 44½	—
“ No. 4.....	—	—	—	—	2 38½	—	2 38½	—
“ Feed.....	2 35½	— 2 41½	2 29½	— 2 35½	2 29½	—	2 29½	—
American hard winter.....	2 41½	— 2 44½	2 41½	— 2 44½	—	—	—	—
“ red winter.....	2 38½	— 2 41½	2 38½	— 2 41½	2 41½	— 2 44½	2 41½	— 2 44½
Californian.....	—	—	—	—	2 56	—	2 59	—
Argentine.....	2 56	— 2 59	2 56	— 2 59	2 47½	— 2 50½	2 47½	— 2 50½
Indian.....	2 58½	— 2 61½	2 58½	— 2 61½	2 56	—	2 59	—
Australian.....	2 56	— 2 59	2 59	— 2 62	2 56	—	2 57½	—
Oats (per bush.)—								
Canadian.....	1 34½	— 1 37	1 34½	— 1 37	1 37	— 1 39½	1 37	— 1 39½
American.....	1 31½	— 1 34½	1 31½	— 1 34½	1 34½	— 1 37	1 34½	— 1 37
Chilian.....	1 37	— 1 39½	1 39½	— 1 42½	1 42½	— 1 44½	1 44½	— 1 50
Flour (per 280 lb.)—								
Canadian good.....	15 33	— 15 57	15 33	— 15 57	16 06	— 16 30	16 30	— 16 55
“ first bakers.....	14 84	— 15 09	14 84	— 15 09	15 57	— 15 81	15 81	— 16 06
“ common.....	14 60	— 14 84	14 60	— 14 84	15 33	— 15 57	15 57	— 15 81
American spring, good.....	15 33	— 15 57	15 33	— 15 57	16 06	— 16 30	16 30	— 16 55
“ spring, common.....	14 84	— 15 09	14 84	— 15 09	15 57	— 15 81	15 81	— 16 06
Kansas.....	15 33	— 15 45	15 33	— 15 45	—	—	15 81	— 16 06
Nebraska.....	14 84	— 14 96	15 09	— 15 21	15 57	— 15 81	15 81	— 16 06
Australian.....	15 09	— 15 15	15 57	— 15 69	15 57	— 15 69	16 06	— 16 55

IV. Average Prices of British-grown Grain, 1917.

Week ended.	Wheat.		Barley.		Oats.	
	Per quarter.	Per bushel.	Per quarter.	Per bushel.	Per quarter.	Per bushel.
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
March 3.....	77 4	2 352	64 0	1 869	48 0	1 273
“ 10.....	78 0	2 372	63 7	1 856	48 7	1 288
“ 17.....	78 10	2 398	64 1	1 871	49 4	1 308
“ 24.....	80 3	2 441	65 6	1 913	50 4	1 335
“ 31.....	81 5	2 476	71 10	2 097	51 10	1 374
Average.....	79 2	2 408	65 10	1 921	49 7	1 316

CHANGE OF TITLE.—In future the title of this publication will be the "Monthly Bulletin of Agricultural Statistics" instead of the "Census and Statistics Monthly". Its contents will be limited to statistics and crop reports relating to agriculture, live stock, dairying and cognate industries.

MONTHLY BULLETIN OF AGRICULTURAL STATISTICS

Vol. 10

OTTAWA, MAY, 1917.

No. 105

DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended April 30, 1917.

This, the first crop report of the present season, relates to the area and condition of the fall wheat crop, the condition of hay and clover meadows at the end of the winter and the progress of spring seeding as reported by correspondents at the end of April.

WINTER-KILLING AND CONDITION OF FALL WHEAT.

The area estimated to be sown to winter wheat last fall is 813,400 acres, of which 656,500 acres are in Ontario, 105,700 acres in Saskatchewan, 38,000 acres in Alberta, 8,000 acres in Manitoba and 6,200 acres in British Columbia. In Ontario the proportion of the area reported to be winter-killed is 25 per cent, in Manitoba 14 per cent, in Alberta 15 per cent and in British Columbia 8 per cent. No reports on the winter-killing of fall wheat are available for Saskatchewan, but as the proportions in the two neighbouring provinces of Manitoba and Alberta are 14 and 15 per cent, respectively, it is assumed that the proportion of 15 per cent also applies to Saskatchewan. The result is a total estimated destruction through winter-killing of 187,000 acres of fall sown wheat, or 23 per cent. This proportion is larger than in any of the two previous years, when, however, the amount of winter-killing was exceptionally low, being not more than about 6 per cent in each year. After deduction of the areas estimated to be winter-killed the area to be harvested of fall wheat is 626,400 acres. The condition of fall wheat on April 30 is reported as 67 per cent of the standard representing a full crop in Ontario, 65 per cent in Manitoba, 88 per cent in Alberta, and 85 per cent in British Columbia, making the figure for all Canada (Saskatchewan excepted) to be 69 per cent. This is a lower percentage representing condition than any previously recorded at the same date since 1909, and it reflects the exceptional severity of the past winter. Converted into a standard of 100 as representing the average condition on April 30 for the eight years 1909 to 1916, the condition of fall wheat on April 30, 1917, indicates a yield of 82 per cent, or 18 per cent below the average for the past eight years provided that conditions between April 30 and harvest time are not abnormal.

HAY AND CLOVER MEADOWS.

Owing to the lateness of the spring this year, it was rather too early on April 30 to judge of the extent to which hay and clover meadows have suffered from the effects of the past winter; but the

indications are that something like 9 per cent of the area under these crops has been winter-killed. Their condition in percentage of the standard is for the whole of Canada 86 as compared with 92 last year, the range by provinces this year being between 82 and 96 per cent of the standard.

PROGRESS OF SPRING SEEDING.

For the three Atlantic provinces it was too soon on April 30 to report as to spring seeding. In the other six provinces the spring is reported as being very late,—even later than last year, and only about 14 per cent of the total seeding was accomplished on April 30. This is the lowest proportion sown on April 30 since the records began in 1910. Last year the proportion was only 18 per cent, but in 1915, when the spring was exceptionally early and conditions were highly favourable, the proportion was as high as 63 per cent. For wheat the proportion of seeding completed on April 30 is 13 per cent as against 27 per cent last year and 94 per cent in 1915, for oats the proportion is 12 per cent against 8 per cent last year and 45 per cent in 1915, and for barley it is 9 per cent as against 3 per cent in 1916 and 38 per cent in 1915. The provinces most advanced in the seeding of spring wheat are Ontario, 28 per cent as compared with 4 per cent last year and 73 per cent in 1915, Alberta, 27 per cent compared with 80 per cent and 91 per cent and British Columbia, 20 per cent compared with 66 per cent and 89 per cent. In Saskatchewan only 5 per cent had been seeded of the area to be devoted to spring wheat as against 36 per cent and 94 per cent on the corresponding dates of 1916 and 1915.

Census and Statistics Office,
Ottawa, May 12, 1917.

ERNEST H. GODFREY,
Editor.

I. Area sown to Fall Wheat, 1916, and Areas Winter-killed as estimated on April 30, 1917.

Provinces.	Area Sown in 1916.	Area Winter-Killed.		Harvest Area of 1917.
	acres.	p. c.	acres.	acres.
Ontario.....	656,500	25	164,000	492,500
Manitoba.....	8,000	14	1,100	6,900
Saskatchewan.....	105,700	15	15,800	89,900
Alberta.....	38,000	15	5,700	32,300
British Columbia.....	5,200	8	400	4,800
Total.....	813,400	23	187,000	626,400

II. Progress of Spring Seeding, 1911-17.

Crops and Provinces.	April 30, 1911	April 30, 1912	April 30, 1913	May 6, 1914	April 30, 1915	April 30, 1916	April 30, 1917
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Spring wheat—							
Quebec.....	24	3	12	5	55	2	1
Ontario.....	51	13	22	24	73	4	28
Manitoba.....	71	50	57	57	93	26	13
Saskatchewan.....	70	72	65	79	94	36	5
Alberta.....	81	61	74	88	91	80	27
British Columbia.....	—	—	—	—	89	66	20
Six provinces.....	59	39	43	48	94	27	13
Oats—							
Quebec.....	19	4	11	4	38	1	1
Ontario.....	44	14	41	44	63	4	33
Manitoba.....	6	17	36	6	30	1	1
Saskatchewan.....	8	17	8	14	29	3	0
Alberta.....	34	30	25	39	50	24	3
British Columbia.....	—	—	—	—	73	56	11
Six provinces.....	29	14	21	23	45	8	12
Barley—							
Quebec.....	17	2	7	4	45	$\frac{1}{2}$	1
Ontario.....	43	12	36	41	63	3	26
Manitoba.....	$\frac{1}{2}$	—	$\frac{1}{2}$	1	8	—	—
Saskatchewan.....	1	23	1	3	13	$\frac{1}{2}$	—
Alberta.....	13	26	11	17	28	6	1
British Columbia.....	—	—	—	—	67	23	6
Six provinces.....	24	10	14	16	38	3	9
Total seeding—							
Quebec.....	21	5	12	6	41	2	1
Ontario.....	44	15	40	41	63	6	30
Manitoba.....	47	37	32	33	63	15	10
Saskatchewan.....	47	49	41	49	70	22	4
Alberta.....	67	52	43	51	67	46	16
British Columbia.....	—	—	—	—	77	58	24
Six provinces.....	44	28	35	37	63	18	14

III. Condition of Hay and Clover Meadows, 1911-17.

Provinces.	April 30, 1911	April 30, 1912	April 30, 1913	May 6, 1914	April 30, 1915	April 30, 1916	April 30, 1917
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada.....	89	75	90	87	91	92	86
Prince Edward Island.....	82	73	90	95	95	92	86
Nova Scotia.....	94	91	96	85	94	91	82
New Brunswick.....	91	82	91	93	90	94	96
Quebec.....	94	50	86	84	90	90	94
Ontario.....	86	80	88	84	91	94	82
Manitoba.....	85	88	93	93	89	91	87
Saskatchewan.....	92	88	91	94	84	89	92
Alberta.....	94	96	94	93	94	95	94
British Columbia.....	93	98	96	96	96	94	88

IV. Condition of Fall Wheat on April 30, 1911-17.

NOTE.—100=Standard or Full crop.

Provinces.	1911	1912	1913	1914	1915	1916	1917
	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.	p. c.
Ontario.....	81	71	83	81	93	89	67
Manitoba.....	—	—	—	—	—	—	65
Alberta.....	89	77	76	87	83	78	88
British Columbia.....	—	—	—	—	—	—	85
Canada.....	82	73	82	83	91	88	69

REPORTS OF CROP CORRESPONDENTS.

Month ended April 30, 1917.

Prince Edward Island.—On April 1 there was promise of an early spring, but northerly winds set in and have since prevailed with heavy frosts at night. The land is too cold and wet for farming operations, and it will probably be the middle of May before work on the land will commence. It is early to judge of the condition of meadows; but in places considerable areas have been killed out by the sheets of ice that lay over them. Farmers are paying more attention to good seed, and a large production of foodstuffs is planned.

Nova Scotia.—April has been cloudy and cold with northerly winds; so that the ground is wet and in places still frozen. A few potatoes have been sown on high dry land, but nothing else will be put in till well on in May. Meadows are only just beginning to show green, and so far as can be seen have suffered but slightly from the winter. Fencing, hauling fertilizer and ploughing, where possible, are occupying the farmers' time.

New Brunswick.—The land is wet and in places still frozen, as the weather has been cold with little sunshine. Except on high, light land nothing has been sown. Meadows appear to have wintered well, having had a good snow covering. Seeding will not be general till the second week in May.

Quebec.—Seeding has been delayed in all parts of the province, owing to a cold, wet and backward spring. In general, the meadows have wintered well, being protected by the deep snow. Hay and clover fields give promise of a good harvest. Seeding will only begin about the 10th or 12th of May. A large quantity of maple sugar is being made.

Ontario.—Clover meadows have suffered considerably from winter-killing, but more seriously from the hard night frosts of April which have resulted in the heaving of the roots and the destruction of large areas. Old meadows are said to have suffered more severely than the new. Much fall wheat has been killed out. Owing to poor seeding conditions last fall, when the ground was hard and dry,

plants were too weak to stand the winter and more especially the hard frosts of April, which are said to have caused the worst damage. The condition of the growing crop is poor, looking patchy and brown, but warm weather may make great improvement. Seeding, though later than usual, was progressing fairly well the last two weeks of April, except in the northern and eastern portions of the province where very little could be sown. Seed potatoes are scarce and dear.

Manitoba.—A month with much rain and some snow has left the ground cold and wet, and the lower levels are partly under water. At the end of April there were still snow banks in the ravines and along the bluffs. Only about 12 p.c. of the wheat had been sown, and this in the southern part of the province, whilst practically no oats or barley were yet in. The weather has been too cold for growth of any kind; so that it is impossible to tell how the meadows have stood the winter. With warm weather, prospects will improve, as there is ample moisture in the ground.

Saskatchewan.—The season is a late one, the weather being cold with frequent falls of rain and snow and frosts at night. The land is too wet and heavy to work except in places on high, well-drained lands. By April 30 only 5 per cent of the wheat had been sown, while no oats or barley had been sown. There is no growth as yet, and the hay meadows were largely under water and ice at the end of the month. Warm weather is needed.

Alberta.—The weather of April was cold and unusually backward. Fields have been too wet to work during most of the month except on high land. At April 30 only 27 per cent of the wheat had been sown and almost no oats or barley. Grasses were just commencing to grow, and it is rather too early to make reliable estimates of the damage done throughout the winter. Fall wheat appears to have suffered considerably from the April frosts. Fears are expressed that the late sown wheat may be caught by the frosts before ripening. Some reports speak of a decreased wheat acreage and larger areas sown to the coarser grains. Feed for stock is becoming scarce.

British Columbia.—April has been cold and unsettled and work on the land is very backward. Meadows are only just beginning to show green. Feed is becoming very scarce. At the end of the month fruit trees were not in bloom.

WINTER-KILLING IN ALBERTA.

Our Crop Correspondent, Count Barle de Foras, of High River, writes as follows: "Last month we were asked about winter-killing, and I could say nothing as there was no growth at that time. I just mentioned that a patch of sainfoin (*Onobrychis sativa*) looked about lost and that alfalfa was safe. Now I must state that the alfalfa is completely killed and that the sainfoin shows only a few plants left, about 4 or 5 p.c. The effects of spring-killing (I say intentionally spring and not winter-killing) must be very strong to kill such a hardy plant as the sainfoin, the most resistant of the cultivated legumes

except white clover. I have seen two other plots of alfalfa not far from my farm killed too. In my judgment, it is not so much the cold, however severe, which kills the plants, but after the thaw has settled the alternate frost at night and thawing in the sunny hours of the day are responsible. On the very border of the destroyed patch of sainfoin on the natural prairie two plants of sainfoin of a previous trial, 7 or 8 years ago, protected all round by the prairie growth, are thriving, whereas the sainfoin two feet distant, but with plants not so protected, are gone. One knows that sainfoin has naturally not a very long life; so that these indications are instructive. I have observed with much interest five acres of winter rye that were sown in August by a neighbour for pasture. The growth was very satisfactory last year, but it was grazed too late last fall. In the winter the farmer spread on it the manure of his stable, but a part received nothing. Where there was manure, the rye is growing well, where there was none it is not worth keeping except at a place close to a bank which kept the sun from thawing the land,—here the rye is very good. Manure could not bring any good effect except as shelter from the sun, as in the case of the bank. Where there was shelter the rye is good, where there was none, it is unsatisfactory. Perhaps it would be worth trying to cover alfalfa in fall or winter to see if some good could not come out of it, and the winter wheat could possibly be protected in the same way. The plot of sainfoin killed was coming four years, and was about half an acre in extent."

PROGRESS DURING MAY OF SEEDING IN THE WEST.

On May 15 the Census and Statistics Office received from the Saskatchewan Department of Agriculture a summary of their telegraphic crop reports collected from about 100 localities in Saskatchewan, which stated that the weather for seeding had been ideal during the previous week. About 75 per cent of wheat had been sown, and early grain was appearing above ground. In some parts farmers were preparing land for oats. It was impossible at that date to estimate the wheat acreage, but a slight decrease was expected as compared with last year.

On May 21 a telegram was received from the Saskatchewan Department of Agriculture summarizing reports by long distance telephone which showed that 95 per cent of the wheat seeding was finished, and that about 20 per cent of oats and flax had been sown. The reports also stated that growth was very rapid, and that conditions were ideal for germination.

On May 31 the Saskatchewan Department telegraphed as follows: "Reports to-day show seeding practically completed in most parts of province. Decrease in wheat acreage not so great as was expected. Heavy frosts this week will retard growth, and rain would do good to spring ploughing and stubble. Live stock in good condition and show average increase."

On May 25 the Manitoba Department of Agriculture telegraphed that wheat seeding in Manitoba was completed on May 15, and that oat seeding was completed on May 25. About 25 per cent of barley seeding had been done. All reports indicated favourable crop conditions with rapid growth and sufficient moisture. Live stock reports showed an increase in foals. Calves, lambs and pigs were above average.

CONTROL OF FIELD MICE.

Our Crop Correspondent, Mr. D. James, of Thornhill, Ontario, having reported the depredations of field mice and asked for a remedy against this pest, the question was referred to Dr. C. Gordon Hewitt, Consulting Zoologist, Department of Agriculture, who replied as follows:—

"Field mice may be controlled by the direct methods of trapping and poisoning and by the operation of such factors as the encouragement and protection of their natural enemies and by clean cultivation. In small areas, or in large areas where the laying of poison is for any reason undesirable, trapping may be adopted. The spring "guillotine" traps have been found on the whole to be the most satisfactory. Poisoning is the best method to employ on large areas. A dry grain poison made as follows has been found satisfactory. It is recommended by the United States Department of Agriculture. One ounce of powdered strychnine is mixed with one ounce of bicarbonate of soda. The mixture is put into a tin pepper box from which it is sifted over fifty pounds of crushed wheat or forty pounds of crushed oats in a metal container; the whole mixture should be stirred thoroughly in order that the poison may be well distributed. This poison should be distributed in the runs and burrows of the mice, not more than a teaspoonful at one place. It would be advisable to place the poison under boards or piles of rubbish to prevent the destruction of birds.

"Important natural enemies of mice should be protected. Too much stress cannot be laid on the importance of protecting owls, which are the greatest destroyers of field mice, and none of the owls, with the exception of the great horned owl, are to be considered noxious. Most of the hawks are also valuable in the same way. Weasels are great destroyers of mice, although their fondness for feathered victims may necessitate an occasional reduction in numbers.

"Clean farming, that is the destruction of weeds and rubbish and the cleaning up of fences, together with clean cultivation of the soil, removes the shelter that encourages the presence of mice. Clean farming is the greatest preventive measure for pests of all kinds and so it aids increased crop production."

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during April have ranged lower than for the corresponding period of 1916, the highest temperature being 66, the lowest 16, and the mean 39.39, 21650—2½

compared with extremes of 73.4 and 18 and a mean temperature of 43.25 a year ago. The precipitation totals 2.78 inches, made up of 2.38 inches of rain and 4 inches of snowfall; while last year it amounted to 2.7 inches, 1.65 inch being rain and the balance 10.5 inches of snow. The bright sunshine recorded averages 5.97 hours a day, as against 5.86 hours a day for this time last year.

The sowing of grain was begun on April 28, when seven acres of oats and some test plots of cereals were put in. This is from a week to ten days later than usual.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—
“The first half of April was dull with moderately low temperatures. There were heavy rains on the 4th, 7th, 10th and 14th, and two light snow flurries on the 11th and 12th. On the night of the 21st, a very severe thunderstorm occurred, accompanied by heavy rain, helping to remove the frost and causing the ground to settle quite firmly. This was followed by three bright days with comparatively high temperatures, which enabled work on the land to start at the Station on the 23rd, and wheat to be sown on the 24th, which is very much earlier than usual in this locality. The balance of the month has been dull, with cold winds from the east and north. The meadows have come through the winter much better than was anticipated from the very heavy sheet of ice that lay for a long time upon them; they were rolled on the 26th. The grass on the lawns about the Station is quite green on the 30th. The present prospect is that the spring planting will probably commence, as a rule, about a week earlier than for several years. The roads about the Station have been put in most excellent condition by the use of the split log drag. The horses are all in good shape for the spring work.”

Kentville, N.S.—W. S. Blair, Superintendent, reports:—
“The temperature during April averages lower than for the two previous years, the mean being 38.4, as compared with 39.81 in 1916, 39.36 in 1915 and an average of 39.47 for the corresponding periods of the four previous years. The rainfall totals 4.12 inches, as against an average of 2.6 inches for April from 1913 to 1916. There has been a good deal of cloudy weather, the sunshine aggregating only 107.6 hours, as compared with an average of 147.8 hours for this time for the three previous years. At the end of the month, the land, generally speaking, is wet and, except in very dry spots, unfit for work. On dry places at the Station ploughing started on the 24th. Some garden peas were got in on the 26th, while turnip, mangold and carrot roots for seed were planted out on the 25th. The weather during the last week of April has been exceedingly cold, with no warm, drying winds, and seeding generally will be late.”

Nappan, N.S.—W. W. Baird, Superintendent, reports:—
“April has been very changeable, varying from bright spring-like days to cold, stormy, winter-like periods. Light snowfalls were recorded on the 4th, 11th, 21st and 22nd. Showers occurred on the 6th, 7th, 10th, 12th and 14th, and there was a thunderstorm on the evening of the 21st. The mildest spell was between the 15th and the

20th. The closing week has been cloudy and cool, the thermometer dropping to 25. The lowest temperature recorded was 20 on the 1st and the highest 59 on the 22nd. All classes of live stock are in good condition. Interned prisoners have been at work during the month, chopping and burning brush."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"April has been decidedly wintry, with high cold winds, both from the west and north-east. There was not much frost in the ground, and as the snow left, what was there soon came out, and a snowfall of fourteen inches on the 9th materially assisted in drawing out the frost and in melting down the old snow banks. The mean temperature is 37.9, against a mean in April, 1916, of 40.9 and an average mean of 39 for the last forty-two years. The precipitation totals 4.06 inches, of which 1.6 inch represents snow, against a precipitation in April, 1916, of 1.41 inch and an average precipitation for the last forty-two years of 2.8 inches. There has been much less sunshine than usual, the total recorded being 136.9 hours, against a forty-two year average of 187, and a possible of 407 hours. On account of the absence of frost, however, the ground has dried out better than in most seasons. No planting has been done. At the Experimental Station, ploughing started on the 30th. Manure has been moved to the fields and considerable areas spread. Work in removing stones and boulders from the fields and in tile draining has been in progress since the 20th April. Live stock has come through the winter well. There is a great surplus of hay throughout New Brunswick and present prospects are for a good hay crop in 1917."

Ste. Anne de La Pocatière, Que.—Jos. Begin, Superintendent, reports: "The weather during April has been cool and showery, with strong winds from the north and north-east, resulting, after the cold winter, in a very late spring. The highest temperature recorded is 53.7, the lowest 12.6 and the mean 34.1, compared with extremes of 62 and 18, and a mean temperature of 37.7 for April, 1916. The precipitation totals only 2.31, consisting of equal parts of snow and rain; but more or less rain or snow has fallen on sixteen different days. The bright sunshine averages only 4.6 hours a day, against 7.4 hours a day for this period a year ago. The past winter and the spring have been favourable from an agricultural and horticultural standpoint; the snowfall has been nearly double the average of the last four years, but the winter was the driest yet recorded at this Station. There has been no spring frost to damage any plants or trees, and, though the season is very late, prospects are fairly good. No farm work has been possible here, except for the seeding to oats, on the 27th, of six acres of dry and well drained land at the Station. Tulips are just showing out of the ground, while they were in full bloom this time last year. Good seed grain is very scarce in this section at the present time and many farmers are short of good seed."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—"April has been colder, drier and duller than the average of the past five years for the same month, the mean temperature being 35.35, the precipitation 1.29 inch, and the bright sunshine aggregating 114.3

hours, whilst they average 36.2 degrees, 2.17 inches and 185.9 hours for this period from 1912 to 1916. After the rough weather and abundance of snow of last winter, it was expected that the spring would be fine and early; but it is far from being so. Seeding operations will be later than usual, as there is yet frost in the ground in many places. No work on the land has been done in central Quebec in April, though, during favourable seasons, potatoes and grain are sometimes got in during the last week of the month. Contrary to what many seem to think, help is exceedingly scarce in the district, and men have to be paid from 25 to 30 cents per hour. At the Station, the work has included the care of live stock and poultry, draining, clearing land, repairing fences, building roads and shovelling snow."

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—"The weather during April has been quite cool, with vegetation making little growth. The temperatures range a little lower than usual, the highest being 63, the lowest 13, and the mean 37.96, compared with extremes of 68 and 18, and a mean of 40.89 in the previous year. The precipitation totals 1.24 inch, which fell on eight different days, compared with 2.34 inches last year. The first ploughing was done at this Station on the 18th and the first seeding on the 30th. There is every appearance of the young clover and grasses coming through the winter in good condition. In view of the labour shortage, the farmers of this district are putting forth special efforts in an endeavour to see that the supply of agricultural products is kept up to the maximum. In order to do this, they are using larger implements, employing every moment possible, taking greater care in the selection of the best varieties of seed and seeing that the same is properly cleaned and also treated for the prevention of fungous diseases, as well as in the preparation of their seed beds and all other lines of effort likely to have a tendency to result in better and larger crops, which there seems every prospect of realizing if the season proves favourable."

Brandon, Man.—W. C. McKillican, Superintendent, reports:—"April has been very backward. The mean temperature for the month is only 32.1. The snow left very gradually, and the water formed from it disappeared even more slowly. By from the 20th to the 23rd, the higher land was beginning to be fit to work, but on the 24th there came a heavy snowstorm, which stopped all seeding operations for the remainder of the month. On the Experimental Farm, a little ploughing and cultivating has been done, and a few acres have been sown, but so little that seeding can only be said to have barely started by April 30."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"The weather during April has been cool, with very little wind. Snow fell on the 17th and 18th and rain on the 24th and 25th; this has kept the land in very wet condition and, as a consequence, no seeding has been done in this district. In a great many sections the land is still practically under water, with no prospect of seeding at an early date. Roads are reported to be in very poor condition. The work at the Experimental Farm has included cleaning grain,

getting implements into shape for spring work, harrowing and dragging roads, caring for hot-house, putting up potato samples, and attending to live stock and poultry."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—"The weather during April has been unusually unfavourable in every way. The temperature has been hovering pretty close to freezing point, which has kept the roads almost impassable for either sleighs or wagons. It, therefore, interfered with the doing of much of the outside work which is usually carried on at this season. At the end of April, no work has been done on the land in the district, and snow still remains in some places. At the Station the four corrals of steers have made larger gains during April than any preceding month. Two of these are being fed on hay and two on haled wheat and oat straw. The appearance of the steers indicates that the haled wheat straw has very poor feeding qualities. Lambs are beginning to come during the last week of April, and prospects are good for a large crop of the same. A solid brick chimney has been built in the sheep barn, which affords facilities for keeping the lambs warm in bad weather."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—"An unusually cold and wet April has been experienced. Frequent snow-storms and rains have rendered the soil too wet for cultivation. Work on the land only commenced about the 25th, and the first seeding was done on the 30th. The disagreeable weather coming at this season of the year, has occasioned some sickness and loss in live stock. At the Station, the feeder steers are making satisfactory gains. The young lambs appear to be stronger and much more vigorous than was last year's crop of these."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—"Conditions during April have been unsatisfactory, low temperatures prevailing, as a rule, with some comparatively heavy falls of snow. Only toward the last of the month has there been any moderation in the cold weather. Work on the land was delayed until the 23rd, and no seeding has been done on this farm by the 30th. Previous to this year, the latest date on which seeding began at this Station was April 30, in 1907. The cold weather has also delayed the growth of grass, resulting in the supply of fodder being drawn heavily upon and, consequently, there is an unusual shortage of coarse fodder at the present time."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"The weather during April has not been favourable for farm work. It is without doubt the most backward season that has ever been experienced since farming has been done in this district. The precipitation, which totals a little over an inch and a half, came in three snow storms; one starting on the 5th and lasting two days, the second lasting from the 15th to the 17th, and the last beginning on the 23rd and continuing till the 26th. In the Pincher Creek and Cardston districts but little work has been done on the land by the end of the month, but in the balance of the area in this part of the

province lying east of these two districts, and as far north as Nanton and Vulcan, a fair amount of seeding, when the unfavourable conditions are taken into consideration, had been done on summer-fallowed land. The acreage of wheat sown by April 30 in this district is about 25 per cent. Although this is very much less than usual, there having been from 60 to 65 per cent sown on the same date in 1916 and from 80 to 90 per cent in 1915, still farmers here are much more advanced with their spring operations than those in any district farther north. At the Station, the first work on the land was harrowing on fallow on April 4, and the first seeding was done on the 7th. There is an unusually large amount of moisture in the soil, and, if seeding is not delayed too late in May, the prospects for another good crop in the district are excellent."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"The weather during April has been cold and marked by an unusual amount of wind. The mean temperature is 37.93, and night frosts of varying intensity were recorded on twenty-four days during the month. Owing to the backwardness of the season, very little spring seeding has been started in the neighbourhood, and, plant growth being generally backward, range cattle and horses have been hard put to it to pick up a living. Fruit trees have again suffered, and it would appear that only the hardier varieties of apples are able to stand the severe winter conditions in this locality. At the Experimental Station, the state of the weather has postponed seeding operations until May, but good progress has been made in clearing the new land recently acquired for this Station. The bees have come through the winter well, and are now getting busy, gathering pollen from the anemones and willows."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"April has been quite cold, and frost has remained in the ground very late. Seeding commenced on the 19th. Many farmers have been disappointed in their fall grain failing to germinate last autumn. At this Station, the land was so dry that fall grain was not sown. A great many inquiries have come in for seed potatoes, and samples have been sent out from this Station, together with instructions for treating the seed to prevent disease. There are nineteen entries for the boys' and girls' potato competition in the Summerland district. Orchard trees are showing well for a large crop of fruit: the late spring has kept the blossoms back and carried the blooming past the normal danger period. Potatoes pitted last fall have come out in first class shape this spring. Pruning operations are completed throughout the district."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"April has been cool and wet, with 4.47 inches more rain and a mean temperature of 5.7 degrees lower than a year ago; while the total hours of sunshine are just about half. These conditions have made the spring a very backward one. At the end of the month, a few warm days aided in making the grass and clover appear quite green. The bulbs and ornamental shrubbery display considerable bloom."

A great deal of spring cultivation has been done on the land in this district, but so far very little seed has been planted. The prices of all kinds of live stock are very high. At several auction sales in this district, grade dairy cows sold around \$150 and in one case a grade cow brought \$200. Dealers are offering 40 cents for wool at present."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"The climatic conditions during April have been such as to make land tillage and seeding very difficult. Over four inches of rain fell during the month, and considerable cloudy weather has been experienced, leaving more water in the soil than during either February or March. Less than twenty-five per cent of the seeding is accomplished at the close of the month. The farmers' activities have been directed toward attempts to work on the land, road improvement, and draining. The live stock of the district in most instances has been running on grass during the month. Dairy cattle are in fair condition and their numbers are being maintained. Sheep are being increased on a number of farms, the lamb crop being a good one and very few losses reported. Bees have not had favourable weather and no nectar-secreting plants of importance bloomed until the last week of the month. Early spraying for pearthrips has been carried out in the district. Very little winter injury to fruit trees has been noted. Fruit spurs and bloom are abundant."

The records of temperatures, precipitation and sunshine at the several Experimental Farms and Stations for the month of April are given in the following table:—

Meteorological Record for April, 1917.

Experimental Farm or Station at	Degrees of Temperature, F.			Precipitation in inches	Hours of Sunshine	
	High-est	Low-est	Mean		Possible	Actual.
Ottawa, Ont.	66.0	16.0	39.39	2.78	406	179.2
Charlottetown, P.E.I.	57.0	24.0	37.20	3.46	408	96.8
Kentville, N.S.	55.0	22.0	38.40	4.12	405	107.6
Nappan, N.S.	59.0	20.0	37.63	3.43	407	104.9
Fredericton, N.B.	64.0	16.0	37.90	4.06	407	136.9
Ste. Anne de la Pocatière, Que.	53.7	12.6	34.10	2.31	409	138.2
Cap Rouge, Que.	56.0	10.2	35.35	1.29	409	114.3
Lennoxville, Que.	63.0	13.0	37.96	1.24	406	106.7
Brandon, Man.	56.0	13.0	32.10	1.09	414	147.7
Indian Head, Sask.	49.0	2.0	31.83	1.10	416	136.8
Rosthern, Sask.	48.0	-3.8	30.03	1.21	419	184.5
Scott, Sask.	48.8	5.0	31.80	1.01	418	134.0
Lacombe, Alta.	58.8	4.9	31.90	1.24	420	150.8
Lethbridge, Alta.	61.0	11.5	38.00	1.57	413	133.1
Invermere, B.C.	54.0	11.0	37.93	0.23	415	168.9
Summerland, B.C.	62.0	21.0	44.68	0.98	414	128.9
Agassiz, B.C.	67.0	30.0	44.51	9.84	413	75.3
Sidney, Vancouver I., B.C.	64.0	33.0	45.48	4.09	411	90.0

Ottawa, April 15, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROPS AND LIVE STOCK IN OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (May 1) that cold and snow hindered work on the land for nearly two-thirds of April. The last ten days were, however, very favourable, and good progress was made everywhere; the land worked very well, and a good seed-bed was almost universally obtained. Wheat, on the whole, is rather a poor plant; that sown early in the autumn is mostly satisfactory, but the later sown is not promising, and some fields have had to be re-sown. Winter oats have been a good deal damaged. Spring grain is only just showing in many districts, and it is early to speak of its prospects; though it appears to be mostly satisfactory. The area under oats is expected ultimately to be 8 or 9 p.c. greater than last year; but a considerable area, both of this crop and barley, still remains to be sown—in the northern districts more particularly. Beans and peas seem fairly satisfactory, though beans have in some cases suffered from the frost. Considerable progress has been made with potato planting in the south, and in Lincolnshire, but much less in the north, and in some places, in fact, it has hardly begun. The work is being carried on under very favourable conditions. Seeds have suffered a good deal from the severe weather in the north, and some fields have been ploughed up. They are now starting to grow, however, and prospects are fairly satisfactory generally in the south. With better weather, a considerable improvement may be looked for. Pastures are very bare, and hardly commenced to grow before the end of the month. Owing to the prolonged cold, winter keep was getting very short, and live stock generally were only in poor condition. The fall of lambs was generally about average, or perhaps even somewhat over, but the severe weather caused considerable losses, except in some favoured southern counties. Losses occurred also among the ewes, and as the trying conditions rendered their condition generally rather poor, there were many complaints of shortage of milk, which was partly responsible for the mortality among the lambs. Hill flocks had a particularly trying time owing to the lateness of the season, and they suffered considerable losses. Labour is very short, but the release of soldiers for farm work is enabling arrears to be overtaken generally, while women are also helping.

India.—The final general memorandum on the 1916-17 rice crop of British India is based upon reports from provinces comprising 99 per cent of the total area under rice. The total area reported is 79,700,000 acres, as compared with 78,152,000 acres, the revised final figure of the preceding season. There was thus an increase of 1,548,000 acres, or 2 p.c. The total yield is estimated at 34,079,000 tons of cleaned rice, as compared with 32,824,000 tons, the revised final estimate of 1915-16, or an increase of 4 p.c. The present estimates of both area and yield are the highest on record.

France.—The agricultural situation in France is described in the "Feuille d'Informations" for April 24, a weekly publication of the

French Department of Agriculture. It states that the climatic conditions not having been favourable in the greater part of France for spring seeding, farmers should put forth increased efforts to ensure that land prepared for cereals, sugar beets and potatoes be sown or planted without too much delay. Unfortunately, it appears that the area of land lying fallow or abandoned will not be less than it was last year. It is recommended that immediate steps should be taken to cultivate these lands, and that they should not be left for cultivation next September in preparation for autumn sowing. It is pointed out that abundance of food will not be the immediate effect of peace whenever this may be declared; but, on the contrary, scarcity at that time is rather to be feared. It is recommended therefore that steps should be taken up to the end of May to sow beans, cabbages, carrots, salads and other vegetables even in districts that previously did not trouble to grow these crops but imported them from other parts. Fallow land, it is pointed out, can only be used for wheat seeding next autumn or spring in two ways, either by summer fallow (*jachère cultivée*) consisting of two or three ploughings and harrowings before the end of September, or by catch-cropping (*demi-jachère*) with the object of obtaining fodder crops. The value of animal products is such that this method should be adopted wherever weeds are not too numerous; so that fodder reserves may be increased for next winter. Amongst the crops recommended for sowing under these conditions are, according to the nature of the soil, corn, buck-wheat, white mustard, millet, tares, peas, and forage mixtures of these plants.

Japan.—H.M. Commercial Attaché at Yokohama writes (February 6) that according to an official report the actual yield of the rice crop exceeded all expectations. The crop harvested is now calculated to have amounted to 289,346,230 bushels, an increase of 11,797,293 bushels as compared with the actual crop in 1915, and an increase of 30,726,334 bushels as compared with the average crop of the last seven years.

United States.—The Crop Reporting Board of the U.S. Department of Agriculture reported (May 8) that on May 1 the area of winter wheat to be harvested was about 27,653,000 acres, or 12,437,000 acres (31 per cent) less than the acreage planted last autumn and 7,176,000 acres (20.6 per cent) less than the acreage harvested last year, viz. 34,829,000 acres. The average condition of winter wheat on May 1 was 73.2, compared with 63.4 on April 1, 82.4 on May 1, 1916, and 86.6, the average for the past ten years on May 1. A condition of 73.2 per cent on May 1 is indicative of a yield per acre of approximately 13.2 bushels, assuming average variations to prevail thereafter. On the estimated area to be harvested, 13.2 bushels per acre would produce 366,116,000 bushels, or 24 p.c. less than in 1916, 45.7 per cent less than in 1915, and 46.6 p.c. less than in 1914. The out-turn of the crop will probably be above or below the figures given above according as the change in conditions from May 1 to harvest is above or below the average change. The average condition of rye

on May 1 was 88.8 compared with 86 on April 1, 88.7 on May 1, 1916, and 90.2, the average for the past ten years on May 1. The condition on May 1 forecasts a production of about 60,735,000 bushels, compared with 47,383,000, last year's final estimate, and 54,050,000, the 1915 final estimate. The average condition of meadow (hay) lands on May 1 was 88.7, compared with 88.4 on May 1, 1916, and a ten-year average on May 1 of 87.9. Stocks of hay on farms May 1 are estimated as 12,488,000 tons (11.4 p.c. of crop), against 14,452,000 tons (13.5 p.c.) on May 1, 1916, and 10,827,000 tons (12.5 p.c.) the five year average on May 1. The average condition of pastures on May 1 was 81.9, compared with 85.2 on May 1, 1916, and a ten-year average on May 1 of 85.2. Of spring ploughing, 72.4 p.c. was completed up to May 1, compared with 70.4 p.c. on May 1, 1916, and a ten-year average on May 1 of 69.3. Of spring planting 58.7 p.c. was completed up to May 1, compared with 56.7 p.c. on May 1, 1916, and a ten-year average on May 1 of 56.3.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The "International Crop Report and Agricultural Statistics" of April contains the following remarks relating to crop conditions in various countries during March.

NORTHERN HEMISPHERE: CROPS OF 1916-17.

Ireland.—The weather during March was abnormally severe. Frost and snow were practically continuous throughout the month, and vegetation was correspondingly checked. The season is one of the most backward experienced for many years.

France.—The temperature was generally low, except in some of the Mediterranean departments, where fine weather prevailed. Falls of snow and hail in places with alternate frost and thaw, and rains more or less plentiful in other localities, have all been reported. These varieties of weather have had an unfavourable effect on the crops as a whole. A portion of the plant has been killed by the frost, although in most localities a spell of fine weather would still, generally speaking, set matters right as regards the crops in the ground. Their aspect is poor in some places. Agricultural work (ploughing and sowing of spring crops) is retarded. The area employed for planting potatoes seems to be much larger this year than in previous years; this work is going on actively in the south and in some of the Breton departments.

Italy.—March, and especially the first fortnight, was very rainy and cold almost everywhere; vegetation as well as spring sowing, is backward in some provinces. However, there are no serious consequences to be looked for. Agricultural work is proceeding in average circumstances; spring sowing has begun under similar conditions.

Luxemburg.—The state of the winter crops on April 1, 1917, is generally reported as unsatisfactory. The very long and most severe winter, as well as the keen frosts of recent weeks, have prevented growth and caused damage of some importance. The crops, more especially that of rye, have suffered greatly from the snow, so long remaining on the ground; it is consequently necessary to re-sow, but it is impossible to estimate the extent required until the weather improves, for it has been persistently unfavourable in March.

Switzerland.—The wintry weather of March has almost everywhere prevented progress with spring sowing. The preparatory work on the land has also been much delayed. However, the soil was frozen to a fairly great depth during the winter, and ploughing is thereby facilitated. Winter crops are very backward, and there are many complaints concerning the condition of the later sown areas. Wheat and rye have especially suffered from the frost, which has also injured winter barley in some places.

Japan.—Since January, frequent snowfalls, sharp frost and drought have done some damage to the crops, to a greater or less degree according to the locality. Winter sowing of cereals took place in normal conditions. There are, however, some fears lest the progress of the young plant should not be quite satisfactory. Spring sowing has not yet begun. The area under linseed in 1916 was 39,211 acres, as compared with 40,436 acres in 1915, and 12,138 acres, the average during the five years 1909 to 1913, or respectively 97 and 323 p.c. of the two last mentioned areas. The yield of fibre in 1916 was 925,941 cwt., as compared with 138,175 cwt. in 1915 and 300,031 cwt., the average during the five years 1909 to 1913, or respectively 670.1 and 308.6 p.c. of the two last mentioned yields. The yields per acre have consequently been 23.64 cwt. in 1916, against 3.39 cwt. in 1915 and 24.71 cwt. for the average of the five years 1909 to 1913. The yield of grain in 1916 was 267,861 bushels as compared with 306,127 in 1915 and 98,165, the average of the five years 1909 to 1913, or respectively 87.5 and 272.9 p.c. of the two last mentioned yields. The yields per acre have consequently been 6.85 bushels in 1916, 7.65 in 1915, and 8.13 bushels for the average of the five years 1909 to 1913.

Egypt.—The weather has been generally favourable according to the report on March 1. The rain in February was of service to the crops, and irrigation is good. Nearly all the provinces report some injury from insects and cryptogamic diseases. Wheat and barley are suffering here and there from the smallness of the supply of fertilisers, but on the whole the cereals look well, and a good harvest may be expected. The variable weather has had no perceptible effect on the crop according to the report of April 1. Water supply is ample. Attacks of smut and rust are widely spread; the damage caused by the former is negligible, but the latter is rather severe in places, and threatens to become more acute. The wheat is turning colour in Upper Egypt, and is on the whole looking well, notwithstanding the insufficiency of chemical manures employed this year.

SOUTHERN HEMISPHERE: CROPS OF 1916-17.

Table I shows the area and yield of field crops in the southern hemisphere, as published in the April issue of the Rome Bulletin, the metric weights and measures being converted into the Canadian equivalents.

I. Areas and Yields of Cereal Crops in Countries of the Southern Hemisphere, 1915-16 and 1916-17.

Crops and Countries.	1915-16	1916-17	Per cent of 1915-16.	Per cent of average ¹ .	1915-16	1916-17	Per cent of 1915-16.	Per cent of average ¹ .	1915-16	1916-17
	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre.	bush. per acre.
Wheat—										
*Argentina.....	16,420	16,089	98.0	100.2	172,651	70,225	40.7	47.2	10.6	4.3
Union of S. Africa..	557	432	77.6	—	4,857	4,790	98.6	—	8.8	11.2
*Australia.....	12,531	11,530	92.0	151.7	179,027	152,089	84.7	168.1	14.3	13.2
*New Zealand.....	329	219	66.5	90.8	7,108	5,400	76.0	76.4	21.6	24.7
*Total & average.	29,280	27,838	95.1	116.5	359,386	227,714	63.4	93.1	12.3	8.2
Rye—										
*Argentina.....	212	180	85.0	212.1	2,008	858	42.7	61.4	9.6	4.8
*Australia.....	10	10	100.0	111.8	134	134	100.0	126.2	13.4	13.4
*Total & average.	222	190	85.7	202.6	2,142	992	46.3	65.9	9.7	5.3
Barley—										
*Argentina.....	431	388	90.0	168.8	6,430	2,165	33.6	49.2	14.9	5.6
Union of S. Africa..	64	57	86.6	—	—	1,000	—	—	—	17.5
*Australia.....	171	180	105.8	116.9	3,959	4,189	105.8	138.7	23.2	23.2
New Zealand.....	30	—	—	—	—	—	—	—	—	—
*Total & average.	602	568	94.5	147.9	10,389	6,354	61.2	85.7	9.3	11.2
Oats—										
*Argentina.....	2,565	2,525	98.5	105.4	70,853	29,912	42.2	58.6	27.6	11.8
Union of S. Africa..	377	250	66.4	—	—	6,521	—	—	—	26.0
*Australia.....	725	724	99.9	97.2	19,045	19,530	102.5	119.8	26.2	27.0
*New Zealand.....	640	548	85.7	149.7	8,779	6,423	73.2	39.1	13.6	11.8
*Total & average.	3,930	3,797	96.6	108.3	98,677	55,865	56.6	66.7	25.2	14.7
Corn—										
*Argentina.....	9,931	8,969	90.3	103.0	161,134	58,840	36.5	30.7	16.3	6.5
Union of S. Africa..	—	—	—	—	—	36,964	—	—	—	—
*Australia.....	324	319	98.5	90.2	6,799	8,500	125.0	84.3	21.0	26.6
*Total & average.	10,255	9,288	90.6	102.5	167,933	67,340	40.1	33.4	16.4	7.3
Linseed—										
Argentina.....	4,001	3,207	80.2	82.9	39,266	3,996	10.2	12.7	9.9	1.3

¹Average of five years, 1909-10-1913-14.

NOTE.—The totals include only the countries marked with an asterisk (*).

Union of South Africa.—The weather is favourable for maize and the condition of the crops on April 1, 1917, expressed according to the Institute system, was equal to 101.

Australia.—In Western Australia a fair proportion of the grain harvest had been gathered in, and the results in the great majority of cases were moderate to good. Many farmers in the centre and south reaped a heavier return than was anticipated, but some on the other hand were disappointed, and attributed the deficient yield to the dry weather in September. In South Australia, at the close of December, harvesting was in full swing, and reports all through the State were unanimous in anticipating exceptionally good returns, in

spite of some loss experienced through wind storms. Some of the observers on the western (Eyre) peninsula speak of the season as the best for many years, and excellent returns are also being obtained from Murray and the southeastern mallee lands. In the north and central divisions heavy yields are general, and some record crops have been reaped. Potato crops were doing fairly well. In Queensland a very wet month (December) was experienced throughout the whole State, the fall being everywhere above the average, with the exception of a small area in the south central district. Floods, in many cases of a disastrous nature, occurred in practically all the rivers of the central and northern districts. A large number of crops, principally wheat, were ruined by the heavy rain which also greatly impeded harvesting operations, and, in the growing districts, lowered the density of the crops. Apart from these conditions, largely due to the exceptional weather of the last months of the year, the country was in an almost unprecedentedly flourishing condition; a prolific growth of all kinds of vegetation was reported. In New South Wales abundant rains, much above the average, were again experienced during December all over the State, with the exception of a small area in the southwest. Reports from all the coast districts were of a most satisfactory character as regards the crops, and on the south coast the country never looked better. In the interior, heavy rains and hail spoilt many of the wheat crops, and delayed harvest, then in full swing. In the western division the season continued excellent. Maize promises an exceptionally fine yield. In Victoria the weather has been favourable throughout the growth and harvesting period of the wheat. Floods have occurred here and there, but crop results are satisfactory as a whole. Generally speaking, agricultural pests are not much in evidence, and rabbits are not very numerous. A good crop of potatoes was reported. Throughout Tasmania, the rainfall was much above normal in December, as it was in November, and record floods occurred in the northwestern rivers. Naturally the frequent and heavy rains have had a disastrous effect on the early crops. Harvest was delayed by the state of the ground, which prevented the free use of machines. An exceptional yield of potatoes was reported.

New Zealand.—As a general rule crops throughout the Dominion are lighter than usual, but in fair condition.

Dutch India.—(Java and Madura). Rains were heavier than usual in November and December 1916, and slightly injured the maize; they became even more constant in January 1917, being favourable for rice, but adverse to the maize crop. The total area under maize in 1916 was 3,901,487 acres; the rice crop was grown on an area of 6,451,485 acres in rice fields, yielding 273,503,800 bushels of rough rice, while in dry fields there was also an area of 980,559 acres.

INSTITUTE CABLEGRAMS DURING MAY.

British India.—On May 18 the following report was received by cable from the Institute and issued by the Canadian Commissioner: "The area harvested in 1917 was 32,961,000 acres compared with 30,-

142,000 in 1916, a five years' average 1909 to 1913 of 29,218,000 and a five years' average 1911 to 1915 of 30,537,000 acres. The production of wheat in 1917 is estimated as 370,683,000 bushels compared with 318,005,000 last year, a 1909 to 1913 average of 351,767,000 and a 1911 to 1915 average of 360,550,000.

Spring Sowings in Europe.—On May 21 the following report was received by cable from the Institute and issued by the Canadian Commissioner: "The condition of growing cereals on May 1 was good in Tunis, average in Spain, Netherlands and Algeria, mediocre in France, Great Britain, Italy and Switzerland. Areas sown to wheat: Spain, 10,300,000 acres, or 105 p.c. of that sown in 1916 and 106 p.c. of the average of the five years 1911-1915; Switzerland, 128,000 acres, 104 p.c. of last year and 121 p.c. of the five years' average; India, 32,885,000 acres, or 109 p.c. of last year and 108 p.c. of average; Algeria, 3,141,000 acres, 96 p.c. of 1916 and 92 p.c. of average. Areas sown to rye: Spain, 1,846,000 acres, or 100 p.c. of last year and 97 p.c. of average; Switzerland, 74,000 acres, or 105 p.c. of last year and 122 p.c. of average. Areas sown to barley: Spain, 4,025,000 acres, or 93 p.c. of last year and 112 p.c. of average; Algeria, 2,852,000 acres, or 95 p.c. of last year and 90 p.c. of average. Areas sown to oats: Spain, 1,416,000 acres, 119 p.c. of last year and 107 p.c. of average; Switzerland, 111,000 acres, 108 p.c. of last year and 133 p.c. of average; Algeria, 524,000 acres, 98 p.c. of last year and 100 p.c. of average.

NUMBERS OF FARM LIVE STOCK.

Table II shows the numbers of farm live stock in various countries according to reports published in the Bulletin of the International Institute of Agriculture for January, February, March and April.

II. Numbers of Farm Live Stock in Various Countries.

Countries.	Date of Enumeration.	Horses.	Mules.	Asses.	Cattle.	Sheep.	Goats.	Swine.
Great Britain and Ireland.....	June 1915	1,984,988	-	-	12,171,452	28,275,970	-	3,795,131
	June 1916	2,108,445	-	-	12,451,540	28,849,655	-	3,615,891
New Zealand.....	April 1915	-	-	-	-	24,901,421	-	-
	April 1916	-	-	-	-	24,788,150	-	-
Egypt.....	1915	35,015	21,611	546,707	553,632	755,421	290,218	7,259
	1916	34,403	17,266	526,181	492,650	687,696	263,200	8,580
Spain.....	1915	512,453	950,830	826,204	2,920,170	15,994,608	3,216,632	2,883,081
	1916	488,715	912,984	838,648	3,070,903	16,012,277	3,207,360	2,814,465
Switzerland.....	April 1911	144,128	3,151	1,560	1,443,483	161,414	341,296	570,226
	April 1916	130,613	3,073	1,275	1,615,645	171,635	358,093	544,021
Denmark.....	May 1915	525,690	-	-	2,417,125	533,034	-	1,918,627
	Feb. 1916	515,415	-	-	2,289,996	-	-	1,983,255
Sweden.....	Dec. 1914	602,613	-	-	2,767,788	993,481	77,174	1,014,683
	June 1916	701,099	-	-	2,913,159	1,198,309	131,788	1,065,396
Tunis.....	July 1915	31,929	17,293	81,529	269,152	1,119,310	499,164	12,255
	April 1916	30,963	15,146	84,063	239,989	1,147,910	521,912	10,252
United States.....	Jan. 1916	21,159,000	4,593,000	-	62,720,000	48,625,000	-	67,766,000
	Jan. 1917	21,126,000	4,639,000	-	63,617,000	48,483,000	-	67,453,000

In Egypt there were also, in 1916, 515,121 buffaloes, as compared with 538,109 in 1915, and 94,911 camels as compared with 109,049 in 1915. In Spain, in 1916, the number of camels was 4,793, as compared with 4,778 in 1915, and in Tunis camels numbered 146,470 in 1916 as against 112,500 in 1915. In Eastern and Western Morocco, in 1915-16, camels numbered 84,118, cattle 877,640, sheep 4,715,371 and goats 4,511,004. In Western Morocco, for the year 1915-16, horses numbered 96,554, mules 42,420, asses 250,869 and swine 29,116.

The Royal Agricultural Academy of Sweden comments as follows on the returns for live stock as given in Table II: "The attention of readers should be drawn to the results realized as to all descriptions of farm stock consequently on the abnormal conditions arising from the war. The fear of an early prohibition has brought about, since the autumn of 1914, a large export of horses and extensive slaughtering of other animals. The very high prices of cattle, from the opening of the war, encouraged breeding. The census of June 1, 1916, shows that the number of cattle, especially those of young stock, has not only been maintained but even increased. Oxen, bulls and cows are the only classes showing any reduction in number for 1916 as compared with 1913.

FIELD CROPS OF THE UNITED KINGDOM, 1916.

Vol. LI, Part II, of the Agricultural Statistics of England and Wales [Cd. 8,559] gives the final returns of the acreage and produce of field crops in the United Kingdom for the year 1916. The figures, which are exclusive of the Channel Islands and the Isle of Man, are as follows:—

Crops	1915	1916	1915	1916	1915	1916	Average of the ten years 1906-15
	acres	acres	bush.	bush.	bush. per acre	bush. per acre	bush. per acre
Wheat.....	2,333,354	2,051,729	73,914,840	59,775,072	31.68	29.13	32.21
Barley.....	1,522,646	1,651,874	46,897,952	52,900,400	30.80	32.02	34.04
Oats.....	4,159,274	4,140,843	178,467,160	170,670,256	42.91	41.16	42.38
Beans.....	264,069	235,024	7,393,240	7,140,576	28.00	30.38	30.13
Peas.....	98,572	85,558	2,402,704	2,088,720	24.38	24.41	26.33
Potatoes.....	1,202,259	1,144,375	281,502,293	204,171,557	234.14	178.41	215.41
Turnips and swedes.....	1,615,066	1,609,500	912,093,765	870,545,013	564.74	540.87	546.93
Mangolds.....	407,740	459,731	302,002,629	336,364,074	727.25	731.65	723.15
Hay ¹	2,837,030	3,053,064	5,069,335	6,145,853	1.79	2.01	1.79
Hay ²	6,393,365	6,521,192	8,873,302	10,875,763	1.39	1.67	1.56
Hops.....	34,744	31,352	285,162	344,799	8.21	10.99	10.14

¹Clover, sainfoin, etc. ²Permanent grass.

NOTE.—The ton=2,000 lb. and the cwt.=100 lb.

The total production of wheat in England and Wales in 1916 was 54,683,264 bushels, or 13,040,000 bushels less than in 1915, but only 800,000 bushels less than the average of the ten years immediately preceding the war, viz., 1905-14. The reduction in the total crop as compared with the previous year was due mainly to the smaller area, but the yield per acre was also less. The yield in 1916 was 28·60 bushels per acre, or more than $2\frac{1}{2}$ bushels per acre less than in 1915, and $3\frac{1}{4}$ bushels per acre below the average of the ten years 1906-15. The total production of barley was 41,447,408 bushels, or 5,200,000 bushels more than the very low production of 1915, but (owing partly to the acreage being below the mean) 8,000,000 bushels less than the average of the ten years 1905-15. The yield per acre, 31·11 bushels, although nearly $1\frac{3}{4}$ bushel greater than in 1915, was nevertheless $1\frac{2}{3}$ bushel under average. There was little change as compared with 1915 in the production of oats, the total crop being 83,287,944 bushels, as compared with 83,095,256 bushels in the previous year. The total production was also slightly larger than the average of the last ten years before the war. The yield per acre was 39·95 bushels, or slightly more than in 1915, but about one-third of a bushel per acre below the average of the previous decade. Beans were the only grain crop which gave an over average yield in 1916, namely, 30·18 bushels per acre, or one-third of a bushel above average; but the total production, owing to a reduced area under the crop, was only 6,899,016 bushels or 1,440,000 bushels less than average. The total production of peas, 2,080,840 bushels, was the smallest recorded since these returns were first collected in 1884, and was little more than half the average of the ten years 1905-14, owing largely to recent reductions in the area. The yield per acre was 24·40 bushels, or $1\frac{1}{8}$ bushel under average.

The weights per bushel of the principal grain crops were for England and Wales in lb. as follows: Wheat 61·4 (62·2); barley, 53·5 (53·5); oats, 39·0 (39·2). The figures within brackets are those of 1915.

THE WEATHER DURING APRIL.

The Dominion Meteorological Office reports that the temperature was below the average throughout the Dominion, except in the Yukon Territory, where it was above the average, Dawson City recording the large positive departure of 6°. The chief negative departures were experienced in the western provinces and in the far northern portions of Ontario, and they varied between 4° and 7°. The precipitation was below the average in the Yukon Territory and locally in Manitoba, northern Ontario, Quebec and in Nova Scotia; elsewhere over the large remainder of the Dominion, it was above the average. The positive departure was quite marked in Alberta and Saskatchewan, also in the peninsula of Ontario and in New Brunswick. In the western provinces the precipitation was chiefly as snow. Occasional snowfalls were also recorded over the other provinces. The chief positive departures in the precipitation were 4·98 inches at Vancouver, 2·00 inches at Southampton and Port Stanley, and 2·55 inches at Chatham, N.B., while the most marked negative departures were 1·34 inch at Winnipeg, 0·93 inch at Port Arthur and 0·78 inch at Halifax.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London and represent the range at the weekly Monday Market. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade	April 7		April 14		April 21		April 28	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.	1 94½	-2 10½	2 08½	-2 20	2 29½	-2 43½	2 39½	-2 70½
No. 2 Nor.	1 90½	-2 06½	2 04	-2 15½	2 24½	-2 39½	2 34½	-2 65½
No. 3 Nor.	1 84½	-2 00½	1 98	-2 09½	2 19½	-2 34½	2 29½	-2 60½
No. 4	1 75½	-1 91½	1 88½	-2 00	2 09½	-2 22½	2 17½	-2 45½
No. 5	1 55½	-1 72½	1 69½	-1 81	1 90½	-2 03½	1 98½	-2 24½
No. 6	1 25½	-1 42½	1 39½	-1 51	1 58½	-1 71½	1 67½	-1 93½
Feed	1 03	-1 07	1 08	-1 16	1 16½	-1 25	1 25	-1 35
Oats—								
No. 2 C.W.	0 65½	-0 69	0 67½	-0 70½	0 69	-0 71½	0 68½	-0 75
No. 3 C.W.	0 63½	-0 67½	0 66	-0 68½	0 68½	-0 70	0 67½	-0 73½
No. 1 Feed Ex.	0 63½	-0 67½	0 66	-0 68½	0 68½	-0 70	0 67½	-0 73½
No. 1 Feed	0 62½	-0 66	0 65	-0 67½	0 67	-0 69½	0 66½	-0 72½
No. 2 Feed	0 62½	-0 65½	0 64	-0 66½	0 65½	-0 67½	0 65½	-0 68½
Barley—								
No. 3 C.W.	1 10	-	1 12	-1 16½	1 17½	-1 20	1 17	-1 25
No. 4 C.W.	1 00	-1 04	1 06	-1 08	1 09	-1 13	1 11½	-1 17½
Rejected	0 87	-0 90	0 91	-0 94	0 95	-0 99	0 99	-1 00
Feed	0 87	-0 90	0 91	-0 94	0 95	-0 99	0 99	-1 00
Flax—								
No. 1 N.W.C.	2 69½	-2 78	2 79	-2 95½	2 96½	-3 03½	2 97½	-3 06½
No. 2 C.W.	2 65½	-2 74	2 74½	-2 91½	2 92½	-2 99	2 93½	-3 03
No. 3 C.W.	2 52½	-2 61	2 62½	-2 78½	2 79½	-2 86½	2 80½	-2 89

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market	January		February		March		April	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis	1 83	-2 06	1 71	-2 02	1 94	-2 20	2 21	-3 10
Chicago	1 74	-2 00	1 66½	-1 85½	2 01½	-2 47½	2 07½	-3 04
New York (f.o.b. afloat)	1 46	-2 05	1 70	-2 03½	-	-	2 2½	-3 19½
Corn, No. 2, mixed—								
St. Louis	0 94½	-1 02	0 95½	-1 01	1 01½	-1 23	1 19½	-1 55½
New York (f.o.b. afloat)	-	-	-	-	-	-	1 23	-1 40
Corn, No. 2—								
Chicago	0 93½	-1 03	0 96½	-1 02½	-	-	-	-
Oats, No. 2—								
St. Louis	0 54	-0 59	0 53	-0 63	0 61	-0 65½	0 67	-0 74½
Chicago	0 53½	-0 58½	0 51½	-0 56½	-	-	0 63½	-0 71½
Rye, No. 2—								
Chicago	1 38	-1 48½	1 40	-1 52	-	-	1 68	-2 05

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description	April 2		April 9		April 16		April 23		April 30	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	2 56	—	2 50	—	2 62	—	2 62	—	2 62	—
“ No. 2.....	2 51½	—	2 54½	—	2 57½	—	2 57½	—	2 57½	—
“ No. 3.....	2 44½	—	2 47½	—	2 50½	—	2 50½	—	2 50½	—
“ No. 4.....	2 38½	—	2 41½	—	2 44½	—	2 44½	—	2 44½	—
“ Feed.....	2 35½	—	2 38½	—	2 41½	—	2 41½	—	2 41½	—
American—										
Omaha Cert.....	2 47½	—	2 50½	—	2 53½	—	2 53½	—	2 53½	—
Montana Cert.....	2 51½	—	2 54½	—	2 57½	—	2 57½	—	2 57½	—
Red winter western.....	2 44½	—	2 47½	—	2 50½	—	2 50½	—	2 50½	—
“ “ common.....	2 41½	—	2 44½	—	2 47½	—	2 47½	—	2 47½	—
Argentine.....	2 48½—2 53½		2 51½—2 56		2 54½—2 59		2 54½—2 59		2 54½—2 59	
Australian.....	2 59	—	2 62	—	2 64½	—	2 64½	—	2 64½	—
Indian.....	2 59—2 62		2 62—2 64½		2 64½	—	2 64½	—	2 70½	—
Californian.....	2 59	—	2 62	—	2 64½	—	2 64½	—	2 64½	—
Oats—										
Canadian.....	1 47½—1 50		1 62½—1 65½		1 70½—1 75½		1 75½—1 78½		1 75½—1 78½	
American.....	1 44½—1 47½		1 60½—1 62½		1 68—1 70½		1 73½—1 75½		1 73½—1 75½	
Chilian.....	1 55½—1 60½		1 70½—1 75½		1 70½—1 70½		1 78½—1 81		1 75½—1 78½	
Flour (per 280 lb.)—										
Canadian good.....	16 79—17 03		16 79—17 03		16 79—17 03		17 28—17 52		17 76—18 00	
“ first bakers'.....	16 30—16 55		16 30—16 55		16 30—16 55		16 79—17 03		17 28—17 52	
“ common.....	16 06—16 30		16 06—16 30		16 06—16 30		16 55—16 79		17 03—17 28	
American spring, good... “ “ common	16 79—17 03 16 30—16 55		16 79—17 03 16 30—16 55		16 79—17 03 16 30—16 55		17 28—17 52 16 79—17 03		17 76—18 00 17 28—17 52	
Kansas.....	17 03—17 27		17 03—17 27		17 03—17 27		17 52—17 76		17 76—18 00	
Nebraska.....	16 55—16 79		16 55—16 79		16 55—16 79		17 03—17 28		17 28—17 52	
Australian.....	16 55—16 79		16 55—16 79		16 55—16 79		17 03—17 28		17 03—17 28	

IV. Average Prices of British-grown Grain, 1917.

Week ended	Wheat		Barley		Oats	
	per quarter	per bushel	per quarter	per bushel	per quarter	per bushel
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
April 7.....	84 4	2.565	69 11	2.042	55 1	1.461
“ 14.....	85 2	2.590	71 10	2.097	57 2	1.516
“ 21.....	84 10	2.580	70 6	2.059	59 8	1.582
“ 28.....	81 1	2.466	69 5	2.027	58 6	1.551
Average.....	83 10	2.550	70 5	2.056	57 7	1.528

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended May 31, 1917.

This report of the Census and Statistics Office gives a preliminary estimate of the areas sown to grain crops this spring, with a report of their condition on May 31 as compiled from the returns of crop correspondents. The reports from the prairie provinces state that the spring there is very backward, and seeding is consequently late. At the end of May severe frosts cut down the growing wheat plant; but rapid recovery was anticipated. Rain was needed for the germination of the later sown crops and of wheat sown on stubble.

AREA AND CONDITION OF WHEAT.

It is estimated from the reports of correspondents that the total area sown to wheat for 1917 is 13,450,250 acres, as compared with 14,897,000 acres, the area sown, and with 12,900,600 acres, the area harvested in 1916. Thus, the area sown this year, whilst nearly 10 p.c. less than the area sown for 1916, is about 4 per cent more than the area harvested for 1916. In arriving at these figures revised returns of the Census of 1916 have been included for Manitoba; for Saskatchewan and Alberta similar revisions have not yet been completed. As compared with the areas sown for 1916, the returns this year indicate small increases under wheat in each of the Atlantic provinces and in British Columbia and an increase of 25,000 acres in Quebec; but for each of the remaining provinces decreases are reported to the extent of 154,000 acres in Ontario, 254,000 acres in Manitoba, 927,000 acres in Saskatchewan and 158,000 acres in Alberta. Of the total area under wheat 809,250 acres were sown last fall and 12,641,000 acres were sown this spring. In the three prairie provinces the total area sown to wheat is estimated at 12,497,550 acres, comprising 2,476,850 acres in Manitoba, 7,605,700 acres in Saskatchewan and 2,415,000 acres in Alberta.

The average condition on May 31 according to the standard representing a full crop is for all wheat for Canada 84 p.c., as compared with 90 p.c. on May 31 last year and with 91 p.c. the average condition on the corresponding date for the seven years ended 1916. In the prairie provinces the condition of wheat is 87 p.c. of the standard in Manitoba, 80 p.c. in Saskatchewan and 92 p.c. in Alberta. Converted into a standard of 100 as representing the average condition at the end of May of the past seven years 1910-16 the condition for the whole of Canada of fall wheat is 86, of spring wheat 94, and of all wheat 93 p.c. Thus, according to its reported condition on May 31, the anticipated yield per acre of wheat this year is 7 p.c. less than the average of the seven years, 1910-16.

AREA AND CONDITION OF OTHER CROPS.

The decrease in the area sown to wheat this year is partly due to the curtailment of the seeding season by the lateness of the spring, and efforts were therefore apparently directed towards an increase in the areas sown to other crops. For oats, the acreage is 11,781,900 acres, as compared with 11,376,346 acres, the area sown, and 9,875,346 acres, the area harvested last year. Barley is sown to 1,954,100 acres, as against 1,827,780 acres, the area sown, and 1,681,180 acres, the area harvested in 1916. Rye has a sown area of 159,470 acres, as compared with 147,170 acres in 1916; peas 152,465 acres, compared with 159,680 acres; mixed grains 558,250 acres, as compared with 410,726 acres; hay and clover, 7,661,800 acres, against 7,892,932 acres; and alfalfa 84,900 acres, against 89,472 acres. The condition of these crops according to the standard representing a full crop is for oats 85 p.c., compared with 90 p.c. last year and 93 p.c., the average at the end of May for the seven years, 1910-16; for barley 87 p.c., as against 89 p.c. last year and 92 p.c., the seven years' average; for rye 86 p.c. against 91 p.c. last year and 89 p.c., the average; for peas 88 p.c. compared with 90 p.c. last year and 91, the average; for mixed grains 89 p.c. both this year and last year and 92 p.c., the average; for hay and clover 80 p.c. compared with 98 p.c. and 92 p.c., the average; for hay and clover 80 p.c. compared with 98 p.c. and 92 p.c., the average.

Census and Statistics Office,
Ottawa, June 13, 1917.

ERNEST H. GODFREY,
Editor.

I. Preliminary Estimate of Areas under Field crops in 1917, compared with areas sown for the Harvest of 1916.

Field crops.	Areas sown for harvest of 1916.	Areas sown for harvest of 1917.	Field crops.	Areas sown for harvest of 1916.	Areas sown for harvest of 1917.
	acres.	acres.		acres.	acres.
Canada—			New Brunswick—		
Fall wheat.....	980,529	809,250	Spring wheat...	14,000	18,000
Spring wheat...	13,916,561	12,641,000	Oats.....	198,000	180,000
All wheat...	14,897,090	13,450,250	Barley.....	1,900	1,800
Oats.....	11,376,346	11,781,900	Peas.....	400	380
Barley.....	1,827,780	1,954,100	Mixed grains....	870	850
Rye.....	147,170	159,470	Hay and clover.	574,000	540,000
Peas.....	159,680	152,465	Quebec—		
Mixed grains....	410,726	558,250	Spring wheat...	70,000	95,000
Hay and clover.	7,892,932	7,661,800	Oats.....	1,308,000	1,334,000
Alfalfa.....	89,472	84,900	Barley.....	81,000	79,000
P. E. Island—			Rye.....	8,300	7,700
Spring wheat...	34,500	36,000	Peas.....	23,000	23,700
Oats.....	199,000	199,000	Mixed grains....	95,000	93,000
Barley.....	3,600	3,500	Hay and clover.	2,985,000	2,925,000
Peas.....	60	60	Alfalfa.....	2,600	2,400
Mixed grains....	8,000	7,700	Ontario—		
Hay and clover.	199,000	197,000	Fall wheat.....	820,600	656,500
Nova Scotia—			Spring wheat...	101,000	111,000
Spring wheat...	13,400	19,400	All wheat...	921,600	767,500
Oats.....	116,000	121,000	Oats.....	2,465,000	2,740,000
Barley.....	4,700	5,000	Barley.....	368,000	386,400
Rye.....	320	270	Rye.....	60,000	63,000
Peas.....	180	170	Peas.....	134,000	126,000
Mixed grains....	4,100	4,200	Mixed grains....	295,000	301,000
Hay and clover	553,000	532,000	Hay and clover.	3,059,000	2,936,000
			Alfalfa.....	56,000	53,700

I. Preliminary Estimate of Areas under Field crops in 1917, compared with areas sown for the Harvest of 1916—concluded.

Field crops.	Areas sown for harvest of 1916.	Areas sown for harvest of 1917.	Field crops.	Areas sown for harvest of 1916.	Areas sown for harvest of 1917.
	acres.	acres.		acres.	acres.
Manitoba—			Alberta—		
Fall wheat.....	3,829	3,850	Fall wheat.....	44,200	38,000
Spring wheat....	2,717,161	2,473,000	Spring wheat....	2,529,000	2,377,000
All wheat....	2,720,990	2,476,850	All wheat....	2,573,200	2,415,000
Oats.....	1,441,246	1,470,000	Oats.....	2,030,500	1,969,600
Barley.....	687,080	856,400	Barley.....	321,400	289,300
Rye.....	30,050	49,000	Rye.....	19,000	17,500
Mixed grains....	1,356	1,300	Peas.....	380	325
Hay and clover..	76,932	73,800	Mixed grains....	1,800	1,600
Alfalfa.....	4,422	4,200	Hay and clover..	196,000	196,000
Saskatchewan—			Alfalfa.....	12,000	10,300
Fall wheat.....	105,700	105,700	British Columbia—		
Spring wheat....	8,427,000	7,500,000	Fall wheat.....	6,200	5,200
All wheat....	8,532,700	7,605,700	Spring wheat....	10,500	11,600
Oats.....	3,543,600	3,685,000	All wheat....	16,700	16,800
Barley.....	357,400	330,000	Oats.....	75,000	83,300
Rye.....	20,500	22,000	Barley.....	2,700	2,700
Peas.....	360	330	Peas.....	1,300	1,500
Mixed grains....	2,000	146,000	Mixed grains....	2,600	2,600
Hay and clover..	75,000	78,000	Hay and clover..	175,000	184,000
Alfalfa.....	1,850	1,700	Alfalfa.....	12,600	12,600

II. Preliminary Estimate of Areas sown to Wheat, Oats and Barley for the harvest of 1917, as compared with areas harvested in 1916.

Field crops.	Area harvested 1916.	Area sown 1917.	Field crops.	Area harvested 1916.	Area sown 1917.
	acres.	acres.		acres.	acres.
Canada—			Ontario—con.		
Fall wheat.....	932,529	809,250	Oats.....	1,991,000	2,740,000
Spring wheat....	11,968,061	12,641,000	Barley.....	326,000	386,400
All wheat....	12,900,590	13,450,250	Manitoba—		
Oats.....	9,875,346	11,781,900	Fall wheat.....	3,829	3,850
Barley.....	1,681,180	1,954,100	Spring wheat....	2,323,161	2,473,000
P. E. Island—			All wheat....	2,326,990	2,476,850
Spring wheat....	34,500	36,000	Oats.....	1,311,246	1,470,000
Oats.....	199,000	199,000	Barley.....	644,080	856,400
Barley.....	3,600	3,500	Saskatchewan—		
Nova Scotia—			Fall wheat.....	105,700	105,700
Spring wheat....	13,400	19,400	Spring wheat....	7,352,000	7,500,000
Oats.....	116,000	121,000	All wheat....	7,457,700	7,605,700
Barley.....	4,700	5,000	Oats.....	3,180,600	3,685,000
New Brunswick—			Barley.....	344,000	330,000
Spring wheat....	14,000	18,000	Alberta—		
Oats.....	198,000	180,000	Fall wheat.....	42,000	38,000
Barley.....	1,900	1,800	Spring wheat....	2,067,000	2,377,000
Quebec—			All wheat....	2,109,000	2,415,000
Spring wheat....	64,000	95,000	Oats.....	1,746,500	1,969,600
Oats.....	1,073,000	1,334,000	Barley.....	281,400	289,300
Barley.....	72,800	79,000	British Columbia—		
Ontario—			Fall wheat.....	6,200	5,200
Fall wheat.....	774,800	656,500	Spring wheat....	9,800	11,600
Spring wheat....	90,200	111,000	All wheat....	16,000	16,800
All wheat....	865,000	767,500	Oats.....	60,000	83,300
			Barley.....	2,700	2,700

III. Condition of Field Crops, May 31, 1910-17.

NOTE.—100 = standard or full crop.

Field crops.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada—								
Fall wheat.....	88	81	71	81	80	94	84	71
Spring wheat.....	91	97	94	92	92	96	92	87
All wheat.....	90	92	87	89	91	95	90	84
Oats.....	94	95	92	92	93	92	90	85
Barley.....	93	93	91	91	92	92	89	87
Rye.....	88	90	87	88	89	91	91	86
Peas.....	93	92	84	88	92	93	90	88
Mixed grains.....	95	94	88	90	93	91	89	89
Hay and clover.....	98	91	96	81	90	86	98	80
Alfalfa.....	—	—	91	77	88	87	94	78
Pasture.....	—	—	—	85	90	87	97	83
P. E. Island—								
Spring wheat.....	102	96	101	97	98	99	99	86
Oats.....	102	96	102	98	98	99	98	99
Barley.....	96	98	102	97	97	100	100	97
Peas.....	100	96	98	96	98	100	99	97
Mixed grains.....	100	99	99	98	98	100	99	99
Hay and clover.....	110	82	92	97	100	97	101	87
Alfalfa.....	—	—	90	40	83	93	—	75
Pasture.....	—	—	—	93	96	93	98	86
Nova Scotia—								
Spring wheat.....	100	92	97	86	93	90	96	95
Oats.....	102	94	97	93	94	92	97	97
Barley.....	98	93	92	86	92	93	97	100
Rye.....	92	96	76	91	95	92	100	65
Peas.....	94	90	95	90	91	104	98	100
Mixed grains.....	98	97	96	89	95	97	99	87
Hay and clover.....	105	86	99	96	90	97	98	86
Alfalfa.....	—	—	84	100	72	90	88	—
Pasture.....	—	—	—	93	86	93	93	76
New Brunswick—								
Spring wheat.....	100	92	98	92	97	98	99	83
Oats.....	103	93	97	92	98	96	99	70
Barley.....	94	86	94	84	93	78	97	67
Peas.....	97	83	96	82	97	82	92	88
Mixed grains.....	96	90	93	89	93	84	98	71
Hay and clover.....	108	87	100	88	100	90	100	82
Alfalfa.....	—	—	81	64	88	91	90	—
Pasture.....	—	—	—	83	95	84	97	76
Quebec—								
Spring wheat.....	95	95	82	89	92	89	90	87
Oats.....	98	93	82	91	93	89	93	85
Barley.....	94	92	86	85	92	88	91	86
Rye.....	91	90	80	86	89	83	91	95
Peas.....	92	91	78	87	92	89	94	86
Mixed grains.....	96	92	79	90	92	90	92	87
Hay and clover.....	105	95	97	79	94	82	91	81
Alfalfa.....	—	—	86	76	91	79	94	87
Pasture.....	—	—	—	79	93	84	99	76
Ontario—								
Fall wheat.....	93	77	68	82	79	94	82	67
Spring wheat.....	94	97	89	90	91	93	85	81
All wheat.....	93	86	76	85	84	94	84	78
Oats.....	93	92	88	88	91	91	77	85
Barley.....	92	93	88	90	92	89	80	88
Rye.....	87	88	86	85	86	90	88	79
Peas.....	94	93	83	89	92	90	84	89
Mixed grains.....	93	94	81	89	93	91	82	89
Hay and clover.....	95	88	92	80	83	83	99	71
Alfalfa.....	—	—	91	73	87	86	94	82
Pasture.....	—	—	—	83	85	86	99	70

III. Condition of Field Crops, May 31, 1916-17—concluded.

NOTE.—100 = standard or full crop.

Field crops.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Manitoba—								
Fall wheat.....	80	100	87	70	96	89	82	66
Spring wheat.....	91	98	97	94	98	92	92	88
All wheat.....	91	98	96	92	98	92	91	87
Oats.....	92	96	97	94	94	90	92	92
Barley.....	92	98	98	93	94	93	90	82
Rye.....	81	96	94	100	100	89	90	90
Peas.....	92	99	97	88	100	98	100	75
Mixed grains.....	97	100	94	97	93	100	93	86
Hay and clover.....	84	99	98	92	97	75	95	77
Alfalfa.....	—	—	—	95	96	84	97	72
Pasture.....	—	—	—	95	97	75	96	72
Saskatchewan—								
Fall wheat.....	77	95	93	82	85	92	100	98
Spring wheat.....	96	98	96	92	94	104	91	80
All wheat.....	86	98	96	91	93	104	91	80
Oats.....	92	98	96	93	93	91	91	81
Barley.....	93	93	96	93	92	94	90	86
Rye.....	95	91	96	97	87	86	93	103
Peas.....	89	100	95	110	92	95	90	69
Mixed grains.....	96	96	93	97	93	102	109	95
Hay and clover.....	70	98	101	96	96	88	97	91
Alfalfa.....	—	—	96	90	93	88	100	84
Pasture.....	—	—	—	91	96	90	94	90
Alberta—								
Fall wheat.....	71	86	77	74	81	96	93	89
Spring wheat.....	85	97	96	94	92	98	94	92
All wheat.....	80	93	89	89	89	98	93	92
Oats.....	87	98	94	94	91	98	100	91
Barley.....	90	98	98	95	92	98	94	89
Rye.....	84	101	98	97	95	101	94	89
Peas.....	89	101	97	93	83	98	97	83
Mixed grains.....	80	99	99	98	90	98	98	92
Hay and clover.....	81	100	99	93	87	100	93	93
Alfalfa.....	—	—	92	86	86	96	93	91
Pasture.....	—	—	—	93	87	101	94	94
British Columbia—								
Fall wheat.....	91	95	94	97	88	98	85	73
Spring wheat.....	95	96	100	99	96	98	89	96
All wheat.....	93	96	97	98	94	98	88	89
Oats.....	90	96	100	98	91	100	92	68
Barley.....	94	96	100	95	96	97	87	94
Rye.....	100	100	100	—	108	99	87	94
Peas.....	95	94	94	100	93	100	88	94
Mixed grains.....	83	100	103	92	86	100	99	95
Hay and clover.....	89	98	101	96	98	102	89	95
Alfalfa.....	103	98	99	83	91	104	91	93
Pasture.....	—	—	—	95	102	101	88	94

CROP REPORTS FROM THE PROVINCES.

Month ended May 31, 1917.

Prince Edward Island.—The month has been very wet and cold, with heavy frosts at night, and farming operations are delayed. The land is in good condition, and growth of grains will be very rapid with warm weather. The orchards are dormant yet; there are no blossoms on the fruit trees. Small fruit bushes look well and

healthy. There are prospects of an abundant crop of fruit. Only a few vegetables are sown as yet and some early potatoes. A considerable amount of gardening will be done.

Nova Scotia.—All agricultural operations have been much retarded by cold, damp weather. The excessive rains have made ploughing and seeding impracticable on heavy soils and low lands. Apple trees are not in leaf yet, but in appearance the orchards promise well. A very small proportion of vegetables has been planted as yet.

New Brunswick.—In general, the exceedingly cold and cloudy weather with considerable rain, has resulted in very little seeding being done, and the growth of crops is very slow. Orchards are dormant, but the bloom being delayed may prevent frost damage later. Very few vegetables have been planted so far, and what has been sown is not yet showing above ground.

Quebec.—The temperature of April and May has been very cold, thus retarding the growth of grain, hay and meadow grass. However, with hope of warmer weather, everything promises well. Fruit trees look vigorous but are not yet in bloom. Small fruits have a good appearance and the prospects are for a good crop. Spring frosts have exterminated the caterpillar. Vegetable gardening is very little advanced. There is a larger acreage of potatoes sown.

Ontario.—Fall wheat, hay and clover have received serious injury, particularly on low lands, from too much moisture and frosty weather. Seeding is proceeding satisfactorily, warm weather will bring crops up to standard. Orchard and garden fruits are in a healthy condition; but apple trees are not yet in blossom. There are prospects of a light crop, especially in winter varieties. There is a large increase in vegetable planting, but vegetation is nearly at a standstill, owing to the lack of warm weather.

Manitoba.—By the end of the month, seeding was largely completed except for flax and grains for green feed. May was cool and extremely dry, and growth consequently very slow. Severe frosts at the end of the month cut down a good deal of the grain. Rains and warm weather are required to repair this damage and to hasten growth in order that crops may mature before the fall frosts. Pastures and gardens are also suffering from the drought. Fruit bloom and tender vegetables were injured by the frosts.

Saskatchewan.—Owing to the late spring, seeding was from two to three weeks later than usual. By May 31 all the wheat was sown and most of the oats, but only a small part of the barley. May was warm and favourable for good growth, but at the end of the month frosts occurred which cut down much of the young grain. These frosts, however, do not appear to have destroyed the vitality of the plant and a good recovery is looked for, though growth has been set back a week or ten days. There is a fair amount of moisture in the soil, but rains would be very beneficial, especially for the germination of wheat sown on stubble and the later sown grains. A larger acreage of oats will be sown owing to the uncertain prospects for maturing wheat. Both wild and tame fruits showed good blossom; but the

frosts may have affected them. Vegetables were not generally showing above ground and what were up were touched by the frost.

Alberta.—In most parts of the province the seeding of wheat and oats was pretty well completed by the end of the month. Wheat was well advanced and of even germination, but oats were hardly showing above ground. In the central part of the province however heavy rainfalls occurred making the ground wet and difficult to work, so that here things are not so well advanced. Barley seeding was first commencing at the end of the month, and large areas were being prepared for flax. Some frosts have occurred, but the resulting damage is not serious. Fruits appeared to have wintered well and show good bloom. Vegetables were just beginning to come through the ground.

British Columbia.—Grain crops are not so far advanced as usual owing to the late spring, but good growth has been made since the warm weather. Hay land is in good condition. Apple trees suffered from winter killing in places, but on the whole fruits of all kinds promise well. Gardens are backward.

CROP REPORTS FROM THE PROVINCIAL GOVERNMENTS.

Ontario.—The Ontario Department of Agriculture now issues a weekly statement of farm conditions, based upon reports forwarded by district representatives at the end of each week. The series began with April 30. At this date it was reported that the acreage of ploughing done was well up to the average, and that seeding was fairly well advanced on light soils, but was backward on heavy land. On May 14 over 75 p.c. of spring seeding had been completed. The soil as a rule worked nicely and better than for many years.

The report of May 21 stated that, except in a few cases, the sowing of spring grains was completed. The seedbed was never in better condition, but owing to the cool weather prevailing, the crops were coming up slowly, awaiting warm rains. More oats and less buckwheat was the rule. Fall wheat has improved with the warmer weather, but clover was not nearly so forward as usual. In the towns vegetable growing was still booming. In addition to the multitude of backyards cultivated, urban clubs and associations were utilizing vacant town lots and rural plots in their immediate vicinity. All classes of farm animals except horses were in great demand at top figures. Fresh milking cows in Carleton had been bringing \$150 during the week, and in Victoria a shipment of 100 grade Shorthorn heifers was being made to Saskatchewan. Pastures had been very backward and short, yet the flow of milk had kept up surprisingly well, although some fault was being found with the quality. Reports on the labour situation state that farmers were much further ahead with their work than they were a year ago. Boy labour has been much in operation, as many High School and other lads were placed by the district representatives.

On June 11 it was reported that spring-sown crops on the whole looked most promising, although there were complaints of some of the early planted corn rotting in the ground owing to the wet and backward weather. A considerable quantity of corn was yet to be put in, as there would be an increased acreage this season. Grass seed had caught splendidly. The fruit outlook was on the whole bright, as blossoms on trees, bushes, etc., had so far totally escaped frost. All classes of live stock were beginning to look sleek on the much improved pastures. Market prices had dropped during the week. Fat steers had brought 12 cents a lb., but ordinary cattle ranged from 8 to 10 cents a lb. Sheep were doing well. Wool never brought such prices. While farm help was not in demand for immediate service, requests were being made for the services of boys during the summer holidays, as many who had already been employed gave satisfaction. Skilled farm hands were very scarce.

For June 18 reports stated that spring grains were coming forward in a most satisfactory way. Oats and barley had never looked better, and there had been a wonderful recovery of fall wheat. Wet weather during the week had still further delayed the planting of late crops. Potatoes had been slow in coming up, but the warmer weather of the week had given them a nice start and most fields were looking encouraging. Pastures had come along amazingly well of late, and at present looked in first class condition where not too closely cropped by live stock. Clover and timothy were growing rapidly, and an average yield of hay was now looked for, while earlier in the season a small return was anticipated. Orchard fruits, with the exception of winter apples, would do fairly well, cherries and plums being in the lead. Many growers were through with the third spraying. Small fruits were described as being very promising. All classes of farm stock were in good general condition. The market for horses was improving, as they were not so plentiful, owing to heavy shipments to the West in the spring. Prices for cattle had had a downward tendency, beef animals selling at \$11.50 a cwt. and dry cows $1\frac{1}{2}$ cent lower. Good grade milch cows, however, could still command \$100 for the dairy. With most farmers all kinds of fodder except hay were practically exhausted, although here and there a little silage or other feed was yet in store. The lush pastures were having a marked effect upon the milk flow, which was never fuller, taking the number of cows into consideration. Two thousand boxes of cheese were sold at Peterborough during the week for $20\frac{3}{4}$ cents a lb., while over 21 cents a lb. was offered in Frontenac county. Dundas county reports that the price fixed for cheese at $21\frac{3}{4}$ cents a lb., f.o.b. Montreal, netted the producers only $20\frac{1}{2}$ cents a lb. or a trifle over. Requests for help during the hoeing and harvest seasons were being made to representatives, the inquiries for boys and men being about equally divided. Fruit and vegetable growers were also asking for assistance. The demand for help was being met in most cases.

Saskatchewan.—A telegram received on June 14 stated that rain was general throughout the province with the exception of the northwestern portion. Wheat was from three to five inches high.

Summer fallowing had started, and it was expected that there would be a slight increase in acreage. New breaking would be about the same as last year.

On June 30 it was reported that all grain crops were making rapid progress and prospects were very encouraging. Wheat was in the shot blade in a great many places. Although the frosts had retarded the growth in some parts the majority of the plants were from eight to ten inches in height. Sufficient rain had fallen to ensure good growth, and warm weather was needed generally.

Alberta.—A telegram dated June 12 stated that the general season was somewhat late, especially between Wetaskiwin and Crossfield. The weather was cool, but crops were doing well. No frost had been reported since June 5. All grain for threshing was sown, but there was 40 p.c. for green feed yet to sow. There was plenty of moisture in all parts. On June 18 it was reported that the condition of crops from June 9 to 16 showed that all grains had made good growth, warmer weather having prevailed over a large portion of the province. Slight frost in several districts had done no damage. More moisture was needed in the eastern part of the central district. Seeding for green feed was still in progress. Hail was reported in one district, but no damage had been done. Live stock were doing well. On June 23 week-end reports showed heavy rains and good growing weather throughout the province, most of the dry district having received splendid rains. Wheat was reported to be in shot blade. Potatoes and all roots were up and looking well. There had been no frost or damage by hail.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during May has been unusually cool, the mean temperature being 48.78, which is the lowest for this period during the past twenty-five years, with the exception of 1907, when the mean for May was 48.16, while the mean temperature for this month in 1916 was 54, and for the previous twenty years averaged 55.42. The highest reading of the thermometer during the month is 81, and the lowest 30, compared with 81.8 and 33, respectively, for this time last year. The precipitation totals 1.83 inch, rain falling on eleven days, while the average for this month for the previous twenty years was 3.12 inches, as against 6.89 inches in May, 1916, when rain was recorded on nineteen out of the thirty-one days. The bright sunshine of the month averages 6.44 hours a day, as against 6.75 hours a day a year ago and 7.75 hours daily for this time during the previous six years.

At the Experimental Farm, grain seeding was completed on the 14th, and potatoes and roots were got in the ground about the middle of May. The planting of Indian corn was finished by the end of the month. Practically all vegetation has made very slow growth on account of the cool weather, especially at night.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—
“The first nine days of May were cold, with occasional white frosts

at night and very little rain. The teams were able to start work on the 3rd, and at the Station both wheat and oats were sown on the 8th. From the 10th to the 17th rain fell every day. The 18th was fine and then there were showers for six days. The last week has been much warmer, with only three days of rain. The cool, backward weather greatly retarded the grass, and many who believed they had plenty of feed for their stock came out short. The Superintendent attended a number of organization meetings of the National Service Branch Leagues. Several of these Leagues imported hay for their districts. With the exception of wheat, there is plenty of good seed in the province. A great quantity of potatoes has been shipped during the month, taxing the railroad and the shipping points to the limit. Some of the potatoes still held will not be required for seed, and these should be available in small lots after the middle of June. The spring bulbs are making a good showing at the close of the month. Vegetables and other seeds in the hot-beds have come on well. The lawns were first cut on the 25th. About one-third of the work in connection with the seeding of the crops has been completed in May. The result of ribbing land in the autumn was very noticeable this season. Land ribbed at the Station was sown April 24th, while other fields were sown May 8th. All other fields in the neighbourhood could not be prepared for seeding until from two to three weeks later."

Kentville, N.S.—W. S. Blair, Superintendent, reports:—"The temperature during May was unusually low, the mean being 43.63 degrees as compared with 49.07, 46.14 and 50.72 degrees for 1916, 1915 and 1914, respectively. The precipitation totals 2.92 inches, and rain fell on sixteen days during the month. There were no periods of continued dry weather, and, as a result, the soil has not dried out well. The rainfall in May, 1916, 1915 and 1914 was 1.78, 2.5 and 1.46 inch, respectively. The sunshine aggregates 101.7 hours, as compared with 186.8, 160.9 and 189.6 hours for 1916, 1915 and 1914, respectively. The low temperature, continuous rain, and lack of sunshine, have very seriously hampered the work of putting in crops. Seeding has been done on dry lands, but, naturally, wet land could not be worked. Consequently, the putting in of crops will be very late. Growth is fully two weeks behind the previous year."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"The weather during May has been extremely unsettled and unseasonable; though practically no precipitation was recorded until the 10th, yet the sky was overcast, making the weather cold and dull, and a light flurry of snow was experienced on the 2nd. From the 10th to the 30th, rain was recorded on fourteen different days, the precipitation amounting to 3.55 inches, and the bright sunshine during the month aggregates only 97.30 hours, compared with 4.43 inches precipitation and 136.15 hours sunshine for May, 1915. For May 1916, the precipitation was 2.42 inches and the sunshine 186.2 hours. It is interesting to note that there is only slightly over half the amount of sunshine for 1917 than there was for the corresponding period in 1916, and very considerably less than in 1915. Weather conditions have

not been very unlike the same period for 1915. Seeding in this district only started on May 30th, while the first seeding in 1915 was on June 1st. At the time of writing, it continues to be dull and cool; and unless fine, warm weather intervenes within the next few days, many farmers in this district, whose land is heavy clay loam and not underdrained, will be very late in getting in their grain. Seed grain of all kinds and seed potatoes have been very scarce, with prices much above normal."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"May has been exceptionally cold and cloudy, with northeast winds nearly every day. There has been frost on twelve nights, the last being on the 28th, and on the 31st there was a reading of 34. The mean temperature is 44.1. May, 1916, had frost on four nights only, the latest being on the 22nd, and a mean temperature of 50.2. The average mean temperature for the past forty-two years is 51. The hours of sunshine total only 116, against 203.6 hours in 1916, and an average sunshine record for forty-two years of 204 hours. The precipitation has not been heavy, amounting to 3.07 inches, including a snowfall of 6 inches; the forty-two-year average for May is 3.3 inches. There has been practically no growth during the month, and unless land was especially well drained, the soil has remained wet and inactive. But little seeding has been done in central New Brunswick. On the Experimental Station, wheat sown on May 7th came up on the 23rd. No ground was fit for oat seeding until the 22nd. The 23rd saw the first potatoes planted. No pasturage has been available during the month. Live stock generally has come through the winter in good condition, and there will be a considerable quantity of hay kept over. Newly seeded meadows have come through the winter in fair shape, and the prospect is for a good hay crop, but conditions, thus far, are against a large cereal crop. The potato acreage in the province is likely to be about the same as last year."

Ste. Anne de la Pocatière, Que.—Jos. Bégin, Superintendent, reports:—"The weather during May has been cool and misty and not at all favourable for seeding. The highest temperature recorded is 59.2, the lowest 29.4 and the mean 42, compared with 75.6 and 30.5, respectively, and a mean temperature of 47.5 in May, 1916. The bright sunshine averages five hours a day, being exactly one hour a day less than that for the same month last year. Though the total precipitation, 3.64 inches, is not excessive, light showers have been experienced on thirteen days, while two inches of snow fell during the first week of the month. At the beginning of the month, the land was still quite wet, and the frequent showers have so retarded cultural operations that, by the 31st, grain seeding is far from completed. The season, on the whole, is probably at least three weeks later than usual. Practically all hoed crops have yet to be put in, and nearly 50 per cent of all grain and potatoes. The relatively cold weather has caused vegetation to make a very slow start. The earliest shrubs and trees are still leafless and buds are just swelling out. A few warm days would no doubt mean the rapid growth of all grass and grain and improve present prospects."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—“ May has been colder, drier and duller than the average for the past five years for the same month, the mean temperature being 46·2, precipitation 2·65 inches, and sunshine 153·6 hours, for 1917, compared with averages of 50·47 for the mean, 4·88 inches for rainfall and 200·8 hours for sunshine, for the corresponding period, for the previous five years. The season is about ten days later than usual, and trees have just commenced to leaf out on the 31st. The weather in general, however, permitted early and continuous work on the land, so that seeding operations were not much delayed. At the Station, all crops, even Swede turnips, are in, and this is earlier than usual. The grain sown about the middle of May is coming up strong and the rains of the 23rd and 25th have helped along meadows and pastures which did not look too good on account of the cold and drought. There has been a great deal more wheat, beans and potatoes than usual sown in the district, while an exceedingly large number of small gardens have been made in and around Quebec City. The inquiries concerning these latter have been so numerous that the Superintendent has spent more than half of his time, during May, attending to them.”

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—“ May has been very cool and backward, the thermometer registering below freezing on eight days. Consequently, vegetation has been retarded, and fruit trees are not yet in bloom. The highest temperature recorded is 77, the lowest 26, and the mean 45·38; while a year ago the extremes were 80 and 24, and the mean temperature 51. The precipitation totals 2·25 inches, while in the previous May it amounted to 4·2 inches. The bright sunshine recorded aggregates 136 hours, compared with 155 hours in May, 1916. Seeding in this district is fairly well under way and is being done under favourable conditions. The prospects for hay do not look very encouraging, the young clover not having wintered very well. Live stock is going to pasture later than usual.”

Brandon, Man.—W. C. McKillican, Superintendent, reports:—“ May has been a very dry month, the rainfall totalling only 0·14 of an inch. This has been fortunate for all farmers on heavy land, as seeding was very late in getting started and it gave an opportunity for continuous work on the land. For light soil, the conditions have not been so favourable, and the shortage of moisture is being felt. The month has been very cool, except for one week, when exceptional heat was experienced. The extreme range of temperature has run from 93 to 19·8, or from extreme summer heat to severe frost. The lowest temperature was recorded on the night of May 29th and did considerable damage to grain and garden crops. Owing to the cold, dry weather and late seeding, crop growth is very backward and much of the coarse grains are not up yet. On the Experimental Farm, preparation of the land and seeding have been the chief work. The sowing of wheat, oats, barley, corn, grasses, field roots, and alfalfa has been completed. A small area of flax remains to be sown.”

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—“May opened dull and showery, but it cleared up on the 6th and the weather has remained fine to the end of the month. Seeding became general by the 2nd and is practically completed by the 31st. Owing to the warm weather, grain has germinated rapidly and has made a good start, but its growth was slightly checked by severe frosts on the 18th, 25th, 28th and 29th. No damage by winds has been done to grain this spring and, with a good rain within the next few days, prospects will be bright.”

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—“Although seeding was not begun until May 4th, the condition of the ground and the weather have been favourable for its continuance without any interruptions, and, except where spring ploughing was done, the seed seems to have been put in under very promising conditions. Wheat seeding was completed at the Experimental Station on the 12th, and, in most of the district, by the 18th. The seventy-two steers fed at the Experimental Station during the winter were sold on May 22nd to the highest bidder. A great many shrubs that had stood the winter successfully since the establishment of the Station were destroyed during the past winter, including the green ash, Manitoba maple, and several varieties of lilac and spiræa. From 9·2 degrees of frost on the night of the 28th and 7·7 degrees on the night of the 29th, considerable further injury resulted to those shrubs which had suffered from winter-killing but were partially surviving. The same frost did considerable damage to the grain in most parts of the district.”

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—“The weather has been unusually warm for May, with very little rain. While the subsoil is quite moist, poorly prepared seed beds have dried out, resulting in an uneven germination of grain sown on these fields. Grain on well worked fields is growing rapidly. Sharp frosts experienced during the last few nights of the month have done some damage to field crops and to tender vegetables. At the end of the month, a few fields of late oats remain to be sown. Two carloads of steers used in the winter feeding experiment have been disposed of at a good figure.”

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—“The precipitation over the district from Calgary to Edmonton along the C. & E. line of railway and extending from twenty-five to fifty miles east of that line, has been heavy for May. The territory lying east of the somewhat irregular line indicated has had sufficient rain, but not an excess, and seeding operations have continued under promising weather conditions throughout the month. In this latter area, sowing is practically completed, while in many districts tributary to the C. & E. line, unfavourable weather has delayed seeding operations until probably not more than fifty per cent of the expected area has been sown at the present time. Since this district devotes its attention largely to the raising of live stock, and as much of the area now remaining unsown will yet be seeded for green feed, and will

no doubt produce a profitable crop of fodder, the loss in this latter area will not be so serious as might on first consideration be supposed."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"The weather during May has been cool. There have been eight showery days, but the precipitation for the month totals only 0.95 of an inch. Although the farmers generally consider that there has been quite a little rainfall during the month, as an actual fact the amount is very much less than normal, as the average May precipitation for the last fifteen years has been 3.1 inches. On account of the large amount of moisture in the soil, however, no crops have suffered so far; but a heavy rain would be very acceptable in southern Alberta. There has been an increase of from five to ten per cent in the amount of wheat sown as compared with last year. The increase in oats and barley will not be great, but there will be fully twenty per cent more land sown to flax. The development of grain crops generally is about ten days later than normal."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"While crops generally in this district are still backward, owing to the lateness of the spring, the genial weather during May, with a record of 227 hours of sunshine, coupled with an unusual amount of rain, has materially assisted plant growth. At the end of the month, crab-apples are in bloom, and cereals have made a good start, while alfalfa looks very promising. Thanks to a rainfall of 2.85 inches, the range pastures have made an exceptionally luxuriant growth, and the range cattle and horses have an abundance of feed. One of the ranchers on the Invermere benches, who is growing alfalfa on dry-farming methods, sowing in rows two feet apart, reports a growth of 16 inches in his plants during the month. At the Experimental Station, some acres of new land situated in Toby Creek canyon have been cleared and seeded to oats. The bees are showing unusual activity for the time of year, supers having already had to be added to several hives."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"May has been very cold but no frosts have been recorded. There have been two good rains of 0.72 of an inch and 0.8 of an inch, respectively, which considerably helped all dry farming in the district. The bare condition of the land on the southern slopes killed a good deal of clover during the past winter, and in the district alfalfa has suffered similarly but to a lesser degree. The blossom on the fruit trees has been exceptionally heavy. In the case of cherries and apricots, which bloomed during a cold spell when insects were very inactive, only a medium crop has set. Alfalfa and hay crops have made good growth, and cereals have improved with the warmer days towards the end of the month. Cut-worms have been very plentiful in the hay crops, but the vegetable garden has not suffered from this cause. There has been a big demand for seed potatoes. Twenty boys and girls have entered a school children's potato competition which has been started in Summerland."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"This month has been the driest May experienced since 1911, only 2.2 inches of

rain being recorded, while the average precipitation for May during the past six years has been 4.55 inches. The fine weather was just what was required to get the seed sown in good shape and in fairly good time. Crops of all kinds are looking promising. There has been no frost during the month. All classes of live stock on the Farm are in good condition. The young heifers and dry cows have been put on pasture. The young pigs and lambs are growing well. The poultry incubation work has been completed. Approximately 1,500 chickens are being raised. The old hens and ducks have been culled and marketed. Eggs are selling for around 40 cents a dozen, wholesale."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"Weather conditions during May have been favourable to seeding operations generally, and the sowing of cereals, root seeds and corn has been completed. Autumn cereals, clovers and grasses made good growth. At the Experimental Station, winter rye, barley and oats have headed during the last week of the month. Winter peas have made splendid growth and were in full bloom by the 24th. Orchards have been in full bloom, and satisfactory conditions for pollination have prevailed during the last three weeks of the month. The live stock in the district is in very good condition. Abundant supplies of milk and cream were shipped to the creameries in the district. The work of sheep shearing and dipping has been completed; the yield of wool has not been above the average. Poultry and poultry products are in good demand at high prices. There is more land under crop this season than for some years."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of May are given in the following table:—

Meteorological Record for May, 1917.

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.	81.0	30.0	48.78	1.83	462	199.9
Charlottetown, P.E.I.	60.0	28.0	41.26	3.52	465	121.3
Kentville, N.S.	63.0	30.0	43.63	2.92	461	101.7
Nappan, N.S.	57.0	28.0	41.51	3.55	463	97.3
Fredericton, N.B.	64.0	25.0	44.10	3.07	464	116.0
Ste. Anne de la Pocatière, Que.	69.2	29.4	42.00	3.64	469	159.2
Cap Rouge, Que.	77.0	28.2	46.20	2.65	468	153.6
Lennoxville, Que.	77.0	26.0	45.38	2.25	462	136.0
Brandon, Man.	93.0	19.8	47.10	0.14	478	293.5
Indian Head, Sask.	86.0	20.0	49.55	0.41	481	300.4
Rosthern, Sask.	89.3	22.8	52.09	0.32	494	336.1
Scott, Sask.	89.4	19.2	51.20	0.41	492	300.7
Lacombe, Alta.	75.8	13.9	46.90	3.26	489	208.3
Lethbridge, Alta.	81.0	16.0	49.00	0.95	477	224.3
Invermere, B.C.	77.0	22.0	50.20	2.85	481	227.0
Summerland, B.C.	76.0	33.0	54.85	1.84	478	196.2
Agassiz, B.C.	78.0	35.0	53.52	2.20	476	138.7
Sidney, Vancouver I., B.C.	72.5	36.0	51.10	0.70	473	278.2

Ottawa, June 13, 1917.

J. H. GRISDALE,
Director, Dom. Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The English Board of Agriculture reports (June 1) that the increased warmth and rains of the latter part of May greatly improved the prospects of all crops. Wheat has improved, but there are in nearly all parts a certain proportion of patchy fields, and on the whole the crop can hardly be described as more than moderate. Barley and oats are germinating very satisfactorily, and everywhere present a promising appearance, except winter oats, which suffered much from the great cold, and in some districts wireworms have been troublesome. The area under barley will probably prove to be about the same as last year; while that of oats is from 8 to 9 p.c. greater, the increase being most pronounced in the west. Beans are, generally speaking—although there are exceptions—a poor crop, especially the winter sown. Peas are better, though very variable in different districts, and are probably hardly up to average on the whole. Potato planting was late, but is now generally finished; the young crops, where through the ground, are a good, even plant, and look very promising. In the case of this crop, an increase in the total area of 10 p.c. is looked for, the increase being here also chiefly in the west. Mangold sowing is not yet everywhere completed, but the work has been done under favourable conditions, and a good seed bed was obtained. Where up, the young plants appear to have germinated evenly, and prospects are quite satisfactory. Turnip sowing is very backward, and comparatively little has been done, but the land has been got into good order for the reception of the seed. Hops are naturally very backward, but the vine made vigorous growth, both in the eastern and western districts, during the second half of May, and the plant is strong and healthy, so that prospects are satisfactory. The area from which a crop will be taken will be about three-fifths of last year's acreage, or half the 1914 area. The rain and warm weather of May have made a great difference to the grass, and present appearances indicate an average yield of hay, both in the case of clovers and of permanent grass. Seeds' hay is, however, less promising in the southwest, while meadow hay is not up to the average in the eastern counties. The area of seeds which it is intended to mow is about 3 p.c. less than last year, but the area of meadow hay will probably be about the same as in 1916. There has been abundance of blossom on all fruit trees, which has generally set well, so that prospects in the case of both orchard and small fruit are for heavy crops. The poorest prospects relate to plums, and even in their case there are more than three reports of over-average promise to every one mentioning poor prospects. Pastures have now, except in a very few districts, plenty of grass, and the condition of all live stock shows much improvement in consequence. The great deficiency in labour has been mitigated by the employment of soldiers, but their withdrawal from many districts is now being rather seriously felt. The shortage is now most acute for hoeing crops, and in many parts fields are becoming rather foul. At the May hirings wages showed a further rise.

France.—The condition of crops in France continues to be under average. The French Department of Agriculture has reported that on April 1 the condition of wheat for the whole of France was represented by 54 as compared with 69 on April 1, 1916. Other crops are reported as being similarly in poor condition.

The Journal Officiel of May 6 gives the results of a live stock census taken in France on December 31, 1916, with comparative figures for July 1, 1916. The numbers in totals for each description are as follows: Horses 2,245,630 (2,317,205); mules 147,630 (102,969); asses 326,570 (316,559); cattle 12,341,950 (12,723,916); sheep 10,845,280 (12,079,211); swine 4,631,900 (4,448,366); goats 1,176,510. The figures within brackets represent the numbers for July 1, 1916. For all descriptions except mules and asses the numbers at December 31, 1916, show a decrease during the six months.

South Australia.—According to the preliminary results of the harvest of the State of South Australia for 1916-17 issued (May 14) by the Government Statist the yield of wheat is 43,830,972 bushels from 3,121,574 sown acres, as compared with 34,134,504 bushels from 3,220,645 acres in 1915-16. Of the area sown for 1916-17 2,765,383 acres were reaped; 328,285 acres were cut for hay and 27,906 acres were fed off. The yield of wheat hay was 443,583 tons compared with 754,516 tons in 1915-16. The average yield of grain per acre for 1916-17 is 15·85 bushels as compared with 12·46 bushels. The total yield of barley in 1916-17 is 1,839,692 bushels with an average of 16·99 bushels per acre, which exceeded the previous record season (1915-16) by 142,022 bushels. Of the total yield, 1,375,419 bushels were returned as malting. Of oats 1,825,503 bushels were harvested, averaging 11·16 bushels per acre. This is a decrease of 308,871 bushels and 5·71 bushels per acre on the record season 1915-16. The cut of oaten hay, 172,521 tons, averaged 1·15 ton per acre, and, though 119,546 tons below the record yield of 1915-16, is substantially greater than any previous cut. There appears to be a great increase in the number of crops grown on shares. The harvesting weather was most unfavourable, and, combined with the shortage of bags and labour at critical periods, resulted in a considerable quantity of grain being spoiled in various parts of the State. Harvesting was not completed in late districts until the end of April.

United States.—The Crop Reporting Board of the U.S. Department of Agriculture states (June 8) that the total area sown to wheat for 1917 is 46,692,000 acres, which is 11·5 p.c. less than in 1916 when the area sown was 52,785,000 acres. As compared with 1915, when the area sown was 60,469,000 acres, the acreage this year is 23 p.c. less. The reduction of 1917 is mainly in respect of winter wheat, the area of which is 27,653,000 acres, as compared with 34,829,000 acres in 1916 and 41,308,000 acres in 1915, the decrease in 1917 over 1916 representing 20·6 p.c. The area sown to spring wheat this year is 19,039,000 acres, or 6 p.c. above the area of last year, viz., 17,956,000 acres, and nearly equal to the spring wheat area of 1915, viz., 19,161,000 acres. Oats occupy 43,161,000 acres, or 3·9 p.c.

more than last year's acreage of 41,539,000, barley 8,379,000 acres, or 9.2 above last year's acreage of 7,674,000, rye 3,772,000 acres or an increase of 22.2 p.c., over last year when the area was 3,096,000 acres. Hay occupies 68,717,000 acres, or 4 p.c. less than last year.

The following table gives the condition and indicated yields for 1917 with comparative figures of 1916:

Crops.	Condition in per cent of normal.				Yield per acre.		Total yield in millions of bushels.	
	June 1, 1916.	May 1, 1917.	June 1, 1917.	June 1, 10 year average.	1916 (final).	1917. ¹	1916.	1917. ¹
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Winter wheat.....	73.2	73.2	70.9	81.4	13.8	13.5	482	373
Spring wheat.....	88.2	—	91.6	93.4	8.8	14.9	158	283
All wheat.....	77.7	—	78.5	85.4	12.1	14.0	640	656
Oats.....	86.9	—	88.8	88.7	30.1	32.0	1,252	1,381
Barley.....	86.3	—	89.3	90.0	23.6	25.6	181	214
Rye.....	86.9	88.8	84.3	89.9	15.3	15.3	47.4	57.9
Hay.....	90.7	88.7	85.1	88.4	1.53	1.49	110	102
Pasture.....	93.4	81.9	83.8	89.5	—	—	—	—

¹Interpreted from condition reports.

The prices on June 1, 1917, as compared with the same date last year placed within brackets are reported as follows, in cents per bushel: Wheat 248.5 (100); oats 69.9 (42.1); barley 119.3 (59.6); rye 183 (83.8); per ton: hay \$15.25 (\$12.46).

INTERNATIONAL INSTITUTE OF AGRICULTURE.

AREAS UNDER CEREALS IN NORTHERN HEMISPHERE, 1917.

The Bulletin of Agricultural and Commercial Statistics for May gives the areas sown to the principal cereals in countries of the northern hemisphere for 1917, as compared with 1916, and with the average of the five years 1911-15. With the areas converted from hectares to acres the figures are as in Table I.

I. Areas sown to Cereal Crops in the Northern Hemisphere 1916 and 1917.

Countries.	1916.	1917.	Per cent of 1916.	Five year average 1910-14.	Percent of five year average 1910-14.
	000 acres.	000 acres.	p.c.	000 acres.	p.c.
Wheat—					
Denmark.....	151	141	93.5	133	106.3
Spain.....	9,839	10,299	104.7	9,739	105.8
France.....	12,441	10,569	85.0	15,368	68.8
Scotland.....	63	58	91.9	—	—
Switzerland.....	124	128	103.8	106	121.1
Canada.....	934 ¹	626 ¹	67.0	1,074 ¹	58.3
United States.....	34,829 ¹	27,653 ¹	79.4	32,779 ¹	84.4
India.....	30,255	32,885	108.7	30,537	107.7
Japan.....	1,241	1,236	99.6	1,227	100.7
Algeria.....	3,272	3,140	95.9	3,413	92.0

I. Areas sown to Cereal Crops in the Northern Hemisphere 1916 and 1917—con.

Countries.	1916.	1917.	Per cent of 1916.	Five year average 1910-14.	Per cent. five year average 1910-14.
	000 acres.	000 acres.	p.c.	000 acres.	p.c.
Rye—					
Denmark.....	479	455	94.9	605	75.2
Spain.....	1,847	1,846	100.0	1,911	96.6
France.....	2,276	2,046	89.9	2,740	74.7
Switzerland.....	71	75	105.5	62	122.3
United States.....	3,474	4,214	121.3	2,494	169.0
Barley—					
Spain.....	4,313	4,025	93.3	3,585	112.3
France.....	246 ¹	270 ¹	109.7	1,804	—
Switzerland.....	18	17	98.0	14	125.1
Japan.....	3,109	2,738	88.1	3,213	85.2
Algeria.....	3,009	2,851	94.7	3,167	90.0
Oats—					
Spain.....	1,192	1,417	118.9	1,321	107.3
France.....	1,693 ¹	1,608 ¹	95.0	9,294	—
Switzerland.....	103	111	107.7	84	132.9
United States.....	3,317 ¹	2,627 ¹	79.2	38,704	—
Algeria.....	536	523	97.7	521	100.4

¹ Winter crops only.

CONDITION OF CROPS IN NORTHERN HEMISPHERE.

The following reports on the condition of crops in countries of the northern hemisphere on May 1 are reproduced from the Bulletin of Agricultural and Commercial Statistics for May.

England and Wales.—Cold weather with snow hindered work on the land for nearly two-thirds of April. The last ten days, however, were very favourable and good progress was made everywhere; the land worked well, and a good seedbed was almost everywhere obtained.

Scotland.—During the first 18 or 20 days of April there were frost and heavy snow, which delayed the growth of wheat and interrupted the sowing of barley and oats. The frost does not however appear to have caused serious damage. During the rest of the month the weather was fine and much progress was made.

Ireland.—The weather until the middle of April remained cold and unsettled, but a marked improvement took place about April 18, and the temperature has steadily risen. The warm, dry weather of the past weeks has quickened growth immensely and has enabled seeding to go on without interruption. The work, so backward a month ago, is well advanced now, and the young plant is healthy and strong. A slight fall of genial rain is now required for all crops.

France.—During the first three weeks of April the weather was generally rainy and cold. Frost and hail have alternately taken place. The concluding period of the month was mostly fine. This weather has interfered to some extent with the spring work, and

vegetation is also about a month late in comparison with an ordinary year. The improvement in warmth, if accompanied by gentle rain, cannot fail to have a favourable influence on the state of vegetation. Winter crops, as a whole, are not particularly good. The forecasts are for a decidedly larger area under spring crops than in 1916. The work in connection with sowing maize is going on. Potato planting is actively in progress. Although seed potatoes have not always been available in the required quantity, it may be believed that the area under crop is larger than last year.

Spain.—Preparatory work for spring sowing is proceeding under conditions not altogether favourable, owing to excessive rains and the low temperature which prevailed during April. Spring sowing has begun in similar surroundings. The area sown with linseed in 1917 is 1,552 acres, as compared with 2,689 in 1916 and 2,184, the average of the five years 1911 to 1915, or respectively 57·7 and 71·0 p.c. of the two last mentioned areas. The condition of the linseed crop in May 1917, expressed in accordance with the Institute system, was equal to 100.

Italy.—The weather was particularly changeable and cold during the second half of April, and was therefore unfavourable for vegetation, which was already late in development. Seedings of maize and rice are not yet completed.

Switzerland.—The condition of the winter crops is regarded as even less favourable than a month ago, being very late. Many of the fields are very thin in plant, and there are gaps, especially in those of wheat and rye. Rye has also been injured by slugs and by fusarium. Early sown winter wheat, which had developed sufficiently before the cold weather, is generally in better condition than are the later areas. Potato planting has been done in very favourable conditions.

Algeria.—The area sown with wheat in the department of Oran shows a reduction of 19,474 acres, as compared with 1916, and the total is 861,651 acres; in the department of Algiers there was a reduction of 174,684 acres on a total of 657,164 acres. On the other hand, the position is most favourable in the department of Constantine, where the area shows an increase of 61,510 acres, and attains a total of 1,621,030 acres. As regards barley, the reduction amounts to 158,417 acres as compared with 1916, and the area is 2,850,835 acres. Unfortunately persistent drought prevails in the southern portion of the department of Constantine, and a short crop may result, although cereals look well in the two other departments. Great efforts have been made for the development of spring crops.

Tunis.—The month of March was very favourable for agriculture. Plentiful rains everywhere have encouraged growth, and the grain crops look splendid. Cutting green for cattle food has begun. Barley has benefited specially by the long period of wet weather. In the centre and the south crops are everything that can be desired. Unfortunately these regions report numerous flights of locusts, particularly in the districts of Gafsa and Thala, and their hatching places have been carefully marked by the local authorities. The

Department of Agriculture has taken every means to combat this invasion.

Table II shows the condition of cereals in a number of countries (A) as expressed according to the Institute's system of numerical expression and (B) as expressed according to the system adopted by the country named.

II. Condition of Cereals in Countries of the Northern Hemisphere.

A. EXPRESSED BY INSTITUTE'S SYSTEM IN WHICH 100 EQUALS THE AVERAGE YIELD PER ACRE FOR THE PREVIOUS TEN YEARS.

Countries.	Wheat.			Rye.			Barley.			Oats.		
	May 1, 1916.	April 1, 1917.	May 1, 1917.	May 1, 1916.	April 1, 1917.	May 1, 1917.	May 1, 1916.	April 1, 1917.	May 1, 1917.	May 1, 1916.	April 1, 1917.	May 1, 1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Spain.....	—	—	100	—	—	100	—	—	100	—	—	100
Ireland.....	85	—	95	—	—	100	—	—	100	95	—	95
Switzerland.....	101	94	90	98	94	91	101	95	95	—	—	99
Canada.....	108	—	82	—	—	—	—	—	—	—	—	—
United States.....	94	73	84	98	96	—	—	—	—	—	—	—

B. EXPRESSED IN SYSTEM ADOPTED BY EACH COUNTRY.

France.....	68	54	—	68	62	—	74	56	—	72	52	—
England and Wales....	—	poor	poor	—	—	—	—	—	—	—	—	—
Scotland.....	—	med-	—	—	—	—	—	—	—	—	—	—
		ioere										
Italy.....	good	aver-	aver-	good	aver-	aver-	good	aver-	aver-	good	aver-	aver-
		age	age		age	age		age	age		age	age
Luxemburg.....	—	3.59	—	—	3.53	—	—	—	—	—	—	—

NOTE.—French system: 80 = good, 60 = fairly good, 50 = fair.

Luxemburg: 1 = very good, 2 = good, 3 = average, 4 = bad.

CABLEGRAM OF JUNE 26, 1917.

On June 26 the following cablegram was received from the International Institute of Agriculture:

The wheat crop of France is provisionally estimated at 161,674,000 bushels, or 75 p.c. of the 1916 crop. Wheat production of India 379,309,000 bushels, or 119 p.c. of last year and 105 p.c. of the average of the five years 1911-15. Japan's wheat crop is estimated at 26,533,000 bushels, or 94 p.c. of the 1916 crop and 108 p.c. of the five years' average. The area sown to wheat in Italy is 10,626,000 acres, 91 p.c. of last year's acreage and 89 p.c. of the five years' average; India 33,041,000 acres, or 110 p.c. of 1916 and 108 p.c. of average; Tunis 1,310,000, or 88 p.c. of 1916 and 102 p.c. of average.

Area sown to barley: France 1,475,000 acres, or 95 p.c. of 1916; Italy 544,000, or 91 p.c. of 1916 and 89 p.c. of average; Tunis 1,038,000, or 84 p.c. of 1916 and 92 p.c. of average.

Area sown to oats: France 6,437,000 acres, or 83 p.c. of 1916; Scotland 1,040,000, or 105 p.c. of 1916 and 109 p.c. of average; Italy 1,137,000, or 130 p.c. of 1916 and 92 p.c. of average.

The condition of cereal crops on June 1 was good in Ireland and Italy, average in India, Egypt, and moderate in France, Great Britain, Luxemburg, Netherlands and Switzerland.

CEREAL CROPS OF SOUTHERN HEMISPHERE, 1916-17.

Last month were given from the April issue of the Rome Bulletin the areas and yields of cereals in countries of the southern hemisphere. The May issue repeats these figures with the addition of Uruguay for which the areas and yields in 1916-17 are as follows: Wheat 5,390,000 bushels from 780,000 acres, a yield per acre of 6.84 bushels; oats 1,813,000 bushels from 142,000 acres, or 12.86 bushels per acre; flaxseed 122,000 bushels from 30,000 acres, or 3.35 bushels per acre. These yields are for wheat 45.4 p.c. less than last year (1915-16) and 17.3 p.c. less than the five years' average (1909-10 to 1913-14), for oats 15.6 p.c. less than last year, but 50 p.c. above the five years' average, and for linseed 68.8 p.c. less than last year and 87.2 p.c. less than the five years' average.

Table III gives for 1916-17, with comparative figures, the revised totals of the areas and yields of cereals in the countries of the southern hemisphere, including Argentina, Uruguay, South Africa, Australia and New Zealand.

III. Areas and Yields of Cereal Crops in the Southern Hemisphere, 1915-16 and 1916-17.

Crops.	1915-16.	1916-17.	Per cent of 1915-16.	Per cent of average. ¹	1915-16.	1916-17.	Per cent of 1915-16.	Per cent of average. ¹	1915-16.	1916-17.
	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre.	bush. per acre.
Wheat.....	30,230	28,618	94.7	115.9	369,254	232,704	63.0	92.7	12.2	8.2
Rye.....	222	190	85.7	202.6	2,142	992	46.3	65.9	9.7	5.3
Barley.....	602	568	94.5	147.9	10,389	6,354	61.2	85.7	9.3	11.2
Oats.....	4,035	3,939	97.6	110.2	100,825	59,858	59.4	70.4	24.9	15.2
Corn.....	10,255	9,288	90.6	102.5	167,933	67,340	40.1	33.4	16.4	7.3
Linseed.....	4,045	3,243	80.2	81.2	39,656	4,118	10.4	12.7	9.9	1.3

¹ Average of five years, 1909-10 to 1913-14.

STATISTICS OF LIVE STOCK.

New Zealand.—The numbers of live stock in New Zealand on January 1, 1916, as compared with April 1, 1911, in brackets are reported as follows: Horses 347,345 (404,284); asses and mules 230

(404); cattle 2,387,036 (2,020,171); sheep 24,788,150 (23,996,126); swine 292,115 (348,754); goats 17,165. In 1916 the bulls of all ages for dairy purposes numbered 34,092, and cows and heifers over two years old for dairying numbered 732,931.

Cuba.—The numbers of live stock in Cuba for the second half year of 1916, compared with the second half year of 1915 in brackets, were returned as follows: Horses 750,219 (720,040); mules 58,039 (54,264); asses 3,005 (2,882); cattle 3,961,731 (3,703,928).

FIELD CROPS OF SWEDEN, 1916.

The Central Statistical Bureau of Sweden has issued preliminary information respecting the harvest of Sweden for the year 1916. The following statement gives in bushels and short tons, as converted from metric quintals, the yields of the principal field crops in 1916, as compared with the annual average for the five years 1911 to 1915:

Crops.	1916.	Average 1911-15.	Crops.	1916.	Average 1911-15.
	000 bush.	000 bush.		000 bush.	000 bush.
Winter wheat.....	8,480	8,263	Beans.....	193	154
Spring wheat.....	498	347	Tarces.....	402	493
All wheat.....	8,978	8,610	Potatoes.....	54,972	63,388
Winter rye.....	22,357	23,757		000	000
Spring rye.....	572	463		tons	tons
All rye.....	22,929	24,220	Sugar beets.....	1,034	953
Barley.....	14,621	14,492	Fodder roots.....	2,366	2,029
Oats.....	87,614	76,014	Hay (Artificial meadows).....	5,555	4,336
Mixed grains.....	17,687	15,180	Hay (Natural meadows).....	2,158	1,764
Peas.....	1,123	1,111	Straw (large grains).....	1,584	1,617
			Straw (small grains).....	3,333	2,879
			Straw (leguminous crops).....	81	

In various places the harvest was damaged by rain, especially cereals in the southern parts of the country. Potatoes and fodder roots were not always of good quality. Hay and straw were as a rule well saved. The total value of the harvest of 1916 was \$394,593,-016, as compared with \$273,536,612, the annual average of the five years 1911-15.

AGRICULTURAL CENSUS OF MANITOBA, 1916.

The Census and Statistics Office has published in the form of a Bulletin the results for the province of Manitoba of the Census of population and agriculture which was taken for June 1, 1916.

POPULATION.

The population in Manitoba on this date is returned as 553,860, an increase of 92,230, or 20 per cent, since the previous Census of 1911. The number of persons per square mile in the province, exclusive of the addition made by the Extension of Boundaries Act, 1912, was 8.5 in 1916 as compared with 7.2 in 1911. The urban popu-

lation is 241,114 and the rural 312,746; the proportion of urban to rural remains about the same as in 1911, viz., 43.5 urban and 56.3 p.c. rural; but the increase over 1911 is practically in the same ratio for each, viz., about 20 p.c. instead of as in 1911 when the increase over 1906 was in the ratio of 45 p.c. urban and only 15 p.c. rural.

AREA OF LAND AND FIELD CROPS.

The total land area of the province, exclusive of the territory added by the Extension of Boundaries Act 1912, is 41,169,098 acres. Of this area 12,976,783 acres, or $31\frac{1}{2}$ p.c., were occupied as farm lands in 1916, as compared with 12,228,233 acres, or 30 p.c., in 1911. The improved land increased from 6,746,169 acres in 1911 to 7,162,162 acres, an increase during the five years of 415,993 acres, or $6\frac{1}{4}$ p.c. Of the remaining occupied area 5,814,621 acres were returned as unimproved, 1,785,705 acres were forest, 2,980,896 acres were prairie and 1,048,020 acres were marsh or waste.

Table I gives the acreage and yield of the principal field crops for the two census years 1911 and 1915.

I. Acreage and Yield of Field Crops in Manitoba, 1911 and 1915.

Crops.	1911.	1915.	1911.	1915.	1911.	1915.
	acres.	acres.	bush.	bush.	bush. per acre.	bush. per acre.
Fall wheat.....	13,301	2,705	380,000	62,881	28.56	23.25
Spring wheat.....	3,081,272	2,793,813	62,303,000	69,204,925	20.22	24.77
All wheat.....	3,094,573	2,796,518	62,683,000	69,267,806	20.26	24.77
Oats.....	1,307,434	1,314,846	60,037,000	50,695,554	45.92	38.56
Barley.....	448,105	566,627	14,949,000	16,651,445	33.36	29.39
Rye.....	4,725	11,507	104,000	207,573	22.00	18.04
Peas.....	414	318	9,000	5,712	22.00	17.96
Mixed grains.....	1,541	659	54,000	22,210	35.00	33.70
Flax.....	79,765	14,505	1,152,000	120,179	14.44	8.29
Potatoes.....	26,488	29,403	5,490,000	2,546,891	207.35	86.62
			tons.	tons.	tons.	tons.
Hay and clover.....	154,632	86,018	257,000	86,800	1.66	1.01
Alfalfa.....	1,965	3,671	4,000	5,345	2.00	1.46
Fodder corn.....	9,919	7,591	76,000	19,860	7.71	2.62

For the year 1916 the areas of field crops are published in the Bulletin and amount to a total of 5,107,755 acres; but the census yields for that year are not yet available.

FARM LIVE STOCK.

Table II shows the numbers of farm animals for the two census years 1911 and 1916, with percentage of increases or decreases, horses and cattle being classified by ages.

II. Number of Animals on Farms in Manitoba, 1911 and 1916.

Farm Animals.	1916.	1911.	Increase (+) or decrease (-)	Increase (+) or decrease (-)	1916.	1911.
	No.	No.	No.	p.c.	No. per farm.	No. per farm.
Horses, all.....	324,175	280,374	+43,801	+15.6	6.9	6.1
“ 3 years and over..	274,011	215,422	+58,589	+27.2	5.8	4.7
“ under 3 years.....	50,164	64,952	-14,788	-22.8	1.1	1.4
Cattle, all.....	554,158	435,568	+118,590	+27.2	11.8	9.6
“ Milch cows.....	196,288	155,328	+40,960	+26.4	4.2	3.4
“ Other cattle.....	357,870	280,240	+77,630	+27.7	7.6	6.2
Sheep, all.....	76,750	37,322	+39,428	+105.0	1.6	0.8
Swine, all.....	205,898	188,416	+17,482	+9.3	4.4	4.1
Poultry, all.....	2,176,495	2,585,903	-409,408	-15.8	46.2	56.7
“ hens and chickens	2,065,607	2,442,381	-376,774	-15.4	43.8	53.6
“ turkeys.....	57,353	79,639	-22,286	-28.0	1.3	1.7
“ geese.....	26,171	28,472	-2,301	-8.1	0.5	0.6
“ ducks.....	27,364	35,411	-8,047	-22.7	0.6	0.8

For 1916 the classification of live stock was extended, and Table III shows their number and value by the classification adopted. Mules were also added to the schedule.

III. Number and Value of Animals on Farms in Manitoba as classified by Census, 1916.

Description.	Number.	Value.
		\$
HORSES—		
Stallions.....	-	1,754,029
Three years old and over.....	3,557	-
Yearlings and two years old.....	1,620	-
Foals.....	2,976	-
Mares.....	-	26,268,155
Three years old and over.....	122,394	-
Yearlings and two years old.....	28,357	-
Foals.....	17,211	-
Geldings.....	148,060	22,499,712
Total Horses.....	324,175	50,521,896
MULES.....	2,695	502,035
CATTLE—		
Bulls.....	10,234	768,188
Milch cows.....	196,288	11,874,995
Calves.....	144,296	2,076,908
Other cattle.....	203,340	8,510,679
Total Cattle.....	554,158	23,230,770
SHEEP.....	76,750	649,519
SWINE.....	205,898	2,248,022

The total value of all descriptions of farm live stock in Manitoba is, therefore, \$77,152,242. For horses, cattle, sheep and swine it is \$76,650,207.

CO-OPERATIVE WOOL SALES.

A pamphlet issued by the Live Stock Branch of the Department of Agriculture consists of a review of co-operative wool sales in Canada, with practical directions for the preparation of wool for the market.¹ The pamphlet describes the efforts made during the last three or four years to encourage sheep breeding in Canada by the more scientific grading of wool for the purpose of securing higher prices. In 1914 seven associations were organized for the co-operative sale of wool under the system of grading organized by the Department of Agriculture, and 206,129 lb. of wool were graded for societies organized in four provinces, namely, Quebec, Ontario, Manitoba and Alberta. In 1915 the number of organizations formed for this purpose was increased to 19 when approximately 427,000 lb. were classified and offered for co-operative sale. In 1916 this amount had reached the total of 1,721,598 lb. with a value of \$570,678.69, and every province was represented. From the pamphlet are reproduced the following statistics of the total weight, average price per lb. and total value of wool graded by provinces in 1916 (Table I) and the number of members of co-operative wool associations with the quantities of wool offered for co-operative sale by provinces in each of the three years 1914 to 1916 (Table II).

I. Total Weight, Average Price and Total Value of Graded Wool by Provinces, 1916.

Province.	Total Weight.	Average price.	Total Value.
	lb.	cents per lb.	\$
Eastern Domestic Grades—			
Prince Edward Island.....	28,176½	38-63	10,876 74
Nova Scotia.....	18,441½	40-98	7,568 53
New Brunswick.....	5,130	38-10	1,954 60
Quebec.....	168,701	42-14	71,205 85
Ontario.....	17,989	34-95	6,287 43
Total.....	238,438½	40-15	97,893 15
Western Domestic Grades—			
Manitoba.....	150,939	32-25	48,681 40
Saskatchewan.....	172,570	32-00	55,244 97
Alberta.....	413,687	31-80	131,565 94
British Columbia.....	15,751	32-25	5,079 69
Total.....	752,947	31-95	240,572 00
Western Range Grades—			
Alberta.....	744,959	30-94	230,557 62
Saskatchewan.....	5,430	30-49	1,655 92
Total.....	750,389	30-93	232,213 54
Grand Total.....	1,741,774½	34-96	570,678 69

¹Pamphlet No. 14. Review of Co-operative Wool Sales in Canada. Published by the Live Stock Branch of the Department of Agriculture, Ottawa, March, 1917.

II. Number of Co-operative Wool Associations and Quantity of Graded Wool offered for Co-operative Sale, by Provinces, 1914-16.

Province.	No. of members.			Quantity of wool offered for sale.		
	1914.	1915.	1916.	1914.	1915.	1916.
				lb.	lb.	lb.
Prince Edward Island.....	—	58	382	—	5,496½	28,176½
Nova Scotia.....	—	163	224	—	12,271	18,441½
New Brunswick.....	—	9	39	—	1,103½	5,130
Quebec.....	93	975	1,616	12,000	104,192	168,701
Ontario.....	69	81	69	15,742	20,295	17,989
Manitoba.....	138	193	440	44,059	75,425	150,939
Saskatchewan.....	—	—	475	—	—	178,000
Alberta.....	63	199	609	134,327½	208,370	1,138,470
British Columbia.....	—	—	62	—	—	15,751
Total.....	363	1,678	3,916	206,128½	427,153	1,721,598½

Tables and diagrams in the pamphlet, which illustrate the quantities of wool offered for co-operative sale by 18 different grades, are of technical interest.

BRITISH WEIGHTS AND MEASURES.

On April 24, 1917, the question of a reform in the weights and measures in use in the old country came up for discussion at a meeting of the Council of the Central Chamber of Agriculture, a federal body representing the legislative interests of agriculture in England. A report from the Agricultural Economics Committee was ordered to be sent down to the local chambers for consideration, after which the matter will again come up for discussion. The report endorsed the following recommendations of the Weights and Measures Committee, which were adopted by the Council of the Central Chamber of Agriculture on December 6, 1911¹:

(1) That the present legal standard pound be the unit of weight, and that the existing legal cental of 100 lb. be substituted for the 112 lb. hundred-weight; twenty such centals to be the ton of 2,000 lb.

(2) That transactions for sales or purchases of agricultural produce and requisites other than liquids, but including milk sold wholesale, shall be by weight under this standard and system.

(3) That Section 8 of the Corn Returns Act, 1882, be repealed, and that the tithe average be adjusted in future upon the cental basis.

(4) That a provisional period of two years be allowed before the new system shall be compulsory, after which all contracts under any other standards shall be unenforceable except for foreign trading.

Section 8 of the Corn Returns Act, 1882, above referred to provides that in the weekly summary of quantities and prices each sort of British grain shall be computed with reference to the imperial

¹ See Census and Statistics Monthly, Vol. 4, 1911, No. 36, p. 121.

bushel. An inspector of corn returns shall convert into such imperial bushel all returns made to him in any other measure or by weight or by a weighed measure, and in the case of weight or weighed measure shall convert the same at the rate of sixty imperial pounds for every bushel of wheat, fifty imperial pounds for every bushel of barley and thirty-nine imperial pounds for every bushel of oats.

In the course of a brief preliminary discussion it was made clear that the Committee preferred the decimal system for application to existing English weights and measures rather than the adoption of the metric system which would entail new standards. One speaker urged that as a gallon weighed 10 lb. the pint should be regarded as weighing 1 lb., and the pint would then be the tenth of a gallon.

There appears to be now some probability that when the war is over steps will be taken to bring about greater uniformity in British weights and measures, and should there be an agreement to use the cental of 100 lb. instead of the existing 112 lb. as a hundred-weight the British practice will become assimilated to that of this side to the more general convenience of all concerned.

THE WEATHER DURING MAY.

The mean temperature of May was below normal from Lake Superior eastward to the Maritime provinces, with negative departures averaging about 5°, but reaching as much as 8° or 9° in some parts of northern Ontario and western Quebec. Westward of Lake Superior to western Saskatchewan the normal was slightly exceeded, and thence to the coast it was again in defect, and especially so in Vancouver Island. Precipitation was light and very much below the normal from northern Ontario westward to the Pacific, except in some few sections of central Alberta and the interior of British Columbia. From southern Ontario eastward it was very generally above average, but a small deficiency is reported from Quebec city.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday market; (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	May 5.		May 12.		May 19.		May 26.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	2 55½	-2 95½	2 86	-3 00	2 77	-2 85	2 49	-2 78
No. 2 Nor.....	2 51	-2 91	2 83	-2 97	2 74	-2 82	2 46	-2 75
No. 3 Nor.....	2 46	-2 86	2 78	-2 92	2 69	-2 77	2 41	-2 70
No. 4.....	2 40	-2 64	2 66	-2 80	2 57	-2 65	2 29	-2 58
No. 5.....	2 08	-	2 41	-2 55	2 32	-2 40	2 04	-2 33
No. 6.....	1 74	-1 88½	2 00	-2 11	1 75	-1 95	1 70	-1 80
Feed.....	1 37	-1 40	1 40	-1 52	1 25	-1 45	1 25	-
Oats—								
No. 2 C. W.....	0 70½	-0 78	0 78½	-0 81½	0 75½	-0 79½	0 70½	-0 79
No. 3 C. W.....	0 70½	-0 77½	0 78½	-0 78½	0 72½	-0 76½	0 67½	-0 76
No. 1 Feed Ex.....	0 70½	-0 77	0 76	-0 78½	0 72½	-0 76½	0 67½	-0 76
No. 1 Feed.....	0 68½	-0 75½	0 74½	-	0 69½	-0 72½	0 62½	-0 72½
No. 2 Feed.....	-	-	0 74½	-	0 69½	-0 72½	0 60½	-0 70½
Barley—								
No. 3 C. W.....	1 21	-1 27	1 23½	-1 32	1 27	-1 32	1 15	-1 30
No. 4 C. W.....	1 16	-1 22	1 18	-1 27	1 22	-1 27	1 13	-1 22
Rejected.....	1 00	-	1 00	-1 05	1 05	-1 07	1 01	-1 05
Feed.....	1 00	-	1 00	-1 05	1 05	-1 07	1 01	-1 05
Flax—								
No. 1 N. W. C.....	3 00	-3 13½	3 16½	-3 35½	2 97½	-3 13½	3 00½	-3 09
No. 2 C. W.....	2 96½	-3 10½	3 13	-3 32	2 94	-3 10	2 97½	-3 05
No. 3 C. W.....	2 84	-2 97½	3 00	-3 18½	2 78½	-2 96½	2 78½	-2 87

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	February.		March.		April.		May.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 71	-2 02	1 94	-2 20	2 21	-3 10	2 65	-3 42
Chicago.....	1 66½	-1 85½	-	-	2 07½	-3 04	2 61	-3 45
New York (f.o.b. afloat).....	1 70	-2 03½	2 01½	-2 23½	2 20½	-3 19½	-	-
Corn, No. 2, mixed—								
St. Louis.....	0 95½	-1 01	1 01½	-1 23	1 19½	-1 55½	1 52½	-1 71
New York (f.o.b. afloat).....	-	-	-	-	1 23	-1 60	-	-
Corn, No. 2—								
Chicago.....	0 96½	-1 02½	-	-	-	-	1 52	-1 74
Oats, No. 2—								
St. Louis.....	0 53	-0 63	0 67	-0 67½	0 67	-0 74½	0 63	-0 72½
Chicago.....	0 51½	-0 56½	-	-	0 63½	-0 71½	0 59½	-0 74
Rye, No. 2—								
Chicago.....	1 40	-1 52	-	-	1 68	-2 05	2 00	-2 40

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	May 7.		May 14.		May 21.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—						
Canadian No. 1.....	2 62	—	2 62	—	2 62	—
“ No. 2.....	2 56½	—	2 56½	—	2 56½	—
“ No. 3.....	2 50½	—	2 50½	—	2 50½	—
“ No. 4.....	2 44½	—	2 44½	—	2 44½	—
“ Feed.....	2 41½	—	2 41½	—	2 41½	—
American—						
Omaha cert.....	2 53½	—	2 53½	—	2 53½	—
Montana cert.....	2 56½	—	2 56½	—	2 56½	—
Red winter western.....	2 50½	—	2 50½	—	2 50½	—
Red winter common.....	2 47½	—	2 47½	—	2 47½	—
Argentine.....	2 55—2 59	—	2 55—2 59	—	2 55—2 59	—
Australian.....	2 64½	—	2 64½	—	2 64½	—
Indian.....	2 70½	—	2 70½	—	2 70½	—
Californian.....	2 64½	—	2 64½	—	2 64½	—
Oats (per bush.)—						
Canadian.....	1 75½—1 78½	—	1 75½—1 78½	—	1 75½—1 78½	—
American.....	1 73½—1 75½	—	1 73½—1 75½	—	1 73½—1 75½	—
Chilian.....	1 75½—1 78½	—	1 75½—1 78½	—	1 75½—1 78½	—
Flour (per 280 lb.)—						
Canadian good.....	17 76—18 00	—	17 76—18 00	—	18 98—19 47	—
“ first baker's.....	17 28—17 52	—	17 28—17 52	—	18 00—18 49	—
“ common.....	17 03—17 28	—	17 03—17 28	—	17 28—17 76	—
American spring good.....	17 76—18 00	—	17 76—18 00	—	18 98—19 47	—
“ common.....	17 28—17 52	—	17 28—17 52	—	18 00—18 25	—
Kansas.....	17 76—18 00	—	17 76—18 00	—	18 74—18 98	—
Nebraska.....	17 28—17 52	—	17 52—17 76	—	18 49—18 74	—
Australian.....	17 03—17 28	—	17 52—17 76	—	18 00—18 25	—

IV. Average Prices of British-grown Grain, 1917.

Week ended.	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
May 5.....	77 7	2.360	64 4	1.878	54 9	1.451
“ 12.....	78 0	2.372	64 11	1.896	55 2	1.462
“ 19.....	77 11	2.370	64 10	1.893	55 2	1.462
“ 26.....	78 0	2.373	64 9	1.891	54 11	1.454
Average.....	77 11	2.369	64 8	1.889	55 0	1.457

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended June 30, 1917.

This report gives (1) the usual second or revised estimate of the areas sown to spring grains; (2) an estimate of the areas under later sown crops; (3) the condition of all field crops at June 30 and (4) estimates of the numbers of farm live stock in Canada at the same date, the whole being based upon the returns of crop correspondents.

AREAS SOWN TO FIELD CROPS.

For wheat, oats, hay and clover the areas now reported are somewhat higher than the figures of a month ago when the seeding had not been completed; but for other crops, including barley, rye, peas and mixed grains, they are less. For wheat the acreage sown is placed at 13,549,650 acres, as compared with 14,897,090 acres, the area sown and with 12,900,590 acres, the area harvested in 1916. Thus the area sown to wheat, whilst 9 per cent less than the area sown for 1916, is 5 per cent more than the area harvested for 1916. Of the total area under wheat 809,250 acres were sown last fall and 12,740,400 acres were sown this spring. In the three prairie provinces the total area sown to wheat is 12,604,550 acres, comprising 2,448,850 acres in Manitoba, 7,689,700 acres in Saskatchewan and 2,466,000 acres in Alberta. The acreages for all Canada now estimated as sown to other early grain crops, as compared with the harvested areas of 1916, are as follows: Oats, 11,806,000 against 9,875,346; barley, 1,819,900 against 1,681,180; rye, 153,900 against 147,170; peas, 151,830 against 150,280 and mixed grains 469,140 against 397,770. Hay and clover are estimated to occupy 7,824,000 acres as compared with 7,892,932 acres, and alfalfa 86,500 acres as compared with 89,472 acres. For later sown cereals and hoed crops the estimated areas, as compared with the areas harvested last year, are as follows: Buckwheat, 336,400 acres as against 341,500 acres; flax, 695,750 acres against 605,700 acres; corn for husking 173,600 acres against 173,000 acres; beans 43,000 acres against 32,500 acres; turnips, etc., 152,100 acres against 156,200; sugar beets, 14,000 acres against 15,000 acres, and corn for fodder, 310,465 acres against 297,100 acres. Every province shows an increase in the area planted to potatoes, and the total area under this crop is estimated at 502,400 acres as compared with 448,800 acres, the area harvested in 1916, an increase of nearly 12 per cent. The acreage under potatoes for 1917 is larger than in any previous year, and is 18,400 acres larger than the previous record of 484,000 acres in 1912.

CONDITION OF GRAIN AND HAY CROPS.

In the three Atlantic provinces conditions at the end of June were generally satisfactory, nearly all grain crops being reported as over 90 per cent of the standard representing a full crop in Prince Edward Island and Nova Scotia and between 85 and 90 per cent in New Brunswick. Quebec also shows a condition of about 80 per cent and over. In Ontario fall wheat has still the low condition of 67 per cent, but spring wheat is as high as 93. Oats are 94, barley is 91, and other crops range from 85 to 97. In the prairie provinces the late spring, followed by cold and dry weather, has kept all crops backward; but prospects at the end of June were reported to be improving, as beneficial rains had fallen over considerable areas. In Manitoba and Saskatchewan the percentage condition of wheat and oats at June 30 was 76 and 78, these figures being lower than in any of the last seven years at the same date. For Alberta spring wheat and oats on June 30 were 85 per cent of the standard.

Converting the figures for all Canada from percentage of the standard or full crop to a scale in which 100 represents the average condition on June 30 for the past nine years, 1908-1916, the condition becomes for wheat, oats, rye and barley as follows: Fall wheat 86, spring wheat 95, all wheat 95, oats 95, rye 94 and barley 97. That is to say, if conditions between June 30 and the date of harvest be not abnormal, the anticipated yield per acre is 14 per cent below average for fall wheat, 5 per cent below for spring wheat, all wheat and oats, 6 per cent below for rye and 3 per cent below for barley. Hay, clover and alfalfa show good promise, excepting in Manitoba, where the condition is as low as 52 per cent of the standard.

Census and Statistics Office,
Ottawa, July 12, 1917.

ERNEST H. GODFREY,
Editor.

I. Revised Estimate of Areas under Field Crops in 1917 compared with 1916.

Field crops.	Area harvested, 1916.	Area sown, 1917.	Field crops.	Area harvested, 1916.	Area sown, 1917.
	acres.	acres.		acres.	acres.
Canada—			P. E. Island—con.		
Fall wheat.....	932,529	800,250	Hay and clover..	199,000	197,000
Spring wheat....	11,968,061	12,740,400	Nova Scotia—		
All wheat.....	12,900,590	13,549,650	Spring wheat....	13,400	16,200
Oats.....	9,875,346	11,806,000	Oats.....	116,000	123,000
Barley.....	1,681,180	1,819,900	Barley.....	4,700	4,800
Rye.....	147,170	153,900	Rye.....	320	300
Peas.....	150,280	151,830	Peas.....	180	170
Mixed grains....	397,726	409,140	Mixed grains....	4,100	4,000
Hay and clover..	7,892,932	7,824,000	Hay and clover..	553,000	542,000
Alfalfa.....	89,472	86,500	New Brunswick—		
P. E. Island—			Spring wheat....	14,000	16,000
Spring wheat....	34,500	36,000	Oats.....	198,000	190,000
Oats.....	199,000	201,000	Barley.....	1,900	1,800
Barley.....	3,600	3,500	Peas.....	400	400
Peas.....	60	60	Mixed grains....	870	840
Mixed grains....	8,000	7,800	Hay and clover..	574,000	568,000

I. Revised Estimate of Areas under Field Crops in 1917 compared with 1916—con.

Field crops.	Area harvested, 1916.	Area sown, 1917.	Field crops.	Area harvested, 1916.	Area sown, 1917.
	acres.	acres.		acres.	acres.
Quebec—			Saskatchewan—		
Spring wheat.....	64,000	90,000	Fall wheat.....	105,700	105,700
Oats.....	1,073,000	1,295,000	Spring wheat.....	7,352,000	7,584,000
Barley.....	72,800	79,000	All wheat.....	7,457,700	7,689,700
Rye.....	8,300	8,100	Oats.....	3,180,600	3,650,000
Peas.....	21,600	23,000	Barley.....	344,000	350,000
Mixed grains.....	91,000	94,000	Rye.....	20,500	23,200
Hay and clover.....	2,985,000	2,985,000	Peas.....	360	400
Alfalfa.....	2,600	2,300	Mixed grains.....	2,000	1,700
Ontario—			Hay and clover.....	75,000	76,000
Fall wheat.....	774,800	656,500	Alfalfa.....	1,850	1,800
Spring wheat.....	90,200	113,000	Alberta—		
All wheat.....	865,000	769,500	Fall wheat.....	42,000	38,000
Oats.....	1,991,000	2,687,000	Spring wheat.....	2,067,000	2,428,000
Barley.....	326,000	361,000	All wheat.....	2,109,000	2,466,000
Rye.....	69,000	68,000	Oats.....	1,746,500	2,071,000
Peas.....	126,000	126,000	Barley.....	281,400	309,000
Mixed grains.....	286,000	295,000	Rye.....	19,000	17,300
Hay and clover.....	3,059,000	2,998,000	Peas.....	380	400
Alfalfa.....	56,000	52,000	Mixed grains.....	1,800	1,800
Manitoba—			Hay and clover.....	196,000	194,000
Fall wheat.....	3,829	3,850	Alfalfa.....	12,000	12,000
Spring wheat.....	2,323,161	2,445,000	British Columbia—		
All wheat.....	2,326,990	2,448,856	Fall wheat.....	6,200	5,200
Oats.....	1,311,246	1,500,000	Spring wheat.....	9,800	12,200
Barley.....	644,080	708,000	All wheat.....	16,000	17,400
Rye.....	30,050	37,000	Oats.....	60,000	89,000
Mixed grains.....	1,356	1,400	Barley.....	2,700	2,800
Hay and clover.....	76,932	75,000	Peas.....	1,300	1,400
Alfalfa.....	4,422	4,400	Mixed grains.....	2,600	2,600
			Hay and clover.....	175,000	189,000
			Alfalfa.....	12,600	14,000

II Areas of Later Sown Cereals and Hoed Crops, 1916 and 1917.

Field crops.	Area harvested, 1916.	Area sown, 1917.	Field crops.	Area harvested, 1916.	Area sown, 1917.
	acres.	acres.		acres.	acres.
Canada—			New Brunswick—		
Buckwheat.....	341,500	336,400	Buckwheat.....	53,000	57,000
Flax.....	599,384	678,750	Beans.....	250	300
Corn for husking.....	173,000	173,600	Potatoes.....	39,000	46,000
Beans.....	32,500	43,000	Turnips, etc.....	7,700	7,700
Potatoes.....	452,315	502,400	Corn for fodder.....	100	85
Turnips, etc.....	154,745	152,100	Quebec—		
Sugar beets.....	15,000	14,000	Buckwheat.....	101,000	104,000
Corn for fodder.....	292,930	310,465	Corn for husking.....	13,000	13,600
P. E. Island—			Beans.....	4,400	5,700
Buckwheat.....	2,500	2,500	Flax.....	500	450
Potatoes.....	31,000	35,000	Potatoes.....	112,000	125,000
Turnips, etc.....	8,000	8,100	Turnips, etc.....	10,000	10,200
Corn for fodder.....	250	250	Corn for fodder.....	31,000	31,600
Nova Scotia—			Ontario—		
Buckwheat.....	10,000	10,900	Buckwheat.....	175,000	162,000
Beans.....	850	1,000	Corn for husking.....	160,000	160,000
Potatoes.....	24,500	41,000	Flax.....	4,500	4,000
Turnips, etc.....	9,000	9,100	Beans.....	27,000	36,000
Corn for fodder.....	500	480	Potatoes.....	133,000	142,000

II. Areas of Later Sown Cereals and Hoed Crops, 1916 and 1917—concluded.

Field crops.	Area harvested 1916.	Area sown 1917.	Field crops.	Area harvested 1916.	Area sown 1917.
	acres.	acres.		acres.	acres.
Ontario—con.			Sask.—con.		
Turnips, etc.....	97,000	94,000	Turnips, etc.....	12,200	12,300
Sugar beets.....	15,000	14,000	Corn for fodder..	1,800	1,800
Corn for fodder..	248,000	265,000	Alberta—		
Manitoba—			Flax.....	81,000	97,000
Flax.....	15,684	16,300	Potatoes.....	26,000	27,000
Potatoes.....	31,515	34,400	Turnips, etc.....	4,500	4,300
Turnips, etc.....	2,645	2,500	Corn for fodder..	1,000	950
Corn for fodder..	9,830	9,800	British Columbia—		
Saskatchewan—			Potatoes.....	15,390	21,000
Flax.....	497,700	561,000	Turnips, etc.....	3,700	3,900
Potatoes.....	30,000	31,000	Corn for fodder..	450	500

III. Condition of Field Crops, June 30, 1909-17.

NOTE.—100=Standard of full crop.

Field crops.	Per cent of standard condition.								
	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Canada—									
Fall wheat.....	77	85	75	70	81	78	93	80	70
Spring wheat.....	86	82	95	90	88	86	93	89	85
All wheat.....	—	83	90	85	86	85	93	87	83
Oats.....	94	86	94	86	88	87	92	86	85
Barley.....	86	87	93	89	88	86	92	88	86
Rye.....	81	88	91	88	86	85	94	91	83
Peas.....	84	87	89	80	87	87	93	82	89
Mixed grains.....	87	85	94	85	87	87	94	84	91
Hay and clover.....	76	91	85	86	72	74	80	99	89
Alfalfa.....	—	89	82	91	77	82	88	95	88
Pasture.....	83	89	91	96	82	83	89	101	92
P.E. Island—									
Spring wheat.....	89	99	95	98	93	97	95	99	97
Oats.....	89	99	99	98	94	97	95	99	98
Barley.....	90	96	95	97	91	96	96	98	96
Peas.....	93	96	96	98	95	97	97	98	92
Mixed grains.....	88	99	94	99	89	98	98	100	98
Hay and clover.....	67	104	67	75	78	95	101	94	87
Alfalfa.....	—	83	83	100	83	80	100	—	75
Pasture.....	73	104	76	91	86	95	99	100	93
Nova Scotia—									
Spring wheat.....	86	98	91	90	89	89	94	96	94
Oats.....	91	99	93	82	91	91	95	96	96
Barley.....	85	94	92	88	90	91	96	93	95
Rye.....	68	95	78	98	88	88	97	86	94
Peas.....	81	93	91	91	91	93	96	95	96
Mixed grains.....	87	97	94	92	90	92	96	98	97
Hay and clover.....	76	106	81	91	—	79	106	103	93
Alfalfa.....	—	95	70	88	—	82	95	105	70
Pasture.....	78	104	71	92	—	81	105	102	95
New Brunswick—									
Spring wheat.....	90	95	93	88	90	90	92	95	88
Oats.....	93	97	97	83	86	89	92	96	86
Barley.....	88	89	94	85	90	87	90	88	87
Rye.....	80	83	88	90	—	—	85	94	—
Peas.....	82	89	91	84	91	93	94	96	95

III. Condition of Field Crops, June 30, 1909-17—con.

NOTE.—100 = Standard of full crop.

Field crops.	Per cent of standard condition.								
	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
New Brunswick—con.									
Mixed grains.....	83	92	96	83	86	90	89	99	92
Hay and clover.....	68	110	83	89	73	85	92	104	102
Alfalfa.....	—	97	69	87	—	59	75	100	90
Pasture.....	82	105	88	94	81	90	92	102	102
Quebec—									
Spring wheat.....	85	89	92	76	85	83	92	80	84
Oats.....	91	93	95	73	87	84	93	79	81
Barley.....	89	91	93	79	86	84	92	82	82
Rye.....	87	89	89	80	85	85	91	94	85
Peas.....	83	84	90	74	92	83	93	80	86
Mixed grains.....	90	74	94	77	88	83	93	82	85
Hay and clover.....	81	103	88	80	64	72	75	100	98
Alfalfa.....	—	88	82	84	71	75	83	90	98
Pasture.....	82	100	91	87	73	77	83	100	94
Ontario—									
Fall wheat.....	79	94	73	68	82	78	93	78	67
Spring wheat.....	76	85	88	81	82	84	95	81	93
All wheat.....	—	90	77	73	82	80	94	80	82
Oats.....	90	90	89	83	83	87	93	73	94
Barley.....	78	91	89	82	82	85	92	81	91
Rye.....	77	89	83	86	83	84	93	86	85
Peas.....	85	88	88	79	81	88	93	75	90
Mixed grains.....	84	91	93	86	84	89	93	73	94
Hay and clover.....	70	90	75	78	63	65	70	100	85
Alfalfa.....	—	93	78	85	71	79	85	96	90
Pasture.....	76	89	82	89	74	79	83	104	97
Manitoba—									
Fall wheat.....	—	—	—	82	73	74	—	97	100
Spring wheat.....	94	73	99	82	84	82	92	93	76
All wheat.....	—	—	—	85	84	82	92	93	76
Oats.....	93	73	96	81	87	88	91	94	76
Barley.....	89	75	94	79	88	80	92	92	77
Rye.....	100	74	97	85	70	100	86	95	71
Peas.....	65	76	96	85	—	98	100	100	93
Mixed grains.....	91	71	99	76	92	89	93	99	86
Hay and clover.....	84	65	97	83	79	66	70	101	53
Alfalfa.....	—	67	100	92	90	82	95	95	73
Pasture.....	94	69	100	83	93	86	84	102	60
Saskatchewan—									
Fall wheat.....	—	—	—	77	75	79	94	99	75
Spring wheat.....	99	78	99	85	90	90	90	91	78
All wheat.....	—	—	—	85	89	90	90	91	78
Oats.....	98	82	97	82	90	89	89	92	78
Barley.....	95	85	96	84	93	89	89	93	84
Rye.....	105	83	99	84	96	92	92	99	87
Peas.....	93	84	90	89	100	93	96	89	97
Mixed grains.....	99	95	97	91	90	93	94	85	89
Hay and clover.....	94	77	98	88	94	93	81	100	81
Alfalfa.....	—	77	92	92	91	94	92	99	76
Pasture.....	99	79	100	93	97	96	93	102	87
Alberta—									
Fall wheat.....	66	64	83	72	76	73	98	87	83
Spring wheat.....	97	66	97	96	93	84	98	92	85
All wheat.....	—	65	92	82	89	82	98	92	85
Oats.....	100	67	98	87	94	85	97	92	85
Barley.....	97	73	96	88	96	86	96	93	85
Rye.....	101	83	92	93	95	84	101	94	89
Peas.....	100	70	94	88	86	83	97	94	79

III. Condition of Field Crops, June 30, 1909-17—concluded.

NOTE.—100=Standard of full crop.

Field crops.	Per cent of standard condition.								
	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Alberta—con.									
Mixed grains.....	95	74	92	91	98	78	95	95	82
Hay and clover.....	95	58	95	91	88	83	100	87	90
Alfalfa.....	—	71	88	87	91	79	102	98	80
Pasture.....	101	63	102	94	97	93	105	97	92
British Columbia—									
Fall wheat.....	88	84	89	92	97	89	95	82	85
Spring wheat.....	73	88	87	90	96	93	98	86	89
All wheat.....	—	86	87	91	96	92	97	85	88
Oats.....	93	88	91	93	96	91	97	88	94
Barley.....	72	98	84	96	88	94	93	90	88
Rye.....	100	90	99	100	95	100	93	83	88
Peas.....	81	85	88	93	101	94	108	91	97
Mixed grains.....	100	98	80	92	103	95	98	87	94
Hay and clover.....	65	91	88	95	97	92	103	81	96
Alfalfa.....	—	102	85	100	90	100	111	85	86
Pasture.....	65	86	89	91	100	90	96	88	98

CROP REPORTS FROM THE PROVINCES.

Month ended June 30, 1917.

Prince Edward Island.—The early part of June was cool and backward, but the latter part of the month has been favourable for the rapid growth of all crops. At the end of the month the condition of all crops was reported to be good, and an excellent yield of hay was promised. A larger acreage of potatoes than last year was planted. All live stock are reported to be in good condition, and the high prices offered for meat and dairy produce have stimulated efforts on the part of stock owners.

Nova Scotia.—Cold, wet weather made the seeding very late, but fine weather towards the end of the month has promoted good growth of all crops. No damage from insect pests is reported, and the frosts usually experienced in June appear to be absent. Live stock are all in thriving condition and good flesh. There is a good flow of milk and more calves than usual are being kept.

New Brunswick.—The late sowing of the crops and a wet and cool season have resulted in the crops being in a backward condition at the end of June. Warmth and bright sunshine are badly needed. The hay crop promises to be a good one. All farm animals are in healthy condition.

Quebec.—Throughout the province the weather of June was on the whole unusually cool with an excessive rainfall. As a result all crops are very backward, especially on low lands, where the grain is turning yellow. Owing to the backward season much land that was

intended for oats and barley has been sown to buckwheat and forage crops. A large increase in the area sown to beans and potatoes is also reported from all parts of the province. The hay crop gives good promise; correspondents state that although it is not so abundant as last year it is superior in quality. All live stock are reported to be in good condition.

Ontario.—Over the greater part of the province June was cool and rainy, so that at the end of the month crops were reported to be nearly two weeks later than in normal years, though generally in fair condition. In the southern peninsula the rainfall was excessive, and crops on low lands, especially corn and beans, were suffering. Fall wheat, too, was reported to be in poor condition, but was improving somewhat. Pastures were late in starting to grow but were generally good. Good increases are reported in acreages sown to beans and potatoes. All classes of live stock are in good condition. Swine have decreased in number materially owing to the high cost of grain feed. The dairying industry is receiving great attention.

Manitoba.—The wheat acreage has been reduced, but more oats, barley and flax than last year have been sown. Weather conditions have not been very favourable, the spring being late and the weather cool and very dry; so that at the end of June all crops were somewhat backward. Towards the end of the month however, good rains were falling and great improvement was looked for. Frosts in the middle of the month cut down potatoes and corn, but rains were reviving them. Live stock were in healthy condition with an increase for all classes but swine. Pastures were not very good, and feed was becoming scarce.

Saskatchewan.—Cool weather and lack of moisture have retarded growth, so that crops are rather later than usual. Crops sown on fall ploughing and summer fallow look much better than those sown on stubble and spring ploughing where the lack of rain was having serious results. Beneficial rains at the end of June were making a marked difference in the appearance of the crops. A decrease of 10 p.c. is reported in wheat, but flax, oats and potatoes have increased. Live stock are generally in good condition, a few cases of blackleg amongst cattle being the only disease reported. Pasturage is rather poor. Swine are fewer in number this year.

Alberta.—The weather has been cool with very slight precipitation, making germination and growth slow. Much needed rains were falling at the end of June, and crops were fast catching up to their normal condition. Pastures were reported to be good, and live stock were in excellent condition.

British Columbia.—Cool weather has retarded growth, but otherwise grain and grasses were in good condition. Potatoes in places suffered from too much rain earlier in the season, and cut-worms were damaging the hoed crops. Dairying is on the increase, and a better grade of cows is being kept.

EFFECT OF JUDICIOUS CULTIVATION FOR WHEAT.

Our Crop Correspondent, Mr John Wythe, of Miniota, Manitoba, writes as follows:—The crops in this district are in bad shape from extreme drought. With these conditions prevailing and crops dying all around, a good healthy field of wheat dotted here and there is very prominent and becomes the main topic of conversation in the locality. I went so far as to question the owners of some fields as to their methods and found that one and all were the same. These fields were double-disked in the fall of 1915 and harrowed. They were again double-disked and harrowed in May, 1916. In June of that year they ploughed an average depth of six inches, the day's ploughing being harrowed and packed immediately. The use of the cultivator varied a little, but all fields were left in a block corrugated state when freeze-up came in 1916. None of these fields were cultivated in the spring of 1917, but were well harrowed and packed and seeded to wheat about May 1st. And should the drought continue these fields will average from 20 to 25 bushels per acre at the least."

TELEGRAPHIC CROP REPORTS.

Following the plan adopted in each of the two previous years, arrangements have been made by the Census and Statistics Office for the collection of telegraphic crop reports on the last day of June, July and August. This year reports are being obtained from each of the Branch Superintendents of the Dominion Experimental Farms and from the Crop Correspondents of the Census and Statistics Office at selected points designed to cover the field as widely as possible. For Saskatchewan and Alberta telegraphic summaries have been furnished by the provincial Departments of Agriculture in connection with their local telegraphic crop-reporting service. The following report, based on the telegrams received at the end of June, was circulated by the Census and Statistics Office on July 5:

Atlantic Provinces.—In PRINCE EDWARD ISLAND the weather conditions have been favourable for maximum growth, and a heavy hay crop is assured in most districts. Cereal crops are sturdy and healthy in appearance, while early wheat is two feet high. Roots, corn and potatoes germinated well and are growing rapidly. Fruit of all kinds is most promising, as no frost occurred since the bloom opened. In NOVA SCOTIA seeding was retarded by the wet weather; but crops since June 12 have been making rapid progress. Fruit prospects are good. In NEW BRUNSWICK a wet cold May was followed by a wet June. The grain acreage is short and the stand poor. The potato acreage is probably above average, though below expectation, owing to wet and shortness of fertilizers. Large hay crop assured; pastures are luxuriant and the milk flow large.

Quebec.—Vegetation is very backward, and the crops have suffered from excessive rains during June, especially those on lowlands and strong soils. Hay promises to be a big crop. Potatoes look well. In some parts seven inches of rain fell during June, and the acreage under field roots will be considerably increased owing to the failure of grain.

Ontario.—OTTAWA:—The grain crops promise well, having a good stand and being even and well stooled. Hay is an average crop. Corn is good and roots are first class. All crops are from ten days to two weeks late. PETERBOROUGH: Fall wheat will average only half a crop. Early sown spring grains are promising, but from 10 to 15 days late. The hay crop is light; corn, potatoes and roots are doing well. WATERLOO, N.R.: Wheat crop small, just heading out. Spring crops promise well. Corn shows poor growth. Potatoes look fairly well. HYDE PARK: All crops making great headway though six weeks late. Potatoes variable, bugs voracious. No apples. A great crop of strawberries. PETROLIA: Season

late. Fall wheat and spring grains promise a heavy crop. Hay, clover and alfalfa average. Winter apples not over 5 p.c. Fall apples 15 p.c., peaches only fair. June wet. NEW LISK-EARD: In Temiskaming district crops are slightly below average, and later than last year. Fall wheat, peas and hay are good, oats fair, spring wheat average, clover and pasture excellent. With good growing weather future prospects are good.

Manitoba—**DAUPHIN**: Wheat two weeks later than last year, cut one-third by dry seed bed, May frosts and prolonged dry weather. Plenty of moisture now. Wheat very ragged. Much in shot blade and some just coming through. Oats good and barley very good. **MILLWOOD**: Since rains commenced on 19th all crops made good growth. Wheat uneven germination; 50 p.c. in shot blade. **DOMINION CITY**: Average wheat crop almost assured. With favourable weather for a late harvest there should be an abundance of coarse grains and fodders and a big yield of potatoes and vegetables. **ELM CREEK**: Grain crops in good shape. Light showers ideal for the formation of wheat heads. Hoed crops uneven and pastures very light. **MANITOU**: Not sufficient rain. Severe frost night of 21st froze wheat and some oats in low lands. Early sown wheat and oats very short and heading out. **FRANKLIN**: Crops two weeks late. Good showers lately, but lack of heat. A fair promise on present appearances. **BRANDON**: Only two-thirds of an inch rainfall before last week of June. Severe late frost and high winds make the crop conditions the worst in many years. Grain at least three weeks late and very uneven. Almost no growth of hay and fodder crops. Prospects improved by showers last week. **BERESFORD**: Crops two weeks later than average through repeated frosts and dry weather. Favourable rains have fallen recently, and prospects are for a good half crop. Hay light and pastures poor. **PIERSON**: Late frosts have done great damage, 75 p.c. of wheat frozen, coarse grains late. With best of condition may get 12 bushels per acre of wheat. Prospects better for barley, oats and flax. Root crops damaged by frost.

Saskatchewan—The provincial Department of Agriculture reports that the crops are from seven to ten days later than last year. Some wheat is in shot blade. The straw will be short, except on summer fallows where abundant rains and warm days have caused rapid growth. About half the summer fallowing is completed, and the acreage of new breaking and summer fallows shows slight increase over last year. The Dominion Experimental Stations report that at **ROSTERN** rains all the month have worked favourably for all crops. Hay crops not fully recovered from drought in May, but grain and hoed crops are excellent. At the **SCOTT** Station crops were injured by both frost and drought. The total rainfall for June was less than one inch. Hay crops promise to be very light and grain crops short in straw. Many vegetable gardens proving failures. At **INDIAN HEAD** the weather during June was warm and showery. Grain crops have made good progress.

Alberta—The provincial Department of Agriculture reports that the crop conditions during June were very encouraging. The first two weeks were cool and the late sown crops appeared very backward. During the last two weeks the weather has been ideal over the whole province. Growing showers visited a large percentage of crop area, and heavy rains with warmer weather where most needed. Slight frost and hail first part of month, none since. The Dominion Experimental Farms report that at **LACOMBE** the weather during June will average below normal temperature. Wheat 35, oats 24, barley 22 inches high. Hay prospects good. At **LETHBRIDGE** the rainfall during June has been light, only about one-third of the average for the last fifteen years. All but late sown grain is in excellent condition, but in imperative need of immediate moisture. The total area in crop is greater than last year, the largest increase being in flax.

British Columbia—**AGASSIZ**: Most crops good, later than average, but earlier than last year. **INVERMERE**: Crops backward, but promise well. Root crops damaged by cut-worms. **SUMMERLAND**: Apple crop 20 p.c. higher than last year. Grain making good growth. Hay good. **SIDNEY**: Hay crop about average, autumn cereals developing well, spring cereals, potatoes, roots and beans doing well. Orchard fruits, except cherries, abundant. Small fruits average, with strawberries excellent.

CROP REPORTS FROM PROVINCIAL GOVERNMENTS.

Ontario—The Ontario Department of Agriculture reported (July 9) that late sowings of buckwheat and millet were made during the week and some rape. There would however be less buckwheat grown than last year. Winter wheat and rye and also early sown barley were already nicely in head. Other spring grains were growing rapidly, and all gave promise of plenty of straw. Early potatoes were already on the market, and a big yield was likely. As a consequence, the price of storage potatoes had been tumbling. All field

roots, including sugar beets, were doing well, for although most of them had a rather late start in sowing owing to the rainy season, there had been a decided rush of growth. Pastures continued in splendid condition. Cattle had never found better forage. Timothy was relatively behind clover in growth, but a considerable quantity of hay had already been cut, and the yield was turning out better than was expected earlier in the season. The first cutting of alfalfa had given satisfaction. Vegetable growing in the towns this year had so far proved satisfactory, as the season had been favourable to crisp and tender growth. In field and market garden culture, tomatoes, cabbage, etc., gave promise of large yields. Although apples would be a light crop, less injury than usual from insect pests was being experienced. Plums and pears would be only fair in yield. The Richmond and other early varieties of cherries were on the market, and a good crop generally of this fruit was assured. Small fruits promised large yields. Horses continued in demand at fair prices. Cattle were being sold at easier values than formerly. The milk flow seemed still at its flood, although one report claimed that the ebb had set in. The condensery at Alymer was reported to be working night and day, and creameries and cheese factories all over the province were on the rush. Cheese sold at Dundas and Peterborough Boards during the week at $21\frac{5}{16}$ cents per lb. Hogs were selling at from \$14.25 to \$15.65 a cwt., according to location, but not many were moving. Washed wool sold in Grey county during the week at 83 cents. The beginning of haying, the immediate need of hoeing after the frequent rains, and the near approach of grain harvesting, made the demand for help very strong, but few experienced men were in sight. It was hoped, however, that vacation labour from the cities would ease the situation. Town and city girls were helping in strawberry picking and other light field work. There was a brisk demand for tile and tiling, owing to the proved need of drainage last year and during the present season. The government tractors were being kept very busy.

On July 16 the Department reported that frequent and heavy rains during the week had delayed almost every branch of farmwork. Corn was not doing its best with the excessive moisture and comparatively cool weather of the past three or four weeks. Roots were making rapid growth, but so were the weeds, which had got a big start owing to the frequent showers, with little opportunity for hoeing. Early potatoes never promised better, and would soon be general on the market. Vegetables and in fact all garden products were doing remarkably well this season. Of the field crops, beans had done the poorest so far, as weather conditions had been against the best results. On the other hand, peas looked very promising. All the grain crops were looking well, although some fields had been knocked down by the heavy rains. With fine weather, however, these would probably recover, and good yields of both grain and straw were looked for. Hay would be a fair crop, but wet harvest weather was telling against it. Some cut early had been out for

days. In many quarters haying and grain harvesting would run together, which would further complicate the labour situation. All classes of live stock were thriving on good pastures. The flow of milk was still good, though hardly up to the unusually heavy yield of the latter part of June. Marketing of live stock had been slow during the week. Farm help was urgently needed, but experienced labour was very hard to find. Vacation assistance, however, was being tried out in many lines of field work.

The report on July 23 stated that fall wheat was ripening rapidly and on the whole would be well headed. Spring wheat was also looking well. Other spring grains, especially barley, promised unusually well, although much of the straw was so rank that injury from lodging was feared should heavy rains come before cutting. Hoed crops were very weedy, owing to the almost continuous rains of the previous two or three weeks. Corn was coming along rapidly, but was about a fortnight late on the average. Potatoes had done splendidly, but in several counties east and west, blight was threatening the late crop. All roots promised well, although much necessary weeding had been delayed owing to the land being too wet for working on. Hay will be about an average yield, but some of it was caught by rain after being mown and will be poorly cured. Some of the clover was said to be over-ripe, awaiting cutting. Delay caused by rains will cause some mowers to be running as late as August. Vegetable gardens in both town and country were on the whole giving much satisfaction to the owners. Live stock generally were in good condition. Swine were being disposed of in the usual numbers, but cattle were marketing very slowly. Milk was still in good flow, as the grass had been better than usual for the time of year. Cheese factories in Dundas paid from \$1.85 to \$1.90 per 100 lb. for milk, with whey back, while the condensory was giving \$2.25 straight for the milk. One report enthusiastically declared that the season would go on record as witnessing one of the largest outputs in the history of dairy production.

On July 30 the Department reported that some fields of winter wheat and rye had been cut, and were yielding well. Spring wheat was also promising a good yield, and like all the spring grains would have plenty of straw. The midge had been doing injury to the growing wheat in a few of the counties in the western half of the province, more especially in Welland and Haldimand, the damage to the crop ranging from 5 to 25 p.c. in some fields, although not averaging more than 7 p.c. in any one district. Barley was ripening rapidly and would give a high yield. Oats were also doing well. Peas at present were looking better than for years, but the hot, dry weather would be their testing time. In the heavy bean raising county of Kent, that crop was likely to turn out well. The week of clear sunshine had been ideal for haying. Both clover and timothy had been got in under ideal conditions, and would be of much better quality than last year's cut. Prospects for clover seed were promising. Roots, where properly cultivated were looking fine, and all classes

gave promise of at least an average yield. Early potatoes were doing well, but blight was threatening some of the later varieties. Live stock, especially young animals, were reported to be in excellent condition. There had been a decline in values, running about 75 cents per cwt. in the case of market cattle. The week of intense heat had told upon pastures, and the flow of milk had slowed up, although it was now better than the average for the time of year. The fly was becoming very tormenting to cattle. Hogs had slightly decreased in price; marketing was about as usual. The frequent rains of the latter part of spring and early summer, which delayed the planting of corn, roots and other late field crops, and prevented hay cutting at the normal period, had been followed by a week or more of torrid weather which was fast hastening the ripening of grain, and was causing the overlapping of the haying and harvesting seasons to such an extent that farmers were almost in despair of securing adequate help to get in the crops at the right time and in the best condition. Much disappointment was being expressed at the slow response so far of men from the towns and cities to give the help that was expected on the farms during vacation. In Halton women are working in the fields, driving horses on rakes and mowers and also on corn cultivators.

Saskatchewan.—The Saskatchewan Department of Agriculture reported on July 14 that wheat was now in the shot blade and in a great many places heading out. Crops varied so much in the different parts of the province that it was difficult to make any authoritative statement as to the conditions generally. Rain was badly needed in many places, especially in the west and southwestern districts, where the crops were burning up on account of the extremely hot weather of the last few days. However, reports from other parts stated that rain had fallen and the weather was cooler. The crops however were from ten days to two weeks later than last year. Weeds were causing some trouble, especially on the summer-fallowed lands. Summer-fallowing would be practically completed in the coming week. The hay crop would be about average.

Alberta.—The Alberta Department of Agriculture reported on June 30 that all crops looked very well, with warmer weather and plenty of moisture prevailing over the whole of the province, making ideal conditions for continued good growth. No hail or frost was reported, but cutworms were doing some damage in one district. Hay and pastures were in splendid condition, and live stock were in excellent shape. On July 7 it was reported that weather conditions have been very favourable for crop growth during the past week. Frequent showers with warmer weather had prevailed over almost the entire province. Some hail in two or three districts was reported but very little damage was done. Especially optimistic conditions prevailed in the Peace River district where crops were reported two weeks in advance of last year, with prospects of a very heavy yield. A greatly increased area was being broken, and an increase in the summer-fallow acreage was expected. Hay would be light in some

districts on account of the late spring and dry weather the first part of last month. A large increase in green-feed acreage had been reported. All root crops and live stock were doing well. On July 14 reports showed that crops had suffered somewhat for rain in the southeastern parts of the province. The weather had been generally warm and the growth elsewhere had been good. Thunderstorms had prevailed over a large portion of the province and destructive hail in two or three districts with considerable damage. Wheat had headed out, and other grains were coming fast in most places. Hay, however, was reported short. Roots and live stock were in good condition everywhere.

ESTIMATED NUMBERS OF FARM LIVE STOCK.

It is estimated from the reports of correspondents that the numbers of farm live stock in Canada on June 30 were as follows: Horses, 3,035,254; milch cows, 2,642,709; other cattle, 3,325,013; sheep, 2,009,717; and swine, 2,513,526. This is an increase over last year for all descriptions, excepting swine, which are less by over 300,000. The decline in numbers of sheep, which has been annually continuous since 1913, appears to be arrested, the increase shown this year being over 44,600.

Numbers of Farm Live Stock, 1912-1917.

Live stock.	1912.	1913.	1914.	1915.	1916.	1917.
	No.	No.	No.	No.	No.	No.
Canada—						
Horses.....	2,692,357	2,866,008	2,947,738	2,996,099	2,990,635	3,035,254
Milch cows.....	2,604,488	2,740,434	2,673,286	2,666,846	2,608,345	2,642,709
Other cattle.....	3,827,373	3,915,687	3,363,531	3,399,155	3,313,519	3,325,013
Sheep.....	2,082,381	2,128,531	2,058,045	2,038,662	1,965,101	2,009,717
Swine.....	3,477,310	3,448,326	3,434,261	3,111,900	2,814,672	2,513,526
Prince Edward Island—						
Horses.....	35,638	35,952	36,114	36,898	38,562	38,948
Milch cows.....	49,415	48,565	47,317	47,043	46,032	46,032
Other cattle.....	64,688	64,261	61,048	59,503	57,260	54,970
Sheep.....	87,793	85,060	85,351	86,640	88,797	90,573
Swine.....	50,462	43,762	41,718	40,792	38,300	35,236
Nova Scotia—						
Horses.....	61,735	62,550	62,581	63,244	64,193	64,193
Milch cows.....	130,104	130,468	128,237	128,814	130,141	131,442
Other cattle.....	156,051	153,726	148,269	144,458	140,673	135,046
Sheep.....	216,135	217,734	211,921	205,542	200,979	200,979
Swine.....	61,194	56,580	53,892	53,402	51,928	49,850
New Brunswick—						
Horses.....	65,582	65,103	65,702	65,827	65,169	65,169
Milch cows.....	110,507	106,904	102,713	101,665	100,221	100,221
Other cattle.....	113,136	107,864	99,256	96,437	92,223	89,456
Sheep.....	148,723	135,115	121,739	111,026	105,997	103,877
Swine.....	85,905	77,014	73,325	72,533	70,683	69,269
Quebec—						
Horses.....	367,402	369,974	372,009	372,567	332,628	332,628
Milch cows.....	755,770	761,816	733,476	720,420	639,805	652,600
Other cattle.....	695,906	693,540	625,958	612,500	535,693	535,693
Sheep.....	620,881	602,751	571,287	554,491	497,711	502,688
Swine.....	747,254	661,768	634,569	632,729	531,303	504,738

Numbers of Farm Live Stock, 1912-1917—concluded.

Live stock.	1912.	1913.	1914.	1915.	1916.	1917.
	No.	No.	No.	No.	No.	No.
Ontario—						
Horses.....	805,271	902,628	904,975	903,527	896,208	887,246
Milch cows.....	1,033,392	1,141,071	1,085,843	1,077,808	1,082,119	1,082,119
Other cattle.....	1,380,890	1,460,015	970,445	935,606	901,924	865,847
Sheep.....	677,462	705,848	640,416	611,789	589,581	595,477
Swine.....	1,693,594	1,652,440	1,553,624	1,469,573	1,404,618	1,236,064
Manitoba—						
Horses.....	293,776	304,088	316,707	317,847	318,387	318,387
Milch cows.....	148,471	152,792	156,306	157,494	159,274	164,052
Other cattle.....	267,130	256,926	251,996	246,603	239,205	230,205
Sheep.....	40,800	42,840	45,303	50,880	51,943	54,540
Swine.....	183,370	184,745	186,276	163,308	130,320	110,772
Saskatchewan—						
Horses.....	551,645	580,386	609,521	630,062	646,633	678,965
Milch cows.....	184,896	194,843	204,624	211,684	218,230	229,142
Other cattle.....	461,244	468,255	474,436	543,609	556,710	573,411
Sheep.....	114,810	115,568	126,027	133,311	138,350	149,418
Swine.....	344,298	386,784	454,703	411,324	334,489	284,316
Alberta—						
Horses.....	451,573	484,809	519,424	544,772	567,543	590,245
Milch cows.....	157,922	168,376	179,068	183,974	188,205	193,851
Other cattle.....	587,307	610,917	633,032	660,000	686,730	721,067
Sheep.....	135,075	178,015	211,001	238,579	245,474	262,657
Swine.....	278,747	350,692	397,123	229,696	215,202	185,074
British Columbia—						
Horses.....	59,735	60,518	60,705	61,355	61,312	59,473
Milch cows.....	34,011	35,599	35,702	37,944	39,318	43,250
Other cattle.....	101,021	100,183	99,091	100,439	103,101	110,318
Sheep.....	40,702	45,000	45,000	46,404	46,269	49,508
Swine.....	32,485	34,541	39,021	38,543	37,829	38,207

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during June has been variable, with showers almost daily up to the 11th, followed by a fine spell until the 29th, when there was a heavy rainfall. The highest temperature recorded is 85·1, the lowest 36·8 and the mean 63·25; while, for the corresponding period of 1916, the highest was 82·5, the lowest 41·0, and the mean 62·3. Showers have fallen on fifteen different days, the rain totalling 2·58 inches, compared with 4·24 inches a year ago, when precipitation was recorded on seventeen days. The bright sunshine averages 7·42 hours a day, as against 6·47 hours in June, 1916.

There has been so much cool, dry weather that vegetation generally has made rather slow growth, and Indian corn, in particular, has been kept back. Potatoes are doing well. If growth, as a rule, has been slow, crops generally have made a good stand. The prospects are for an average hay crop on newly seeded meadows, but indications are that the returns will be rather less than usual on old meadows.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—“The weather conditions during June have been very favourable for maximum plant growth. The total rainfall is 2.54 inches, falling on thirteen different days, distributed over the entire month. The season was late, and the forest trees did not appear green until June 6, which is nine days later than last year. The growth of vegetation, however, has been so rapid that the cultivated strawberries bloomed quite as early as in 1916. The pastures improved greatly, and the live stock are doing well. The cereal crops germinated very quickly, and have made sturdy growth, and are healthy in appearance, the earliest sown wheat being two feet high on June 30. Cropping is completed, with the exception of a little buckwheat and late turnips. Roots, corn and potatoes germinated quickly, and are growing rapidly. Fruit prospects are good, as no frost has occurred since the bloom opened, and the fruit has set well. Insects are numerous, several rather bad outbreaks of the forest tent-caterpillar being reported; and fungous diseases of plants seem to be prevalent.”

Kentville, N.S.—W. S. Blair, Superintendent, reports:—“The June mean temperature is 60.36, compared with 58.3 in 1916, 56.8 in 1915 and 56.2 in 1914. This means that the temperature has averaged higher than that of any June since this station was started. The warm weather has favoured a rapid growth of all crops, which had been greatly retarded by the cool, backward May. Rain fell on eleven days, amounting to 2.93 inches; there was rain on eight days up to the 13th, during which period 1.93 inch fell but it has been fairly fine since, except for a rainfall of 0.61 of an inch on the 24th. These conditions, after a wet May, made seeding very late, and many farm areas could not be worked for crops until after the middle of the month. The precipitation for the corresponding month in 1916 was 3.69 inches, 2.43 inches in 1915 and 4.2 inches in 1914. The sunshine amounts to 176.28 hours as compared with 160.5 hours in 1916, 180.2 hours in 1915 and 250.3 hours in 1914. During the latter part of the month there has been ideal growing weather, and all crops are making exceptionally rapid progress. The fruit bloom was fully ten days later than usual; but it was at its height during fairly bright, warm weather and the set of fruit promises to be large. Conditions have been favourable for the apple scab fungus, and orchards unsprayed or not well sprayed, will likely produce much worthless fruit. Conditions were unfavourable for spraying operations during the latter part of May and early in June, owing to so much rain, and, as the wet prevented putting in crops early, this had to be done about the time of the later spraying operations. Hay promises to be a heavy crop.”

Nappan, N.S.—W. W. Baird, Superintendent, reports:—“The first week of June was dull and rainy, with showers on four days. The weather since has been mostly fine and warm, and vegetation has made rapid growth. At the Experimental Farm, seeding was general at the beginning of the month, but, in many instances, in the surrounding district grain was not sown until about the 15th

and in some places it has been still later. Potatoes and roots were planted about the 16th. The orchards were sprayed during the early part of the month and a new plantation of strawberries set out. The small bush fruit plantation was also sprayed and gives promise of a good currant crop this year. Prisoners of war worked on the Farm on the fine days of the month, clearing the new fields. All live stock is in good condition and doing nicely. The work that has engaged attention during the month, other than caring for live stock, poultry and bees, has been harrowing, seeding, treating and cutting potatoes, packing and shipping strawberry plants, fencing, mowing lawns, spraying, sowing fertilizers, drilling and cultivating bush fruits."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"Following a wet and cold May, June, with fifteen days on which rain fell and only three really bright days, has been a very disappointing month agriculturally and thousands of acres that would have been in crop, had the weather been favourable, will lie idle throughout central and southern New Brunswick. Out of 470 hours of possible sunshine in June, the total for the month is only 153.9 hours, compared with an average of 214 hours for June during the past forty-three years. The precipitation amounts to 5.1 inches, against a forty-three year average of 3.7 inches. On well drained land, crops have grown fairly well, but grain is badly off colour. Potatoes were very late in planting, and in some cases have been flooded out and there has been more or less rot of the seed in the ground. Everywhere there is a great stand of grass, and pastures, except in low ground, are luxuriant. There will be potatoes planted in July and considerable buckwheat sown, while five-sixths of the turnip crop is yet unseeded. At the Station farm, where much of the land is underlaid with clay, conditions are very backward. Crops on drained land are, however, doing well."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports:—"June has been cool, dark, and very wet. The highest temperature recorded is 81.2, the lowest 35 and the mean temperature 54.6. The precipitation totals 7.68 inches, distributed over thirteen different days. These conditions have been most unfavourable for all crops, except hay. The excessive moisture has been very detrimental to seeding, so much so that a good deal of the land intended for wheat and other grain has been sown to turnips. It is safe to say that on account of the wet weather not more than eighty per cent of the usual quantity of grain has been sown; of the grain in the ground, most has been put in so late that it is feared the crops will be much lighter than usual. Prospects for small fruits are good, and fair to good for tree fruits. The potato acreage has been increased about twenty per cent and, though this crop has suffered considerably from the excessive moisture, potatoes generally are doing well on dry land. However, it is rather too early to speak with any certainty, and, should the weather conditions improve in the near future, the prospects for all crops may become much more favourable."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—“June has been warmer, wetter and duller than the average for the corresponding month during the last five years, the figures being, respectively, 59.5 and 58.4 degrees, 8.56 and 3.38 inches of rain, and 136.4 and 211.9 hours of sunshine. The main difference is found in the precipitation, which is by far the heaviest for June recorded at this station since 1911. It rained on nineteen out of the thirty days, and most crops are suffering, especially corn, oats and potatoes, in the order mentioned. At quite a number of places, barley had to be sown instead of oats, and, in some localities, buckwheat had to be used. At the Station, all seeding operations were finished in May, and the main work in connection with the crops since has been to keep in check weeds, which are very plentiful. Five foals of the French-Canadian breed have been dropped and are in fine health. Quite a few calves have been born, and some 600 Barred Rock chicks are growing nicely, as are some twenty lambs.

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—“The highest temperature recorded during June is 84, and the lowest 40, and the mean for the month is 60.21, compared with 79 and 35, and a mean of 59 for this time last year. The precipitation totals 7.38 inches, the heaviest recorded since the establishment of this station. Throughout the district, grain on low, undrained land has suffered much damage, and the difference in the case of under-drained soils has shown in a striking manner the value of under-drainage. The crops have been kept back considerably by the weather and the cultivation of corn and roots delayed. Hay promises well, but it is about ten days later than usual. Profiting by the example of some whose increased yields varied from 50 to 113 bushels per acre of marketable potatoes in tests carried on in this district under the supervision of the Division of Botany, this year farmers generally are spraying their potatoes with Bordeaux mixture to prevent Late Blight. Thanks probably to a large extent to the considerably higher prices now prevailing for agricultural products, those engaged in crop raising seem to be realizing, more and more, the advantage of combating insects and fungous diseases harmful to crops.”

Brandon, Man.—W. C. McKillican, Superintendent, reports:—“The drought conditions which prevailed in May continued throughout the first three weeks of June. Up to the 22nd, the total rainfall for the season was only two-thirds of an inch, and this, coming in light scattered showers, never penetrated the surface dust. Combined with this shortage of moisture there were frequent severe frosts and high winds. Consequently crop conditions toward the latter part of June were the least promising for this date in many years. Grain has been very backward, suffering seriously from drought, and the later sowings germinated very unevenly. Hay crops were practically non-existent, and corn and roots had either not germinated or else had suffered severely from light frosts. During the last week of June more than an inch of precipitation has fallen, most of it on one day, the 29th. This should make a considerable

improvement, particularly if followed by more showers. The rainfall totals 1.76 inch, as compared with 6.14 inches in 1916. On this Experimental Farm, summer-fallows have been ploughed and given the first cultivation, corn has been cultivated, and hoeing begun. Alfalfa cutting has also commenced, but the crop is the lightest in many years."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"The weather during June has been moderately warm and showery, with no severe storms reported throughout the district. The rainfall has been quite sufficient for grain, which has made satisfactory growth during the month. Hay land and pastures have improved greatly, and, with a few more showers, a fair cut of hay will be obtained. Hoed crops promise to be fair, but Indian corn will require an abundance of warm weather through July in order to produce even a medium crop."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—"The rain experienced in June has been very favourable for the development of all grain and hoed crops. The effect, however, of the drought in May is working adversely on the hay crop and present indications point to very little hay. The damage done by hail to the trees and shrubs shows up more clearly after the foliage has come out. It is found that, not only at the Experimental Station are many trees and shrubs killed and badly injured, but, even in the native bluffs over the prairie, large numbers have been killed. This evidently is due to the bark being seriously injured by the hail stones. The land is in better condition for summer-fallowing this season than it has been since 1912. The moisture of June has penetrated to a considerable depth, and ploughing is easy and seeds germinate readily."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—"Weather conditions during June have been decidedly unfavourable for growing crops. The unusually low precipitation of less than an inch will result in a decrease in acreage harvested as well as a decrease in yield per acre. Hay crops promise a poor yield, while potatoes and corn were only showing through the ground late in June. At the Station, on June 30th, Prelude wheat is eighteen inches high and heading out, while early sown Marquis is in the shot blade and about sixteen inches high. Frost as late as June 20th injured grain crops and damaged many vegetable gardens."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—"The average temperature for June is below normal and, in consequence of this somewhat cool weather, growth, which had already got away to a late start, has been still further delayed. However, the closing week of the month has been bright and warm and growth correspondingly rapid. In this section of the province, moisture is available in ample amounts; but, in the district south and east, it is reported that, even though there have been a few showers during the last ten days, a further rainfall will be welcomed. The hay crop promises well, pastures are abundant, and live stock are in thrifty condition."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"Unfortunately the precipitation recorded during the month of June totals only 1.42 inch, while the average of this month for the last fifteen years is 3.2 inches. All field crops, except those sown late, are looking very promising, but a general rain is greatly needed. It would appear that the increase in the area of flax is even greater than was estimated at the end of May. As this has all been sown very late—most of it early in June—it shows the effect of insufficient moisture. The germination in some fields has been irregular. The weather, on the whole, has been rather cool, especially during the nights. Frosts occurred on the morning of the 3rd and 4th. Grass and pasture are excellent, but the growth of alfalfa has been somewhat retarded by the cool weather. At the station, considerable irrigation has been done on the irrigated portion of the farm."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"The mean temperature for June is 53.8, the lowest recorded in the last four years. Haying in this district has commenced and, while alfalfa promises well, clover will be light, owing to considerable areas having been winter-killed. It has been observed that on the neighbouring benches, some 300 or 400 feet higher than the Experimental Farm, and on land sheltered from the chinook winds, and which consequently retains the protection of the snow, clover is quite immune from winter-killing. Root crops and garden truck generally, in this district, are somewhat backward, owing to the late spring, and have been severely thinned in some quarters through the ravages of the cutworm, but wheat and peas have made good progress during the month. The range cattle and horses still have an abundance of feed, and are looking in fine condition."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"The weather during June, with the exception of one or two hot spells, has been cool. The first crop of alfalfa has been harvested in good condition, the rain coming just after most of it had been stacked. There has been a very heavy June drop in all fruits. The splendid bloom of apples has been much reduced owing to poor pollenization during cold weather. Grain crops in the district are good. Much poor seed was used for potatoes, and there are many complaints of a poor stand. Corn has just started to make growth, the latter part of the month. A large acreage of onions in the Kelowna district is looking splendid, and a big area is in tomatoes in the southern Okanagan this year. Canneries will take the main crop after the earliest tomatoes are shipped. There has been an abundance of water up to date and the creeks are still running well."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"June has been fine, with conditions such as to induce plant growth. The precipitation totals 4.3 inches, which, being well distributed, did not allow of any satisfactory haying weather during the month. The first cutting of clover has been put in the silo. The root, grain and hay crops in this district are good. Some corn germinated badly,

with poor results, while corn which started well has made good growth. All classes of live stock are doing well and prices continue to be high."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"The climatic conditions during June have been very favourable to plant development. The precipitation and hours of sunshine are above the average for this season. All autumn and spring sown cereals have done well and promise good yields. Winter barleys were ready to harvest during the last week of the month. Some haying has been done, and meadows, both old and new, have given a good crop, much above the average. Corn is making fair progress during the closing days of the month. Beans have done well where proper varieties of seed have been sown. Potatoes, of which there is a much increased acreage, have grown well and the early varieties are yielding a good crop where sprouting before planting for earliness, is practised. Poultry are producing well. The abundant pasture has been taken advantage of by all grass eaters; sheep and cattle are in better condition than usual. Orchard fruits, excepting cherries, promise an abundant harvest. Strawberries have been shipped from the district during the last two weeks of the month; this crop has been a good one, the plants yielding well and the quality of the fruit has been excellent. Other small fruits, such as raspberries, currants and gooseberries, promise a good return. The general crop outlook for the Vancouver Island districts is encouraging."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of June are given in the following table:—

Meteorological Record for June, 1917.

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Pos-sible.	Actual.
Ottawa, Ont.	85.1	36.8	63.25	2.58	469	222.6
Charlottetown, P.E.I.	81.0	37.0	60.27	2.54	471	179.9
Kentville, N.S.	83.0	34.0	60.36	2.93	467	176.3
Nappan, N.S.	82.0	32.0	59.21	2.72	470	120.7
Fredericton, N.B.	79.5	36.0	58.90	5.10	471	153.9
Ste. Anne de la Pocatière, Que.	81.2	35.0	54.60	7.68	476	168.4
Cap Rouge, Que.	80.0	42.2	59.50	8.56	474	136.4
Lennoxville, Que.	84.0	40.0	60.21	7.38	468	174.3
Brandon, Man.	96.9	26.0	58.10	1.76	488	227.7
Indian Head, Sask.	86.0	26.0	55.27	2.67	490	214.2
Rosthern, Sask.	82.3	27.7	56.00	3.42	505	287.6
Scott, Sask.	90.0	25.6	55.00	0.88	502	294.1
Lacombe, Alta.	83.0	27.9	53.60	1.49	501	255.8
Lethbridge, Alta.	82.0	31.0	55.90	1.42	488	384.5
Invermere, B.C.	78.0	35.0	53.80	1.96	492	230.2
Sunmierland, B.C.	88.0	42.0	59.63	1.25	489	205.7
Agassiz, B.C.	82.0	42.3	64.23	4.30	485	127.3
Sidney, Vancouver I., B.C.	77.0	41.3	65.34	1.96	482	217.4

Ottawa, July 31th, 1917.

CHAS. E. GIBSON,
Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (July 1) that the warm weather and rains have improved the prospects of most of the crops. Wheat has improved and has grown well, but there are in nearly all districts some thin and patchy pieces, especially on the light soils which suffered from drought. The yield is not expected to come up to the average. Barley is promising, and is likely to be the best of the cereal crops, though not quite reaching the average. Oats are not so satisfactory, except in the north and northwest of England, where over-average yields are anticipated, but the general result is for a crop below the normal. Straw is generally short for all cereals. Beans and peas have not done well, and both crops will be below the average. Potatoes have made a strong and healthy growth, and are generally free from disease. An over-average crop is expected in all districts. Turnips and swedes have suffered from the dry weather of the early part of the month, fly has been very troublesome, and much has had to be resown. Mangolds have done better and are now looking well, and a yield slightly over the average is anticipated. The hay harvest is backward, and little progress has yet been made in many districts owing to unfavourable weather conditions. The cutting of seeds' hay is more forward than that of the meadow hay, and the yield of both classes is expected to be less than usual. Towards the middle of the month pastures began to look bare, but the later rains have effected an improvement. Live stock have done well, and are generally in good condition. The weather has been favourable for the growth of hops, and the vine has made a strong and healthy growth. Very little fly is mentioned, and washing has been less than usual. An over-average yield is expected in Kent, and an average in the western counties. The prospects for the fruit crops, especially of orchards, are not so favourable as a month ago owing to attacks by caterpillars, although over-average crops of apples, plums, pears and cherries are still anticipated. Raspberries, currants and gooseberries also promise large crops. Labour is everywhere deficient, but the shortage has to some extent been met by the employment of women and soldiers in those districts where they have not been withdrawn.

Summarising the returns, and expressing an average crop by 100, the condition of the crops on July 1 indicated probable yields per acre which may be denoted by the following percentages:—Wheat, 94; barley, 98; oats, 93; beans, 88; peas, 94; potatoes, 103; mangolds, 101; seeds' hay, 97; meadow hay, 95; hops, 102.

Scotland.—The Board of Agriculture reports (July 1) that on the whole the weather conditions during June were favourable for both crops and stock, and that the prospects of the season are good. The yield of wheat in most parts is expected to be under average. Barley appears at present to be the best of the cereals. The crop is strong and healthy, and fully an average yield is expected. Oats show considerable variation, but an improvement took place during the month in several districts.

India.—The Indian Department of Statistics has issued (May 26) the third general memorandum on the wheat crop of 1916-17, which shows that the total area under wheat in India is estimated at 33,040,000 acres, as compared with 30,143,000 acres last year, an increase of 10 per cent. The total yield is estimated at 379,307,000 bushels, as against 318,005,000 bushels last year, an increase of 19 per cent. The figures of both area and yield are the highest on record. The condition of the crop is good except in parts of the unirrigated areas in the Punjab and Delhi. The unsettled weather in April and May has slightly affected the quality of the crop, and caused some discolouration of the grain in northern and central India. Harvesting has been completed everywhere except in parts of the Northwest Frontier Province. Threshing operations, retarded by the recent rains, still continue in parts of northern and central India.

France.—The Journal Officiel of June 3 records the results of the inquiry made by the French Department of Agriculture as to the seeding of cereals and the condition of the crops on May 1. The areas shown show a decrease of over 3,855,000 acres, as compared with 1916, the difference being made up as follows:

Crops.	1916.	1917.	Difference.
	acres.	acres.	acres.
Winter wheat.....	12,461,234	9,438,090	-3,023,144
Spring wheat.....	402,165	958,969	+ 556,804
All wheat.....	12,863,399	10,397,059	-2,466,340
Meslin.....	250,084	208,767	- 41,317
Rye.....	2,287,213	2,000,904	- 286,309
Winter oats.....	1,716,720	1,467,686	- 249,034
Spring oats.....	5,807,065	4,969,598	- 837,467
All oats.....	7,523,785	6,437,284	-1,086,501
Winter barley.....	254,025	246,797	- 7,228
Spring barley.....	1,194,720	1,227,697	+ 32,977
All barley.....	1,448,745	1,474,494	+ 25,749

An unofficial note of the Department gives the following as the causes of the reduced sowings: (1) A rainy autumn prevented to a large extent the preparation of the soil for winter cereals; (2) a rigorous and prolonged winter hindered the ploughing and seeding for both winter and spring cereals. In addition, successive frosts and thaws destroyed in a number of departments considerable areas of winter cereals. The seriousness of the situation caused by the decrease shown above is still more apparent from a statement that the total decrease in the areas under these cereals is 8,648,710 acres, as compared with the areas of the pre-war harvest of 1914, not counting the territory occupied by the enemy.

The Académie d'Agriculture at its session of June 13 received from one of its members an interesting statement of work accomplished by the British army in the revival of agriculture on lands freed from hostile occupation. The Academy decided to express its acknowledgments by letters addressed to the commander-in-chief of the

British armies and to the president of the Royal Agricultural Society of England. The letter to the Royal Agricultural Society dated June 30 was laid before the Council of that Society on June 27. In it the Academy referred to the "magnificent efforts made by the British army for the restoration of the land in the region conquered by their valour" and to the "fund opened by the Society for the agricultural relief of the allies which had been of the greatest utility for the agriculturists who fell victims to the German invasion."

Russia.—The Trade and Industrial Gazette has published the following report on crop conditions in central and southern Russia on May 27 [O.S.]: "The condition of the crops is generally favourable. Winter wheat shows generally satisfactory condition, being good in parts of the south, southwest, North Caucasus and central governments; this crop is unsatisfactory in parts of the Don Territory, Little Russia, Middle Volga and the northwest. The rye crop is generally above the average; this crop is good in parts of the southwest, centre and south, in North Caucasus and Trans-Volga, but it is unsatisfactory in Poltava and the northwest. Spring crops are generally satisfactory, being good in the greater part of the southwestern Don region, also in parts of the southwest, Little Russia and central governments. Spring crops are unsatisfactory in parts of the centre and northwest. In many localities there is now a want of rain. Broomhall's Corn Trade News of June 26 reports that favourable accounts of crop conditions in the central and southern zones continue to be received; in the northerly regions better weather has recently prevailed, but previously it was unseasonably cold and generally of a wintry character, which caused much delay to spring sowing and kept winter crops backward."

Argentina.—Favourable weather for the new seedlings continues to prevail, and according to a statement made in Parliament the wheat area this year is no less than 19,700,000 acres. Last year only 16,000,000 acres were planted with wheat, and the biggest acreage hitherto was 17,000,000 in 1911 and 1912.

United States.—The Crop-Reporting Board of the U.S. Department of Agriculture issued (July 9) the following estimates of the areas under the principal field crops:

Crop.	Acres.	Per cent of 1916.	Crop.	Acres.	Per cent of 1916.
Winter wheat.....	27,653,000	79.4	Barley.....	8,379,000	109.2
Spring wheat.....	19,039,000	106.0	Rye.....	3,772,000	122.2
All wheat.....	46,692,000	88.5	White potatoes.....	4,384,000	122.5
Corn.....	121,045,000	114.2	Tobacco.....	1,418,400	100.5
Oats.....	43,161,000	103.9	Flax.....	1,939,000	120.8
			Rice.....	968,600	111.8

The following statement gives the condition at July 1 and the total estimated production in millions of bushels, tons or lb. of the

crops named, together with the comparative figures of previous years:

Crop.	Condition in per cent of normal.				Yield per acre.			Total yield in millions of bushels, tons or lbs.			
	July 1, 1916.	June 1, 1917.	July 1, 1917.	July 1, ten year average.	1916.	1917. ¹	Average 1911-1915.	1916.	June forecast, 1917. ¹	July forecast, 1917. ¹	Average 1911-1915.
	p.c.	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Winter wheat....	75.7	70.9	75.9	80.9	13.8	14.6	16.3	482	373	402	542
Spring wheat....	89.0	91.6	83.6	84.2	8.8	14.5	14.0	158	283	276	264
All wheat.....	79.9	78.5	78.9	82.0	12.1	14.5	15.4	640	656	678	806
Corn.....	82.0	—	81.1	83.5	24.4	25.8	26.0	2,583	—	3,124	2,754
Oats.....	86.3	88.8	89.4	83.6	30.1	33.7	31.7	1,252	1,381	1,453	1,230
Barley.....	87.9	89.3	85.4	84.6	23.6	25.5	26.5	181	214	214	197
Rye.....	87.0	84.3	79.4	89.4	15.3	49.9	16.5	47.4	57.9	56.1	41.4
White potatoes...	87.8	—	90.1	87.3	80.4	103.9	98.3	285	—	452	363
Flax.....	90.3	—	84.0	86.5	9.6	8.7	8.6	15.5	—	17.0	18.6
Rice.....	92.7	—	85.1	89.1	47.0	35.5	33.8	40.7	—	34.4	25.3
Hay.....	93.5	85.1	84.3	81.3 ²	tons.	tons.	tons.	tons.	tons.	tons.	tons.
					1.53	1.50	1.31	110	102	103	86.6
Tobacco.....	87.6	—	86.8	82.5	lb.	lb.	lb.	lb.	lb.	lb.	lb.
					815.0	856.8	788.6	1,151	—	1,215	984

¹Interpreted from condition report. ²Nine-year average.

The total production of potatoes in the United States for 1917 is forecasted at 451,717,000 bushels as compared with 285,437,000 bushels in 1916 and 359,721,000 bushels in 1915. The amount of wheat remaining on farms July 1 is estimated at 2.5 per cent of last year's crop, or about 15,720,000 bushels, as compared with 74,731,000 on July 1, 1916, and 30,934,000 the average of stocks on July 1 for the five years 1911-1915.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The following information is taken from the Bulletin of Agricultural and Commercial Statistics of June, 1917, the metric weights and measures having been converted into the Canadian equivalent denominations.

YIELD OF WHEAT IN COUNTRIES OF THE NORTHERN HEMISPHERE.

The yield of wheat in France is provisionally estimated by the Ministry of Food Supplies at 161,691,000 bushels, as compared with 214,622,000 bushels in 1915-16 and 296,304,000 bushels, the annual average for the five years ended 1914-15. For India the production of wheat is estimated at 379,307,000 bushels, which is 19.3 per cent more than 1915-16 and 5.2 per cent more than the annual average of the five years ended 1914-15. The wheat yield of Japan is esti-

mated at 25,849,000 bushels for winter wheat, which is 6.5 per cent less than last year but 8.6 per cent above the five-year average. Of spring wheat in the same country the provisionally estimated production is 683,000 bushels, or 5.1 per cent above last year and 7.4 per cent below average.

CONDITION OF CEREAL CROPS IN NORTHERN HEMISPHERE.

England and Wales.—The increased warmth and rains of the latter half of May greatly improved the prospects of all crops. Although wheat had improved, thin crops occur here and there in all parts, and the outlook can only be described as moderate; the area is approximately 8 per cent less than last year's. Barley and oats are germinating very satisfactorily and everywhere present a promising appearance, except winter oats which suffered from the great cold and more recently from wireworm. The area under barley is probably about the same as last year's, while that of oats is from 8 to 9 per cent greater.

Scotland.—The weather during May was very favourable, especially the latter portion which was warm and showery. The cereal crops are making good progress, but wheat is still backward and the condition is only moderate, as it has suffered in some districts from wireworm. The same pest has affected oats locally, but otherwise this crop promises well.

Ireland.—The weather throughout May was very favourable to the growth of all the cereal crops, including those spring-sown. The fields both of winter and spring wheat now look strong and vigorous, while oats and barley are also in healthy condition, and rye promises well. Attacks of wireworm and other pests have been successfully resisted.

Italy.—The changeable weather during May was extraordinarily favourable for the crops. The rains were specially propitious for wheat in the southern provinces. The area under rice in 1917 was 358,000 acres, as compared with 353,000 acres in 1916 and 359,000 acres in the five years' average 1911 to 1915, or respectively 101.8 per cent and 99.8 per cent of the two last-mentioned areas. The condition of the crop on June 1 was good, as it was also at the same time last year.

Luxemburg.—Until the last two days of April the weather was cold and unseasonable, and consequently the development of the crops was very slow, otherwise no serious drawbacks were reported during April.

Norway.—The area under spring wheat and under barley and oats in 1917 is estimated at about 20 p.c. more than in 1916, when barley was grown on 98,000 acres and oats on 297,000 acres.

Netherlands.—The long and severe winter was very prejudicial to the crops, but the position has been represented as more gloomy than it really is. The winter was followed by an unfavourable beginning of spring; the month of April had been characterized by a deficiency in temperature and sunshine, with more frosty days than usual. The winter crops did not suffer only from frost, but in

some districts damage has been caused by wild animals, especially in the province of Utrecht where rabbits and pheasants have made depredations, and in Zealand where wild duck have been destructive. The condition of winter wheat varies from bad to average. The new varieties, with larger yield, have suffered the most from the frosts, especially when late sown. The condition of rye varied from average to good. Generally speaking, the early sown rye promises well. As last year's harvest was so late, the sowing of rye was delayed in many places, and this portion has suffered from frost. The condition of winter barley is, generally speaking, bad to average, except in Gelderland and in South Holland where it is good, and slightly over average in North Brabant. In Zealand which is only second to Groningen in its yield of barley, the area under crop is nearly the same as in 1916. The condition of the crop in Groningen is bad. Oats are developing well.

Switzerland.—The winter-sown crops, reported last month as very backward, have now developed in a particularly satisfactory way, but, where they suffered from the severity of the winter, they have not yet quite recovered. Wheat, rye and occasionally spelt also are frequently rather thin on the ground, and any thick crops of rye have a tendency to be laid. Notwithstanding this fine progress the outlook for the winter crops remains on the whole below average. The germination of spring crops has taken place in favourable surroundings. To judge from present appearances a normal yield may be looked for. Insect pests have caused some injury here and there. Hailstorms have done damage in some districts.

British India.—Telegrams from the Viceroy announce that on June 8 the outlook for the general monsoon rainfall of India was on the whole favourable and the rainfall likely to be in excess, at any rate in the earlier part of the season. The revised area for all India now stands at 33,039,622 acres as against 32,772,626 acres as reported on May 10. The condition of the crop generally continued good, except in the unirrigated areas of the Punjab and Delhi. Slight damage by rain had been reported from parts of the Punjab, from the western districts of the United Provinces and by hailstorms from parts of the Frontier province. The unsettled weather in the Punjab had somewhat delayed harvesting. The crop in the United Provinces is good, and the yield is expected to be above normal. In Sind rust and insufficient irrigation have affected outturn in parts. Harvesting has been completed in the United Provinces, Bombay, Bengal and Ajmer-Merwara and was nearing completion in the Central Provinces, Bihar and Orissa, Delhi, the Punjab and Sind. It had not yet commenced in the hilly tracts of the Frontier province. Threshing had commenced in the Punjab, Delhi and Sind, and is continuing in the United Provinces and Bihar and Orissa. It has made good progress in the Central Provinces, Bombay, Bengal, and Ajmer-Merwara. The area under rice in 1917 is 79,699,088 acres, the same as in 1916, while the average area of the five years 1911 to 1915 was 73,110,244 acres. The area cultivated in 1917 represents 109 p.c. of the previous average.

Japan.—The condition of the rice crop on June 1, 1917, was bad, whereas it was fairly good at the same period of last year.

Egypt.—Harvesting and threshing of wheat at the end of May were general and well advanced, while for barley this work was nearly completed. The quality of the wheat is on the whole good, and the yields of both cereals are proving to be satisfactory. The sowing of rice has much advanced during May, and the water supply is plentiful, so that the area promises to be above the normal.

Russia.—A supplementary report of May 15 states that no important change has taken place during the past week as regards the weather in European Russia. As previously during the spring, a cool temperature, below normal, has prevailed in most regions. Rainfall was less and was principally distributed over central and south Russia, and to some extent along the Volga. In some parts of the southwest rain was not plentiful, and this continues to be the case in the northeast. Reports on the growing crops are, as a whole, fairly favourable. In south Russia the winter crops are coming on well, and those spring-sown are growing quickly. In North Caucasia the continuance of low temperature is retarding the spring crops. There are complaints of cool weather also in the agricultural parts of central Russia, but the condition of crops remains satisfactory. Field work and sowing make good progress wherever the weather is suitable. Taken as a whole, it is expected that all the area cultivated last year will again be sown, and in some instances the area is larger than in the previous season. In western Siberia sowing makes normal progress. Here and there in the northern parts of Akmolinsk, drought and winds are hindering the growth of the spring crops. The prolonged winter has had very little effect on crops in the ground, and according to present advice, the outlook for next harvest is a good one. Maize sowings are actively in progress.

REPORTS ON OTHER CROPS.

Linseed.—In Great Britain and Ireland flax is growing rapidly, and though there are some complaints of attacks from ground beetles the appearance of the crop is as a rule satisfactory. In Italy the area under linseed in 1917 was 44,479 acres, the same as last year, while the five years' average 1911 to 1915 was 42,394 acres; the present area is therefore 104·9 p.c. of the previous average. The condition of the crop on June 1, 1917, was good, while it was only an average at the same time last year. In British India the area under linseed in 1917 is 3,532,958 acres, as compared with 3,316,963 acres in 1916, and 3,852,217 acres the five years' average 1911 to 1915, or respectively 106·5 p.c. and 91·7 p.c. of the two last mentioned areas. The condition of the crop on May 1, 1917, expressed according to the Institute system, was 106. The estimated yield in 1917 is 20,799,968 bushels of linseed, as compared with 18,959,973 bushels in 1916 and 20,150,373 bushels the five years' average 1911 to 1915, or respectively 109·7 p.c. and 103·2 of the two last mentioned yields. In Japan the area under linseed in 1917 is 61,777 acres, as compared

with 39,211 in 1916 and 23,675 the five years' average 1911 to 1915, or respectively 157.5 p.c. and 260.9 p.c. of the two last mentioned areas. The condition of the crop on June 1, 1917, was an average one, the same as last year.

Potatoes.—In England and Wales potato planting was late, but is now generally completed; the young plants are coming up evenly and look very promising. An increased area of 10 p.c. is looked for as compared with last year. In Scotland potato planting was carried out in most favourable circumstances. The area cultivated is 139,998 acres, against 130,118 in 1916, or 107.6 p.c. of the latter. In Ireland potatoes, though planted late, are coming up rapidly and prospects are excellent. Early varieties escaped frosts in May, and are expected to be ready for lifting by the end of June. The condition of the crop on June 1 according to the Institute system is equal to 100, while it was 85 at the same time last year. In Italy the area under potatoes in 1917 is 790,739 acres, as compared with 741,318 in 1916 and 719,424 the five years' average 1911 to 1915, or respectively 106.7 p.c. and 109.9 p.c. of the two last mentioned areas. The condition of the crop on June 1, 1917, was good, as it was also at the same time last year. In Norway the area under potatoes in 1917 is estimated at about 30 p.c. more than in 1916, when it was 114,222 acres. In the Netherlands the cultivation of potatoes is almost everywhere in a promising state, with the exception of peat soils where the area has been reduced by 20 p.c. owing to the scarcity of fertilizers. Land thus left vacant has been mostly planted with beans or with beetroot for feeding purposes. In Switzerland the area under potatoes for 1917 is 160,619 acres, as compared with 134,673 acres in 1916, and 116,387 the five years' average 1911 to 1915, or respectively 119.3 p.c. and 138 p.c. of the two last mentioned areas. The condition of the crop according to the Institute system was 105 on June 1, 1917, against 103 at the same period of last year. The area under potatoes in Japan in 1917 is 244,635 acres, as compared with 231,249 acres in 1916, and 181,853 the five years' average 1911 to 1915, or, respectively, 105.8 p.c. and 134.5 p.c. of the two last mentioned areas. The condition of the crop on June 1, 1917, was an average one, while it was good at the same time last year.

Sugar beet and beet sugar.—In Italy the area under sugar beet in 1917 is 111,198 acres, as compared with 123,553, in 1916, and 125,144, the five years' average 1911 to 1915, or, respectively, 90 p.c. and 88.9 p.c. of the two last mentioned areas. The condition of the crop on June 1, 1917, was good. The cultivation of sugar beet in the Netherlands is on a limited scale. The following are preliminary estimates of the production of sugar beet this year in the following countries: France, 212,898 short tons; Netherlands, 287,372 tons and Switzerland, 1,984 tons. These figures are in excess of those of last year, but in Switzerland the estimate is for a production of 1,984 tons as compared with 2,646 tons last year, a decrease of 25 p.c.

IMPORTS OF CEREALS INTO BELGIUM.

The Commission for Relief in Belgium has supplied the following information as to imports of cereals into Belgium for the years 1913-16.

Cereals.	(Jan. 1 to Dec. 31, 1913).	(Nov. and Dec., 1914).	(Jan. 1 to Dec. 31, 1915).	(Jan. 1 to Dec. 31, 1916).
	bush.	bush.	bush.	bush.
Wheat.....	56,637,681	1,274,381	17,082,691	23,537,895
Wheat flour.....	609,883 ¹	271,776	1,310,793	35,161
Rye.....	5,698,653	—	—	—
Barley.....	14,724,125	—	11,303	176,324
Oats.....	8,924,462	—	—	—
Maize.....	19,410,778	28,109	6,897,112	3,399,641
Rice (cleaned).....	894,008	206,549	2,324,749	2,961,247

¹Net exports (surplus of exports over imports).

CROPS OF THE SOUTHERN HEMISPHERE, 1916-17.

Uruguay.—The following is the final estimate of the areas and yields of the crops of Uruguay for 1916-17 with comparative figures:

Crops.	1915-16	1916-17	Per cent of 1915- 16.	Per cent of average ¹ .	1915-16	1916-17	Per cent of 1915- 16.	Per cent of average ¹ .	1915- 16.	1916- 17.
	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre.	bush. per acre.
Wheat.....	949,604	779,736	82.1	98.6	9,867,271	5,390,225	54.6	82.7	10.4	6.8
Rye.....	74	141	190.0	69.5	724	1,134	156.5	54.1	9.7	8.1
Barley.....	9,696	2,733	131.3	195.5	115,403	110,309	95.6	141.8	8.7	11.8
Oats.....	105,065	141,552	134.7	215.6	2,148,747	1,812,944	84.4	150.0	12.9	20.5
Linseed.....	44,141	35,890	81.3	28.4	390,245	121,915	31.2	12.8	3.3	8.9

¹Average of five years 1909-10 to 1913-14.

Dutch India (Java and Madura).—The weather has been unfavourable for maize, and in consequence of floods, also for rice. There are complaints of excessive moisture.

CABLEGRAM OF JULY 23, 1917.

On July 23 the following cablegram was received from the International Institute of Agriculture:

Crop conditions on July 1 were for wheat good in Spain, average in Italy and Switzerland, mediocre in Denmark, Great Britain and Sweden. The condition of rye was good in Spain

and Ireland, average in Italy and Switzerland, and mediocre in Denmark and Sweden. The condition of barley was good in Spain, Scotland and Ireland, average in England and Wales, Italy and Switzerland, and mediocre in Denmark and Sweden. The condition of oats was good in Spain, average in Scotland, Ireland, Italy and Switzerland, and mediocre in Denmark, England and Wales, and Sweden. Corn conditions were good in Spain, Italy and Switzerland, and the condition of the rice crop was good in Spain, Italy and Japan.

The production of the different crops in Spain is, Wheat 141,000,000 bushels, or 92.6 p.c. of the 1916 crop and 112.6 p.c. of the average of the five years 1911-15; rye 27,778,000 bushels, or 96.3 p.c. of last year and 110.5 p.c. of the five-year average; barley 76,495,000 bushels, or 88 p.c. of last year and 103 p.c. of the five year average. The cotton crop of India is estimated at 3,423,000 bales of 500 lb., or 114 p.c. of last years' crop and 99 p.c. of the five year average.

THE WEATHER DURING JUNE.

The Dominion Meteorological Office reports that the temperature was below the average throughout the Dominion, except at Chatham, N.B., Charlottetown, P.E.I., and on the Island of Anticosti, where it was a little above. The chief negative departures were 7° at Elora, 6° at Parry Sound and Huntsville, 5° at Port Arthur, 4° at Vancouver, Barkerville, Minnedosa, Port Stanley and Toronto, and 3° at Kamloops, Qu'Appelle, Winnipeg, Ottawa and Montreal. The rainfall was very much below the average over the western province, except in a few isolated places, notably Qu'Appelle and the Pas. It was also below the average over the Lake Superior district, and north of and including the greater portion of the Ottawa valley, also locally in Prince Edward Island, and in eastern Nova Scotia the average was not maintained. Elsewhere in the Dominion it was nearly everywhere greatly above the average, the excess being very pronounced in the interior of British Columbia, the peninsula of Ontario and in Quebec and New Brunswick.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Port William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb., oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grade and Market.	June 2.		June 9.		June 16.		June 23.		June 30.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.....	2 33	—2 50	2 49	—2 56	2 56	—2 62	2 41	—2 51	2 15	—2 43
No. 2 Nor.....	2 30	—2 47	2 46	—2 53	2 53	—2 60	2 38	—2 48	2 12	—2 40
No. 3 Nor.....	2 25	—2 42	2 41	—2 48	2 48	—2 56	2 33	—2 43	2 07	—2 36
No. 4.....	2 13	—2 30	2 29	—2 36	2 36	—2 44	2 21	—2 31	1 95	—2 24
No. 5.....	1 88	—2 05	2 04	—2 11	2 14	—2 19	1 96	—2 09	1 70	—2 00
No. 6.....	1 55	—1 70	1 65	—1 75	1 77	—1 88	1 83	—1 88	1 57	—1 84
Feed.....	1 15	—1 25	1 25	—1 33	1 33	—1 38	1 38	—	—	—
Oats—										
No. 2 C.W.....	0 64½	—0 69½	0 66½	—0 69½	0 68½	—0 71½	0 69½	—0 70½	0 70½	—0 71½
No. 3 C.W.....	0 61½	—0 66½	0 65½	—0 68½	0 66½	—0 68½	0 67½	—0 69½	0 69½	—0 70½
No. 1 Feed Ex.....	0 61½	—0 66½	0 64½	—0 67½	0 66½	—0 69½	0 67½	—0 70½	0 69½	—0 70½
No. 1 Feed.....	0 57½	—0 63	0 62½	—0 64½	0 64½	—0 68½	0 66	—0 67½	0 65½	—0 67½
No. 2 Feed.....	0 55½	—0 61	0 60½	—0 63½	0 62½	—0 66½	0 64	—0 65½	0 65½	—0 67½
Barley—										
No. 3 C.W.....	1 15	—1 21	1 22	—1 28	1 29	—1 31	1 25	—1 31	1 25	—1 26
No. 4 C.W.....	1 11	—1 15	1 16	—1 22	1 23	—1 26	1 20	—1 26	1 20	—1 21
Rejected.....	1 00	—1 03	1 04	—1 07	1 08	—1 09	1 08	—1 09	1 09	—1 10
Feed.....	1 00	—1 03	1 04	—1 07	1 08	—1 09	1 08	—1 09	1 09	—1 10
Flax—										
No. 1 N.W. C.....	2 79½	—2 93½	2 93	—3 09½	2 83	—2 93	2 78	—2 87½	2 64	—2 79½
No. 2 C.W.....	2 75	—2 89	2 88	—3 04	2 78½	—2 88½	2 73	—2 83½	2 60½	—2 75½
No. 3 C.W.....	2 56½	—2 72	2 70	—2 88	2 64	—2 74	2 53	—2 68½	2 45½	—2 60½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1916.

Grade and Market.	March.		April.		May.		June.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 12	—1 22	1 16	—1 30½	1 22	—1 24	2 22	—2 98
Chicago.....	1 21	—1 21½	1 17	—1 25½	1 22½	—1 22½	2 24	—3 07
New York (f.o.b. afloat).....	1 27½	—1 29½	1 25½	—1 35½	1 29	—1 31½	—	—
Corn, No. 2 Mixed—								
St. Louis.....	0 73	—0 73½	0 73½	—0 76	0 76	—	1 55	—1 75½
New York (f.o.b. afloat).....	0 83½	—0 84½	0 83½	—0 86½	0 86	—0 86½	1 66½	—1 90½
Corn, No. 2—								
Chicago.....	0 75	—0 75½	0 74½	—0 79	0 77½	—0 78½	158	—1 76
Oats, No. 2—								
St. Louis.....	0 44	—	0 42½	—0 45	0 43½	—	0 63	—0 72
Chicago.....	0 43½	—0 44	0 44½	—0 47	0 45½	—0 46	0 62	—0 69
Rye, No. 2—								
Chicago.....	0 95	—	0 94	—0 97½	0 97	—0 97½	2 34	—2 40

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE LONDON, E.C.

Description.	June 4.		June 11.		June 18.		June 25.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	2 59	—	2 59	—	2 59	—	2 62	—
“ No. 2.....	2 54½	—	2 54½	—	2 54½	—	2 56	—
“ No. 3.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—
“ No. 4.....	2 41½	—	2 41½	—	2 41½	—	2 38½	—
“ Feed.....	2 20½	—	2 23½	—	2 26½	—	2 23½	—
American—								
Omaha cert.....	2 51½	—	2 51½	—	2 51½	—	2 51½	—
Montana cert.....	2 54½	—	2 54½	—	2 54½	—	2 54½	—
Red Western winter.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—
Red winter, common.....	2 41½	—	2 41½	—	2 41½	—	2 38½	—
Argentine.....	2 47½—2 53½		2 47½—2 53½		2 47½—2 53½		2 47½—2 53½	
Indian.....	2 67½—2 70½		2 70½—2 73½		2 70½—2 73½		2 70½—2 73½	
Australian.....	2 59	—	2 59	—	2 59	—	2 59	—
Californian.....	2 62	—	2 62	—	2 62	—	2 62	—
Oats (per bush.)—								
Canadian.....	1 75½—1 78½		1 75½—1 78½		1 75½—1 78½		1 75½—1 78½	
American.....	1 73½—1 75½		1 73½—1 75½		1 73½—1 75½		1 73½—1 75½	
Chilian.....	1 75½—1 78½		1 78½—1 81		1 78½—1 81		1 78½—1 81	
Flour (per 280 lb.)—								
Canadian good.....	18 98—19 47		18 98—19 47		19 47—19 95		19 47—19 95	
“ first baker's.....	18 00—18 25		18 00—18 25		18 25—18 74		18 25—18 74	
“ common.....	17 28—17 76		17 28—17 76		17 76—18 00		17 76—18 00	
American good.....	18 98—19 47		18 98—19 47		19 47—20 19		19 47—20 19	
“ common.....	18 00—18 25		18 00—18 25		18 49—18 74		18 49—18 74	
Kansas.....	18 98—19 22		18 98—19 22		19 47—19 95		19 47—19 95	
Nebraska.....	18 74—18 98		18 74—18 98		—		—	
Australian.....	18 74—18 98		18 74—18 98		19 10—19 34		19 22—19 71	
Japanese.....	17 76—18 00		17 76—18 00		17 76—18 00		18 25—18 74	

IV. Average Prices of British-grown Grain, 1917.

Week ended.	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
April 7.....	s. d. 84 4	£ c. 2-565	s. d. 69 11	£ c. 2-042	s. d. 55 1	£ c. 1-461
“ 14.....	85 2	2-590	71 10	2-097	57 2	1-516
“ 21.....	84 10	2-580	70 6	2-059	59 8	1-582
“ 28.....	81 1	2-466	69 5	2-027	58 6	1-551
Average.....	83 10	2 550	70 5	2 056	57 7	1 528
May 5.....	77 7	2-360	64 4	1-878	54 9	1-451
“ 12.....	78 0	2-372	64 11	1-896	55 2	1-462
“ 19.....	77 11	2-370	64 10	1-893	54 11	1-454
“ 26.....	78 0	2-372	64 9	1-891	54 11	1-454
Average.....	77 11	2 369	64 8	1 890	55 0	1 457
June 2.....	78 0	2-372	65 11	1-925	54 11	1-455
“ 9.....	78 2	2-378	75 6	2-205	55 1	1-460
“ 16.....	78 2	2-378	75 6	2-205	55 1	1-460
“ 23.....	78 1	2-375	75 0	2-190	55 2	1-462
“ 30.....	78 3	2-380	73 11	2-158	55 1	1-460
Average.....	78 2	2 377	73 2	2 137	55 1	1 459

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FIELD CROPS OF CANADA.

Report for the month ended July 31, 1917.

AREA AND YIELD OF FALL WHEAT, HAY AND CLOVER AND ALFALFA.

The preliminary estimate of the average yield per acre of fall sown wheat for 1917 is 22 bushels as compared with 21½ bushels in 1916, 29·41 bushels in 1915 and 21·70 bushels, the average of the seven years 1910 to 1916. The total yield of fall wheat for 1917 is therefore now estimated at 15,806,000 bushels, from 713,550 harvested acres, as compared with 18,122,000 bushels from 836,797 acres in 1916. In Ontario, the chief fall wheat province, the total yield is 14,515,000 bushels from 656,500 acres, as compared with 16,465,000 bushels from 774,800 acres in 1916, the average yields per acre being 22·11 bushels in 1917 and 21¼ bushels in 1916. The total yield of hay and clover is placed at 13,379,000 tons from 7,824,000 acres, as compared with 14,637,000 tons, the record crop from 7,892,900 acres in 1916. This year's total yield of hay and clover has only twice been exceeded, viz., last year and in 1911, when the yield was 13,989,000 tons. The average yield per acre this year is 1·70 ton, as compared with 1·85 ton in 1916 and 1·62 ton in 1911. The yield from alfalfa is 152,200 tons from 86,500 acres, as compared with 260,500 tons from 89,470 acres last year, the average yield per acre being 1·76 ton as compared with 2·91 tons.

CONDITION OF SPRING-SOWN GRAINS.

The condition of spring wheat for the whole of Canada has receded from 85 p.c. of the standard at the end of June to 77 at the end of July. Oats show 76 compared with 85, barley 78 against 86, rye 81 against 83 and peas 85 against 89. The condition of other crops on July 31 was as follows: beans 74, buckwheat 86, mixed grains 90, flax 88, corn for husking 76, potatoes 84, turnips 90, mangolds 86, hay and clover 88, alfalfa 86, corn for fodder 77, sugar beets 88 and pastures 83. Converted into a standard wherein 100 represents the average yield per acre of the nine years 1908 to 1916 the condition of the principal grain crops at July 31, 1917, was as follows: Fall wheat 94, spring wheat 92, all wheat 93, rye 96, barley 93, oats 88, potatoes 99 and flax 107. That is to say, the yields per acre of these crops, according to their appearance on July 31, are expected to be below the average yields of the previous nine years by 6 p.c. for fall wheat, 8 p.c. for spring wheat, 7 p.c. for all wheat, 4 p.c. for rye, 7 p.c. for barley, 12 p.c. for oats and 1 p.c. for potatoes. Throughout eastern Canada the condition of the crops generally on July 31 is reported as excellent. In Ontario spring wheat is marked as high

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as 91 and oats and barley are 93; but in the west excessive heat and drought during July brought the condition down by July 31 to figures below 70 p.c., of the standard, spring wheat being 68 in Manitoba, 63 in Saskatchewan and 64 in Alberta, whilst oats are 62 in Manitoba, 53 in Saskatchewan and 57 in Alberta. Reports received during the last fortnight are however of somewhat more reassuring character.

Census and Statistics Office,
Ottawa, August 14, 1917.

ERNEST H. GODFREY,
Editor.

I. Area and Preliminary Estimate of the Yield of Fall Wheat in 1917, as compared with the Final Estimate of 1916.

Provinces.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	bush. per acre.	bush. per acre.	bush.	bush.
Ontario.....	774,800	656,500	21.25	22.11	16,465,000	14,515,000
Manitoba.....	3,800	3,850	17.50	20.00	67,000	77,000
Saskatchewan.....	9,968	10,000	20.25	21.00	202,000	210,000
Alberta.....	42,000	38,000	28.50	22.00	1,197,000	836,000
British Columbia.....	6,200	3,236	30.75	32.33	191,000	105,000
Canada.....	836,768	711,586	22.66	22.12	18,122,000	15,743,000

II. Area and Preliminary Estimate of the Yield of Hay and Clover and Alfalfa in 1917, as compared with the Final Estimate of 1916.

Provinces.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	tons per acre.	tons per acre.	tons.	tons.
Canada—						
Hay and clover.....	7,892,932	7,764,000	1.85	1.70	14,637,000	13,240,000
Alfalfa.....	89,472	81,200	2.91	1.75	260,500	142,200
P. E. Island—						
Hay and clover.....	199,000	197,000	1.70	1.50	338,000	296,000
Nova Scotia—						
Hay and clover.....	553,000	542,000	1.80	1.64	995,000	889,000
New Brunswick—						
Hay and clover.....	574,000	568,000	1.48	1.60	850,000	909,000
Quebec—						
Hay and clover.....	2,985,000	2,985,000	1.75	1.92	5,224,000	5,731,000
Alfalfa.....	2,600	2,300	2.65	1.77	7,000	4,000
Ontario—						
Hay and clover.....	3,059,000	2,998,000	2.00	1.56	6,118,000	4,677,000
Alfalfa.....	56,000	52,000	3.00	1.82	168,000	95,000
Manitoba—						
Hay and clover.....	76,932	75,000	2.00	0.86	154,000	65,000
Alfalfa.....	4,422	4,400	2.75	1.38	12,200	6,100
Saskatchewan—						
Hay and clover.....	75,000	76,000	1.97	1.72	148,000	131,000
Alfalfa.....	1,850	1,800	2.85	1.19	5,300	2,100
Alberta—						
Hay and clover.....	196,000	194,000	1.75	1.25	343,000	243,000
Alfalfa.....	12,000	12,000	2.65	1.38	32,000	17,000
British Columbia—						
Hay and clover.....	175,000	129,000	2.67	2.32	467,000	299,000
Alfalfa.....	12,600	8,700	2.88	2.02	36,000	18,000

III. Comparative Condition of Field Crops, July 31, 1913-17.

Field Crops.	1913	1914	1915	1916	1917	Field Crops.	1913	1914	1915	1916	1917
	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	p.c.
Canada—						New Brunswick—					
Fall wheat.....	78	72	94	82	75	Spring wheat.....	94	85	89	94	82
Spring wheat.....	88	77	93	89	77	Oats.....	95	90	89	97	84
All wheat.....	85	76	93	87	77	Barley.....	91	87	89	93	82
Oats.....	87	78	93	83	76	Rye.....	65	87	—	—	—
Barley.....	88	77	92	83	78	Peas.....	90	81	92	96	94
Rye.....	85	79	92	87	81	Beans.....	81	81	85	87	94
Peas.....	83	80	91	75	85	Buckwheat.....	92	87	85	88	91
Beans.....	82	80	88	82	74	Mixed grains.....	91	88	85	97	91
Buckwheat.....	85	81	88	83	86	Corn for husking.....	48	87	77	81	82
Mixed grains.....	89	88	95	83	90	Potatoes.....	98	94	87	94	96
Flax.....	84	69	88	86	88	Turnips.....	92	91	92	96	93
Corn for husking.....	82	81	82	74	76	Mangolds, etc.....	89	86	93	95	95
Potatoes.....	89	82	91	84	84	Hay and clover.....	80	85	90	106	103
Turnips.....	84	78	92	87	90	Alfalfa.....	—	—	110	93	—
Mangolds, etc.....	84	79	89	85	86	Corn for fodder.....	73	73	85	88	75
Hay and clover.....	75	69	81	100	88	Sugar beets.....	86	84	99	92	89
Alfalfa.....	76	70	87	95	86	Pasture.....	95	94	94	101	101
Corn for fodder.....	87	83	82	79	77	Quebec—					
Sugar beets.....	84	79	89	82	88	Spring wheat.....	88	87	90	82	88
Pasture.....	82	71	89	95	83	Oats.....	90	89	91	79	82
						Barley.....	89	89	87	81	83
P. E. Island—						Rye.....	90	77	88	87	87
Spring wheat.....	96	100	93	95	90	Peas.....	87	84	89	76	84
Oats.....	101	100	91	99	98	Beans.....	83	75	88	84	56
Barley.....	99	96	96	98	96	Buckwheat.....	90	80	83	85	84
Peas.....	89	95	94	93	95	Mixed grains.....	90	90	92	82	85
Beans.....	90	90	93	92	93	Flax.....	85	74	80	79	81
Buckwheat.....	94	93	95	92	95	Corn for husking.....	81	79	81	81	81
Mixed grains.....	101	98	97	99	98	Potatoes.....	92	87	90	80	86
Flax.....	97	93	100	96	94	Turnips.....	82	73	87	88	101
Potatoes.....	88	96	89	98	97	Mangolds, etc.....	82	76	82	87	87
Turnips.....	90	99	99	97	94	Hay and clover.....	63	64	76	99	103
Mangolds, etc.....	91	97	97	97	91	Alfalfa.....	76	64	81	92	93
Hay and clover.....	82	88	94	91	86	Corn for fodder.....	85	80	83	80	80
Corn for fodder.....	88	79	83	85	85	Sugar beets.....	85	70	84	85	89
Sugar beets.....	82	78	96	93	86	Pasture.....	77	71	77	96	97
Pasture.....	97	91	98	97	91	Ontario—					
						Fall wheat.....	81	72	94	81	74
Nova Scotia—						Spring wheat.....	79	81	94	78	91
Spring wheat.....	95	94	90	97	92	All wheat.....	80	76	94	80	81
Oats.....	97	96	94	100	95	Oats.....	83	85	96	66	93
Barley.....	95	92	91	95	94	Barley.....	81	86	97	70	93
Rye.....	95	88	97	98	96	Rye.....	80	80	92	81	85
Peas.....	90	91	96	94	92	Peas.....	78	74	91	59	82
Beans.....	82	88	91	86	97	Beans.....	78	82	89	70	76
Buckwheat.....	94	93	92	93	93	Buckwheat.....	73	74	91	72	80
Mixed grains.....	96	93	94	99	94	Mixed grains.....	85	87	98	71	94
Flax.....	100	100	—	85	95	Flax.....	82	86	91	73	88
Corn for husking.....	83	78	86	87	68	Corn for husking.....	84	82	83	61	70
Potatoes.....	92	96	91	96	98	Potatoes.....	82	84	91	63	87
Turnips.....	90	94	95	90	94	Turnips.....	76	75	90	73	90
Mangolds, etc.....	88	92	90	95	92	Mangolds, etc.....	80	79	90	72	89
Hay and clover.....	91	77	106	106	91	Hay and clover.....	65	59	74	109	96
Alfalfa.....	84	84	80	87	93	Alfalfa.....	69	70	88	98	95
Corn for fodder.....	85	83	85	91	95	Corn for fodder.....	88	86	87	70	76
Sugar beet.....	95	91	90	95	93	Sugar beets.....	80	81	86	71	86
Pasture.....	93	85	100	100	95	Pasture.....	65	60	87	84	92

III. Comparative Condition of Field Crops, July 31, 1913-17—con.

Field Crops.	1913	1914	1915	1916	1917	Field Crops.	1913	1914	1915	1916	1917
	p.c.	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.	p.c.
Manitoba—						Alberta—					
Fall wheat.....	62	68	80	85	66	Fall wheat.....	64	68	95	89	73
Spring wheat.....	85	68	92	84	68	Spring wheat.....	88	75	96	92	64
All wheat.....	83	68	92	84	68	All wheat.....	82	74	96	92	65
Oats.....	83	62	92	87	62	Oats.....	88	72	95	90	57
Barley.....	83	62	89	83	64	Barley.....	91	72	94	90	60
Rye.....	81	69	88	92	71	Rye.....	92	77	98	91	79
Peas.....	82	58	95	95	94	Peas.....	77	66	94	83	55
Beans.....	88	65	84	85	91	Beans.....	91	70	90	78	—
Mixed grains.....	83	61	91	94	72	Mixed grains.....	93	88	95	93	59
Flax.....	84	58	86	88	60	Flax.....	82	61	96	89	53
Potatoes.....	92	74	93	92	83	Potatoes.....	90	74	95	92	67
Turnips.....	88	65	89	93	82	Turnips.....	92	75	96	93	66
Mangolds, etc.....	88	64	90	91	78	Mangolds, etc.....	91	78	96	94	69
Hay and clover.....	83	62	67	98	50	Hay and clover.....	89	91	99	89	72
Alfalfa.....	84	69	74	95	62	Alfalfa.....	85	68	98	91	75
Corn for fodder.....	92	81	67	92	67	Corn for fodder.....	73	90	77	91	75
Pasture.....	88	61	94	98	58	Sugar beets.....	92	70	93	93	73
Saskatchewan—						Pasture.....	94	80	103	98	71
Fall wheat.....	79	59	—	75	77	British Columbia—					
Spring wheat.....	89	66	92	94	63	Fall wheat.....	92	83	99	84	85
All wheat.....	89	66	—	94	63	Spring wheat.....	90	78	93	92	81
Oats.....	86	58	90	88	53	All wheat.....	91	80	95	89	82
Barley.....	90	60	89	89	58	Oats.....	90	79	93	91	82
Rye.....	89	74	97	95	74	Barley.....	95	77	93	91	65
Peas.....	85	69	87	88	86	Rye.....	100	90	93	90	94
Beans.....	90	67	73	100	76	Peas.....	98	87	94	95	87
Mixed grains.....	91	63	90	90	61	Mixed grains.....	90	71	90	98	90
Flax.....	84	64	90	91	57	Potatoes.....	90	84	93	90	84
Potatoes.....	91	70	92	95	74	Turnips.....	86	87	91	86	87
Turnips.....	90	64	95	92	70	Mangolds, etc.....	95	87	96	90	83
Mangolds, etc.....	89	69	92	90	66	Hay and clover.....	98	86	90	84	91
Hay and clover.....	90	74	82	100	64	Alfalfa.....	93	99	100	82	87
Alfalfa.....	86	73	83	93	52	Sugar beets.....	97	87	94	88	81
Corn for fodder.....	85	69	60	93	60	Pasture.....	99	77	93	94	75
Sugar beets.....	86	69	98	88	75						
Pasture.....	93	71	90	101	61						

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—Weather conditions are perfect for growing crops, and prospects are good for a full harvest. Hay will be a somewhat lighter crop than last year, the clover having suffered from winter-killing. Hay making has just begun, but wet weather is delaying operations somewhat.

Nova Scotia.—Although the season was late for sowing and planting, crops of all kinds have made excellent growth, and indications are that there will be a large crop of cereals and roots. Hay is of good quality, but apparently not so abundant as last year. Hay making has only commenced. Potatoes and beans should be above the average crop. There are practically no potato bugs.

New Brunswick.—Owing to the late spring all crops and vegetables were not sown till June. The warm weather and warm rains

of July have greatly favoured the growth of all kinds of field crops. Hay is in excellent condition, and promises a heavy yield. Potatoes have been very much infested by the potato bug.

Quebec.—Frequent rains in the months of May and June delayed seeding and made all crops suffer, particularly on lowlands. But great progress and remarkable growth have been noticed since the weather has improved. Hay is in first class condition and very abundant, but farmers will have difficulty to save it, on account of rain and shortage of labour. Small fruits are plentiful and gardens are in splendid condition.

Ontario.—Grain and root crops are reported to be in excellent condition everywhere. Fall wheat, though a thin stand, had plump, well-filled heads and was nearly ready to be cut. At the end of July haying was in progress and a good yield was being stored in the barns. Pastures were in good condition and all stock thriving. Corn was somewhat backward owing to the late seeding and the wet weather following, and it was feared that it would not ripen. Beans, too, have deteriorated with the heat, and reports mention that the maggot has damaged them materially. Peaches are likely to prove a light crop, and apples will be scarce.

Manitoba.—July has been hot and the rainfall much below the average, except in the eastern part of the province where crops are in somewhat better condition. Elsewhere in the province reports state that all grain crops, and especially the later sown ones, have suffered severely from the drought. Wheat and oats were ripening unevenly, and the straw was very short. Rust and insect pests appeared to be absent, but pigweed and wild oats were much complained of. The condition of fodder corn and potatoes was good. Hay and pasture were poor. Harvesting was likely to be general about August 20.

Saskatchewan.—During July there were no general rains throughout the province, and the few local showers have been insufficient. The continual hot sunshine and winds proved a serious set-back to all grains, especially to those on light lands. Wheat was reported to be ripening prematurely and the heads were shrivelling up without being well filled. Complaints were made of damage from the Hessian fly, and pigweed infested all crops. With good rains, however, the condition of all crops would improve. Pastures and hay were in poor condition.

Alberta.—July was hot and excessively dry, except in the more northerly districts, and all crops have suffered seriously. Wheat was short in straw and was ripening too rapidly to be well filled. Crops on summer fallow were standing the drought better than those on any other land. Hail did considerable damage in some districts.

Our crop correspondent at High River (Comte Barle de Foras) reports as follows under date of July 23: "I am just back from my yearly trip to Lethbridge and can send you a true survey of 100 miles of crops. The first impression is that wheat is suffering everywhere from drought. From High River to Claresholm conditions are now satisfactory. Certainly the high records of the last two years

of 50 bushels per acre will be few, if any, but one can rest assured that for the moment the prospective wheat crop can be safely put between 28 and 35 bushels. All wheat is headed out, but it is too early for a closer estimate, because a good rain will make it higher, and further drought on the contrary will lower it. From Claresholm to Macleod, the yield is lower, as the soil is more light and sandy and has suffered to a certain extent from drought. However the crop is about normal, the average for the district, about 22 to 25 bushels, being right, subject to the same observations previously made. As for the district from Macleod to Lethbridge, it is certainly hard hit; some crops show out as close to 25 bushels, the majority is anywhere below 20. Coming nearer to Lethbridge, the crops are drying out without any kind of exaggeration. The lower part of the plants is practically dry, the small leaves dead, the upper part still a bit alive is of the blue green colour so well known in crops suffering from drought. The situation is serious enough as it is, but made more serious everywhere by the practical failure of oats, a big part of which is so short that cutting with the binder seems impossible. Outside of the irrigated part of the Experimental Farm I have not seen a single good field of oats, none headed out. It is the worst oat crop I have ever seen. There are some good fields around here."

British Columbia.—Crops under irrigation are good, but all others have suffered somewhat from heat and drought. Haying weather was favourable and a good yield was realized. Loss of lambs and poultry through coyotes is reported from the interior of the province.

TELEGRAPHIC CROP REPORTS.

On August 2, 1917, a special press bulletin was issued by the Census and Statistics Office giving the following report on the condition of field crops throughout Canada, as compiled from telegrams despatched at the end of July:

Atlantic Provinces.—In PRINCE EDWARD ISLAND frequent beneficial rains have assured excellent cereal crops, insect damage reducing wheat below average. Hay an average crop. Potatoes promise full crop with 15 p.c. increased acreage. In NOVA SCOTIA all crops made excellent growth. In NEW BRUNSWICK weather was excellent for growth. Potatoes and roots are good, grain is a bad colour.

Quebec.—RIMOUSKI: Rains frequent; all crops have splendid appearance, good hay crop. STE. ANNE DE LA POCAIERE (Kamouraska): Frequent showers favourable to all crops. Hay good. Grains poor, but better than expected in June. Potatoes promise average crop. LENNOXVILLE (Sherbrooke): Hay crops late, about 40 p.c. being harvested. Yield above average. Heat of last few days very beneficial to corn, roots, etc. AUBREY (Chateaugay): Hay averages two tons per acre. All grains promise average crops; roots a failure. Potatoes doing well, also corn except on lowlands where drowned out. CAP ROUGE: Hay crop very heavy, pastures fine. All grain suffering from excess of precipitation. Roots promise well, corn for silage poor, potatoes fair. LAC A LA TORTUE (Champlain): Wheat, oats and barley good, potatoes very good, corn better than in June; beans promise well; hay abundant; roots fair.

Ontario.—OTTAWA: Hay harvesting about two weeks late, crop average. Grain and roots promise well. Corn with favourable weather should be abundant crop. Potatoes promise to be above average. Pastures very good. PRESCOTT (Grenville): Hay full crop of good quality, three-quarters cut. Grain promises full head and filling well. Corn for husking doubtful, for fodder very promising; potatoes good. PETERBOROUGH: Fall wheat

ripe, thin, but heads well filled. Barley above average, peas best for several years. Oats and mixed grains specially good; potatoes and roots looking fine; fodder corn large acreage and good appearance. Everything ten days late. OSHAWA (Ontario): Hay about average, one third well saved, third fairly well, rest poor. Barley, oats and spring wheat prospects above average; corn, mangolds, turnips doing well; potatoes big crop, if blight does not damage. Farm help very scarce. CONESTOGO (Waterloo): Hay crop harvested in good condition. Wheat nearly ready to cut, some rust prevalent. Spring crops look well, but need rain, so do roots and potatoes. HYDE PARK (Middlesex): Wheat badly infested with ball smut and rust. Oats developing open smut, but look well; peas, corn, barley, potatoes, turnips excellent, though late; hay, half well saved.

Manitoba.—MILLWOOD: Cereals injured by drought, about half crop; potatoes and roots late but good; hay and pastures half crop; summer fallows very fair; late crops suffering from great heat. BRANDON: Drought continued during July. Wheat will not average more than 12 bushels. Oats and barley worse, hay a failure; cutting will begin about August 20.

Saskatchewan.—INDIAN HEAD: July very dry with hot southwest winds; crops have suffered considerably throughout district. Early sown grain on fallow filling fairly well. Stubble and spring ploughing will be very light. Crops are maturing rapidly. Cutting will commence from tenth to fifteenth and should be general by August 20th. SASKATOON: Crops very short owing to continued drought. Best grain fields very weedy. Yields of hay much below normal. Many vegetable gardens almost total failure. ROSTHERN: No rain since July 12. Hay and corn poor, roots fair, grain good, but needs rain. Yield about 50 p.c., unless copious rains soon. Potatoes promise above average.

Alberta.—The Alberta Department of Agriculture reports hot and dry weather generally throughout the province except in a few districts. Grain and roots have advanced well, but all need rain, particularly in southwest portions. Haying general. Barley turning in many districts. If rain comes soon a big crop can still be harvested. LACOMBE: High temperature and dry weather last three weeks of July have hastened maturity and reduced prospective yield of all cereals; some districts not suffering from lack of rain, but all central Alberta would be benefited by good rainfall. Hay harvest 60 p.c. completed. Early varieties of grain will be ripe next week.

British Columbia.—AGASSIZ: July exceptionally dry and hot. No rain fell until the last five days. All hay stored in excellent shape. Grain crops maturing rapidly. Corn growing fast; roots and pastures need rain. Live stock in good condition. SUMMERLAND: Apple crop will not exceed that of 1916; it is very patchy. Well kept orchards have held out well during water shortage and heat. Early peaches are just ripe; apricots coming in. Both running small this year. INVERMERE: Crops under dry farming conditions a failure. Crops under irrigation good, and have made rapid growth. Weather good for haying. Fodder crop promises well. SIDNEY: Very few areas in the Island district received beneficial rains during the month. In consequence of long drought all spring sown grain, roots and potatoes have not developed as usual. A heavy hay crop was gathered in excellent condition. Small fruit has given an average crop.

CROP REPORTS OF THE PROVINCIAL GOVERNMENTS.

Ontario.—The Ontario Department of Agriculture in weekly reports of August 6, 13, and 20 states that in yield per acre, fall wheat is equal to the average, but the total acreage is smaller than usual. In the report of August 13 it is stated that most of the fall wheat is cut and housed. Spring wheat on probably an increased acreage is above the average in yield and in length of straw. Oat fields, as a rule, have been a revelation of growth. Some of the yields reported run as high as 70 and 80 bushels to the acre, while 50 and 60 are common. Peas are a most promising crop at present appearance. Reports regarding beans run all the way from poor to promising. Hay has turned out to be an excellent crop, being well above the average in yield, and most of the cut being of good quality. Coils may yet be seen in some fields, the grain crops having overtaken the mower. Apples, which did not set heavily, dropped considerably during the summer, and will be a poor yield generally. Pears and plums have done somewhat better. Peaches will be fair, relatively. All classes of live stock are reported to be in good health. Very

few sales, generally speaking, are being made. Good draught horses are bringing from \$175 to \$200; general purpose from \$125 to \$180. In Grey county nine carloads of cattle, chiefly butchers' animals, left a local station one day last week. At a sale in Halton county, grade Holstein cows sold as high as \$153. Hogs keep up in price, selling at $15\frac{1}{2}$ cents to $17\frac{3}{4}$ cents a lb., according to point of purchase.

On August 20 the Department reported that getting in the grain crops and late cut hay, and preparing land for the new fall wheat, had made the week just closed one of the busiest of the season. Fall wheat in the threshing shows a great range of yields, but on the whole it will be about an average per acre. The grain is plump, having ripened well. Barley will likely prove to be the best grain crop of the season, taking yield, straw, and the favourable conditions of harvesting into consideration. Oats give promise of a large yield, and there is a great length of straw, but there are complaints of lodging, and harvesting will be much more difficult than in the case of the other grains, which were handled under more favourable conditions. Winter rye, like fall wheat, has done fairly well. Green peas for the canning factories have done much better than the common field pea. Owing to frequent rains there has been a tendency with this crop to run too much to vine. On account of late planting, corn is fully two weeks behind, but growth is now rushing along, and the crop may yet reach a three-quarter yield, providing it escapes frost. Potatoes are not yielding as largely as was expected, the intensely hot, dry weather of the latter part of July having more or less checked growth. Fortunately it also appears to have checked the progress of the blight to a considerable extent. Roots look splendid where well hoed, but owing to haying and harvesting overlapping, most of the fields have been left very weedy. Hay on the whole is an excellent crop, the bulk of it having been cut and cured in most favourable weather. A few very late fields were mowed during the week. Alsike is also yielding well. Young clover is coming along nicely, and the second cut of alfalfa has been satisfactory. Reports from Eastern Ontario state that Snow apples and McIntosh Reds are scabbing considerably. The raspberry yield has been a large one, and bush fruits generally have borne well.

Live stock are in good condition, although flies have caused annoyance. Complaints continue that too many young cattle are being sold for veal. On the other hand good dairy cows are bringing \$130. As is usual at this time of year the milk flow has decreased, but the production is well up to the average, as pastures generally have been steadier than for many years. Both butter and cheese have been in good demand, and with a large supply of grains and hay, and plenty of straw and other roughage on hand, less mill feeds and other concentrates will be needed, and dairymen are inclined to hold on to their profitable cows. In fact more live stock generally are likely to be kept over this winter. Hogs are commanding higher figures, quotations showing sales at from \$17.25 to \$17.50.

During the week a large number of men from towns and cities have been placed on farms through the medium of Government

organizations and the more immediate agency of Representatives. The open weather of the last month has somewhat lessened the demand for agricultural help. Farmers too, have been interchanging work more systematically and satisfactorily than ever before, and improved machinery is also helping out. Female help in the fields has also been a factor in meeting the rush of work. Tractors are in insistent demand, as preparations are apace for the new fall wheat crop. Up to the end of the week, however, the land was too hard for ordinary ploughing in many fields and rains were awaited to soften the surface of the soil.

The weekly Report of August 27th, stated that during the week much needed rains fell in many parts of the province, which, although further delaying harvesting, revived pastures and growing crops generally. Heavy soils, which with so much dry weather have been too hard for ploughing, can now be more easily prepared for the new fall wheat. Fall wheat has been fully harvested and many are busy getting ready for the new crop; in fact some wheat for next year's cutting is already in. It is reported from Grenville, a county in which practically no winter wheat has heretofore been grown, that a number of farmers have decided to try out the crop this fall. The barley harvest is also completed, and is highly spoken of. Oats are practically all cut; most of the crop is in the barns, but considerable is yet in the shock owing to the recent rains. Corn is behind in growth on account of late planting, but it has made remarkable headway during the past few weeks. Roots are showing tremendous growth where well hoed. The weeds, however, are very bad in some fields. Most of the early potatoes have been disposed of at good prices. The later grown varieties are looking well as a whole, as the late blight has not been so serious as was at one time feared. The numerous stacks of hay to be seen indicate that most of the barns are well filled. Pastures are unusually good for the season, recent rains having given them a good start. The new catch of clover has been satisfactory.

Cattle have been moving slowly, but the keen demand for hogs has put prices up to a higher notch than has yet been reached, several market sales being reported at from \$10.25 to \$18.70 a cwt., and in one instance \$19. However, about \$17.25 has been the ruling price in most quarters. The pastures, refreshed by recent rains, are keeping up the milk flow most encouragingly for the time of the year. Oxford county quotes cheese as bringing 29 cents a pound. The Dundas Representative states that the farmers of that county are arranging to donate a day's milk to help the farmers in the devastated areas in Europe. The main reliance of farmers, however, has been exchanging work and getting members of their families, both male and female, to assist in the time of rush. The Government tractors are said to be doing excellent work in preparing the land for fall wheat.

Saskatchewan.—The Saskatchewan Department of Agriculture telegraphed on August 7 that the cool weather of the past week and local showers generally had done much to improve crop conditions

throughout the province. Almost every point heard from reports local showers during the past week with cooler weather generally. On the other hand a great deal more rain is needed if the wheat crop is to be anything more than between 10 and 18 bushels to the acre. On August 14 the Department telegraphed that wheat cutting had commenced and would be general about the 20th. The estimated yield of wheat for the province was from 10 to 15 bushels. Some crops were as low as five and others as high as 40 bushels per acre. Wheat was filling well, but oats were very short in straw and very low in yield. The hay crop was normal. The report of August 21 stated that wheat cutting was now in full swing and would be general by the middle of the present week. The weather was all that could be desired, local rains had fallen which had helped to fill the later maturing grain. The wheat crop in many places was picking up beyond expectations after the drought, and the yield would be materially increased thereby. Some damage to the wheat crop has been noticed, caused by Hessian-fly, also by the Borer-fly, but the damage is not serious. The oat crop was varied,—in some parts too short practically to cut with a binder, while in other parts, a splendid crop. South of Wadena are oats from four feet six to five feet in height which look like yielding eighty bushels per acre. All crops were ripening well and with favourable weather should be harvested in excellent shape. Harvest labour was scarce, but every effort was being made by the Department to obtain help and special trains from the East were bringing their quota of men.

A telegram of August 27 states that harvesting is general in Saskatchewan under favourable conditions. Heavy rains early in the week were of great benefit to late oats. Threshing started and will be general next week. Considerable damage has been done by hail. Wheat on breaking and summer fallow is an average crop. Heavy frost of last night reported fourteen degrees in North Battleford district.

Alberta.—The Alberta Department of Agriculture telegraphed on August 2 that conditions during the previous week had greatly improved owing to torrential rains and frequent showers. On August 11 a further telegram stated that heavy rains and cooler weather, which had prevailed throughout most of the province during the week, had greatly benefited late crops. Hay harvesting was general. Light frosts in a few districts on August 8 had done very little damage except to vegetables in one or two places. A telegram from Lethbridge, on August 6, stated that wheat in southern Alberta was filling very much better than was considered possible during the hot wave ten days ago. The crop varied greatly in different districts. The average yield of wheat per acre might reach 18 bushels. On August 8 the Alberta Department of Agriculture telegraphed that the weather conditions during the week had been favourable, but that harvest operations would not be general until the middle or later part of the coming week. There had been some hail and a little frost but no damage. Threshing returns from two districts in the southern part of the province reported yields

averaging about 25 bushels to the acre. In one case 55 bushels of No. 1 was threshed. The favourable weather during the past two weeks had greatly increased the average crop. Roots and live stock were doing well.

On August 25th, the Department telegraphed as follows: "Weather conditions during the past week have been all that could be desired for harvest operations, except in two or three districts where hailstorms prevailed. Cutting has been general in the eastern section of the province, including Peace River district, and will be general throughout the whole province next week. Officials of this Department have personally visited during the week a great many districts and have found conditions very favourable and greatly improved since recent rains. The outlook is promising for fair yields quite generally, except in hailed districts."

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—July, on the whole, has been cooler than last year, with a good deal less bright sunshine and considerably more precipitation. The highest temperature reached is 97·7, recorded on the 30th, the lowest 50, and the mean 70·6, compared with extremes of 100·3 and 52 and a mean temperature of 74·72 for this period in 1916. The precipitation amounts to 2·87 inches, distributed over eighteen different days, and nearly an inch falling on the 10th; while in the previous July the total was only 1·5 inch, rain then having been recorded on but nine days. The bright sunshine averages 7·98 hours a day, as against 10·08 hours a day for the corresponding period of 1916.

At the Experimental Farm haying has been completed during the closing week of the month, the yield being about 2½ tons per acre. Grain generally, although probably about a week later than usual, is looking well, and there promises to be a good average crop. Some plots of barley were harvested on the 28th of the month, constituting the first grain cutting of the season. Indian corn, which has been backward, has picked up, especially during the second half of the month. Potatoes and roots are making satisfactory growth and should give good returns.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—"Vegetation has made extraordinary growth during July, notwithstanding a rainfall aggregating less than two inches. Showers, which have been well distributed, occurred on eighteen days. The wheat crop is thin in many sections, due to injury caused by Hessian-fly and Joint-worm. Oats, barley and mixed grains promise to be full crops. Hay-making is well under way, the crop is turning out better than was anticipated, yielding above the average. Potatoes are likely to be a full crop, and there is about fifteen per cent of an increase in the acreage planted. Roots and corn have made excellent growth. The injury from cutworms, etc., is less than usual. The small fruits that have been picked, or that are now coming on the market, are a full crop. The large fruits are most promising. Early

vegetables are very plentiful. The first hay cutting on the Experimental Station took place on the 14th. The twenty acres of mangolds for stockings, sown between the 9th and the 24th, are all well up."

Kentville, N.S.:—W. S. Blair, Superintendent, reports:—"The mean temperature for July is 65.93, the rainfall, distributed over twelve days, totals 3.65 inches, and the bright sunshine amounts to 195.6 hours; while, for the corresponding period of the four previous years, the average figures are 64.58 for temperature, 2.34 inches for precipitation, and 195.6 hours for bright sunshine. Owing to light showers during the first half of July, little haying was done, while the latter half has had several dark days and one heavy rain, which materially held up haying operations. The weather, on the whole, has not been satisfactory for continuous haying, and the gathering of the crop will be later than usual. The rain of the 28th has in a measure prevented grass from ripening rapidly, and this, with a late season, has kept the grasses growing later than usual and a good quality of hay should be harvested early in August. The hay made by this Station, amounting to seventy-five tons, has been got up in excellent condition during the month. The temperature and weather conditions generally have been such that crops of all kinds have made fine growth during the month, and all those seeded late give promise of yielding well. Many apples have dropped during the month, and the prospects are that only a medium crop of the same will be secured, the yield being estimated at between 600,000 and 700,000 barrels. Orchards, sprayed thoroughly before bloom, show a large percentage of fruit free from apple scab, but trees not well sprayed early are developing much scab."

Nappan, N.S.:—W. W. Baird, Superintendent, reports:—"Exceptionally fine weather has been experienced during July. Light showers have been recorded on six different days, giving a total precipitation of 1.38 inch. A maximum temperature of 85 was registered on the 18th. Light thunder showers were experienced on the 22nd and 27th. During the second week of the month preparations were made for sowing twenty acres of the newly cleared land to turnips for seed production. Stones, sticks, stumps and small roots were removed from the field and then the land prepared, and by the 31st most of it has been seeded. Strawberries have yielded plentifully, and the fruit was of good quality, for which a ready market was found at from eight to ten cents per box. Although there appears to be plenty of clover in the fields, the bees have secured very little honey from it. Not much over 100 lb. of clover honey has been extracted so far. The Cumberland County Farmers' Association held their annual picnic at the Experimental Farm on the 18th, some three thousand people being in attendance. All grain crops are in good condition and have made fairly uniform growth, but they give indications of rather short straw. The plots of barley began heading out about the 19th. All live stock at this Farm is in good condition and doing nicely. The work that has engaged attention during the month, other than caring for live stock, poultry and bees, has included ploughing, harrowing, drilling, spreading lime-

stone, sowing turnips, spreading manure, cultivating, spraying, hoeing, picking berries and cleaning up the grounds."

Fredericton, N.B.:—W. W. Hubbard, Superintendent, reports:—"Conditions during July have been favourable for the growth of all crops, and for the finishing of planting and seeding. There have been no intensely warm days, the highest reading of the thermometer being 90; but the heat has been fairly continuous, the mean temperature, 70·2, being over three degrees above the average of the last forty-three years. While the precipitation is about one inch less than the average, it has been ample. There has been a good deal of cloudy weather, the sunshine record showing only 180·2 hours, against a forty-three year average of 238 hours. Had the crops been well put in, they would have shown much better; as it is, most of them are very late, and grain, especially, cannot give a full yield. Potatoes are doing very well; but an unusual crop of bugs has necessitated spraying, and, if this is followed up during August, it will help to improve the potato prospects. Hay, which is a heavy crop, is late, cutting only having got fairly started. Many more beans than usual have been planted, and these fields are looking well. At the Station, farm work is backward, the bulk of the hay having yet to be cut. Forty-five acres have been seeded to turnips for seed production next year, considerable extra labour being involved. Pastures have kept up well, and live stock generally is in good condition."

Ste. Anne de la Pocatière, Que.:—Jos. Begin, Superintendent, reports:—"During the first two weeks of July it was cool and cloudy. A few warm days and frequent showers have been experienced during the latter part of the month. The highest temperature recorded is 89·9, and the lowest 42·4. The mean temperature is 61·6, while the mean for the corresponding time last year was 72·4. The precipitation, 2·29 inches, has sufficed for all crops, as the soil was wet to quite a depth at the end of June. Hay has yielded a little above the average; at the Station, it was all in by the 29th. Most of the cereal crop was sown very late in June and had made rather poor progress until the middle of July; but the last part of the month has been very favourable for growth, and grain of all kinds, as well as Indian corn and potatoes, have improved considerably during the last three weeks. Early sown cereals at the Station are remarkably good, especially the wheat, which promises the heaviest yield yet recorded."

Cap Rouge, Que.:—G. A. Langelier, Superintendent, reports:—"July has been warmer, wetter, and duller than the average of the corresponding month during the last five years, the figures being, respectively, 67·3 and 66·2 degrees for mean temperature, 3·19 and 2·71 inches of precipitation, and 212·4 and 245·3 hours of sunshine. From the 8th, it has rained on fifteen different days, so that it has not been easy to work at haying; the season, anyway, is about ten days later than usual, so that the click of the mowing machines was not heard very much before the end of the month. Hay is a very heavy crop in the district; all grain has suffered from the excess of pre-

cipitation; roots promise well; corn for silage is poor; potatoes are fair; small fruits are abundant; apples will be half a crop; plums will be abundant. At the Experimental Station, most of the hay is stored at the beginning of August. Besides the work on the farm, a lot of time has been devoted to grading and gravelling the main road from the entrance to the cattle barn."

Lennoxville, Que.:—J. A. McClary, Superintendent, reports:—"July has been very warm, the thermometer registering 80 and above on fifteen different days, and on two days reaching 90. The lowest temperature recorded is 40, compared with 41 last year; while the mean is 67.61 against 68.35 a year ago. The precipitation, a large part of which fell on the 18th and 19th, amounts to 3.97 inches, compared with 5.68 inches last year. The hours of sunshine total 216.1, compared with 250.5 in July, 1916. The grain and root crops are looking well, considering the rain and wind experienced. The wet weather during the first part of the month caused haying to be very late, only about 40 per cent. being harvested; but the hay is of good quality and the crop above the average. The warm spell of the past week had a very noticeable effect on corn, roots and other crops."

Brandon, Man.:—W. C. McKillican, Superintendent, reports:—"The drought which prevailed during May and June, has continued throughout July. The total rainfall for the three months is only 3.16 inches. With one exception, this is the least for this period since the rain gauge was installed twenty-seven years ago. The only season with a smaller rainfall was 1897, when 2.97 inches fell up to July 31. Combined with the shortage of moisture, there has been extreme heat and scorching winds. A temperature above 90 has been common, and on two occasions 100 or over has been reached. With such weather, it is inevitable that crops should be light; but they are really better than one knowing the weather conditions would expect. Wheat is thin, and in many places short, and the heads are light. Oats and barley, being later sown, have suffered more than wheat. Hay crops are extremely light. Corn has done well this month, but is still backward owing to the late June frosts."

Indian Head, Sask.:—W. H. Gibson, Superintendent, reports:—"July has been extremely warm and dry. Hot south and southwest winds have prevailed during the latter part of the month, causing some damage to crops on stubble and fall ploughing. Early sown grain on fallows promises a good crop at present. Wheat is filling fairly well and the heads are of good size. Stubble and spring ploughing will give a light return. Oats are late, and, at present, short; but, with a shower of rain, may develop into a fair crop."

Rosthern, Sask.:—Wm. A. Munro, Superintendent, reports:—"Crops in this district were very promising up till July 20, but since that date the drought has begun to tell, and at the end of the month prospects are not very favourable, and the corn crop is almost a complete failure. During the past two months there have been

three miles of fencing erected at the Station, affording much more convenience and accommodation for the horses and cattle. There are practically no currants, gooseberries or raspberries this season, owing to the old canes having been so injured by the hailstorm of last year as to succumb to winter-killing. There is a strong growth of new shoots, however, which augurs well for fruit next year. There has been a good crop of strawberries."

Scott, Sask.:—M. J. Tinline, Acting Superintendent, reports:—"The weather for July has been unusually warm, with much less precipitation than usual, for, while a fair share of rain has fallen in a few districts, for the most part the showers have only covered small areas. Grain is maturing rapidly. On light soil and on poorly worked land, the crop is drying up. Some other fields will be too short to harvest. On well worked lands and in some districts where rain has fallen, some reasonably good yields may be expected."

Lacombe, Alberta:—G. H. Hutton, Superintendent, reports:—"Early in July there was a precipitation of slightly over one inch, but for the last three weeks of the month there has been no rain. Rather high average temperatures have prevailed, accompanied by considerable wind, with the result that the grain crops, which were later than usual at the beginning of the month, are now fully up to the average stage of maturity at this date. The straw is shorter than usual, and rain is needed over practically all of central Alberta, although a few districts are not suffering seriously as yet. The cutting of the early-matured varieties of grain will commence during the first week of August, but it is not anticipated that the general harvest of early-sown grain will start before the third week."

Lethbridge, Alberta:—W. H. Fairfield, Superintendent, reports:—"The weather has been very dry in southern Alberta during July, as there have been no general rains. What precipitation came was in the form of thunder showers, which, although supplying sufficient moisture in some localities, might leave neighbouring ones suffering. In consequence of this, the crop is going to be very uneven in different sections. Wheat, however, is filling very much better than it was considered possible during the hot wave that occurred during the last week or two in July. At the Station, 1.37 inch of precipitation has been recorded, and 1.22 inch of this came in half an hour on the evening of the 3rd, accompanied by a little hail, which did not do much damage. The winter wheat on the non-irrigated land of the Station was cut on the 28th."

Invermere, B.C.:—G. E. Parham, Superintendent, reports:—"July has been the driest month experienced either in the spring or summer since the Experimental Station was established, the total precipitation amounting to only 0.29 of an inch. Bright sunshine has been registered every day with a total of 365 hours, which also constitutes a record. The highest temperature recorded is 94, the lowest 36, and the mean 64.4. Conditions in this district have been excellent for haying and some good fields have been brought in. The suitability of this soil for alfalfa has again been demonstrated.

Owing to the continued dry spell, the crops under dry-farming conditions at the Experimental Station have proved a failure, but those under irrigation have made very rapid growth, fodder corn, especially, promising well. In the apiary department, the lack of moisture has had a very marked effect upon the honey-flow. During the earlier part of the month, conditions seemed unusually favourable, some colonies bringing in, on an average, 10 lb. a day, but during the week ending the 21st, when the mean maximum temperature was over 90 and considerable areas of alfalfa and clover were cut the honeyflow received a sudden check, and has almost ceased."

Summerland, B.C.:—R. H. Helmer, Superintendent, reports:—"The weather during July has been warm, and, if water had been more plentiful, crops would have benefited, as in most cases they are backward. There has been an opportunity of visiting some of the southern Okanagan orchards during July, and, although the fruit is of good quality at present, the apple crop will not exceed that of 1916. Pears are a medium crop, in places; peaches medium, and will run small; plums are good, in places. Grain has suffered from the intense heat, so also has hay on the benches. Bottom-land hay has been harvested in good condition. Some bad fires have occurred to the north and south of here; luckily, the rain at the end of the month put them out."

Agassiz, B.C.:—W. H. Hicks, in charge, reports:—"July has been very dry and hot. The total precipitation for the month is only 0.59 of an inch, which fell during the last five days. The dry season made excellent conditions for saving a good hay crop. The second cutting of hay and the pasture are apt to suffer unless August has more rain than usual. Corn is growing rapidly and grains are maturing fast. Roots, however, are in need of more moisture. The hot weather and flies have not been conducive to high milk yields."

Sidney, Vancouver Island, B.C.:—Lionel Stevenson, Superintendent, reports:—"Very few areas in the Island districts have experienced beneficial rains during July. In consequence of the prolonged drought, all spring-sown grains, roots and potatoes have not developed as usual. A heavy hay crop has been gathered in excellent condition. The autumn-sown cereals have developed well and have reached the ripe state by the close of the month. Small fruits have given an average yield. Apples, pears and other orchard trees promise a very ordinary crop, with a larger percentage of small fruit than usual. Areas devoted to seed production in vegetable and flower lines promise exceedingly well. Stock roots set in October are yielding much greater quantities of seed than those set in April. The live stock of the district is in good condition, with high prices offering for all butcher or breeding stock."

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of July, are given in the following table:—

It will be noticed that potatoes show a large increase over 1916.

A decree of July 13, 1917 fixes the following maximum prices for cereals harvested in France in 1917 and 1918 to hold good until July 15, 1919.

Cereal.	Per 100 kg.	Per bushel	
	Francs	\$	cts.
Wheat weighing 77 kilograms per hectolitre, (61.74 lb. per bushel).....	50	2	62
Barley, including winter barley weighing at least 60 kilograms per hectolitre (48.11 lb. per bushel.).....	42	1	76
Corn and rye.....	42	2	06
Buckwheat.....	42	1	76
Oats.....	42	1	25

Russia.—The Industrial and Commercial Gazette of Petrograd reports (May 28/June 10) that the area sown with sugar beets this year for the whole of Russia is estimated at 1,099,798 acres, as compared with 1,497,216 acres, a decrease of 397,418 acres, or 26½ per cent.

Japan.—H. M. Commercial Attaché at Yokohama reports that, according to official statistics, the total yield of barley, rye and wheat in Japan in 1917 is estimated at 105,972,731 bushels, a decrease of 9,847,257 bushels, or 8.5 per cent, as compared with last year's yield, and of 6,273,596 bushels, or 5.58 per cent, as compared with a normal yield. Sowing was delayed by excessive rain, and the growth of the young plants was greatly checked by intensely cold weather in many districts, some places having a very heavy snowfall. In consequence of the rise in price of fertilizers since last year insufficient manuring was carried out, and, as a result, the condition of the plants after sprouting was far from satisfactory. Better weather was experienced at the time the plants were coming into ear, but too late, however, to effect a complete recovery in the crops. H. M. Consul General at Seoul reports (May 8) that the rice crop of Corea in 1916 amounted to 62,185,201 bushels, as compared with 56,416,224 bushels in 1915, an increase of 5,768,977 bushels.

United States.—The Crop-Reporting Board of the U. S. Department of Agriculture issued, August 8, estimates of the yield of the principal field crops with a statement of average condition on August 1, as compared with previous years, as in the following table:—

Crops.	CONDITION IN PER CENT OF NORMAL.			TOTAL YIELD IN MILLIONS OF BUSHELS, TONS OR LB.			
	August 1 1916	July 1 1917	August 1 1917	1916 (final)	July forecast ¹	August forecast ¹	1911 to 1915 average
Winter wheat.....	p.c.	p.c.	p.c.	bush.	bush.	bush.	bush.
Spring wheat.....	63.4	83.6	68.7	482	402	417 ²	542
All wheat.....	-	-	-	158	276	236	264
Corn.....	75.3	81.1	78.8	640	678	653	806
Oats.....	81.5	89.4	87.2	2,583	3,124	3,191	2,754
Barley.....	80.0	85.4	77.9	1,252	1,453	1,456	1,230
Rye.....	-	-	-	181	214	203	197
Buckwheat.....	87.8	-	92.2	47.4	56.1	56 ²	41.4
White potatoes.....	80.8	90.1	87.9	11.8	-	19.9	16.6
Sweet potatoes.....	85.9	81.9	84.8	285	452	467	353
Flax.....	84.0	84.0	60.6	71.0	82.2	86.4	60.3
Rice.....	92.2	85.1	85.0	15.5	17.0	12.8	18.6
Hay.....	95.7	84.3	84.6	40.7	34.4	34.6	25.3
Sugar beets.....	86.4	92.4	90.3	tons	tons	tons	tons
Tobacco.....	84.4	86.8	88.1	110	103	100	86.6
Cotton.....	72.3	70.3	70.3	6.23	7.99	7.82	5.84
				lb.	lb.	lb.	lb.
				1,151	1,215	1,270	984

¹Interpreted from Condition Reports. ²Preliminary estimate.

The wheat crop of 653,000,000 bushels exceeds the poor yield of 1916 by 13 million bushels. Corn promises the record yield of 3,191,000,000 bushels, as compared with the previous record of 3,124,000,000 bushels in 1912. Oats promise a yield of 1,456,000,000 bushels, as compared with 1,252,000,000 bushels in 1916 and 1,549,000,000 bushels in 1915.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The Bulletin of Agricultural and Commercial Statistics for July gives estimates of this year's production of wheat, rye, barley and oats in countries of the northern hemisphere, with comparative figures of the previous year, as in the following table:

Area and Yield of Wheat, Rye, Barley and Oats in Countries of the Northern Hemisphere, 1916 and 1917.

Countries	1916	1917	Per cent of area of 1916	1916	1917	Per cent of yield of 1916
Wheat—	000 acres	000 acres	p.c.	000 bush.	000 bush.	p.c.
Spain.....	10,148	10,224	100.7	152,330	141,007	92.6
France.....	12,856	10,397	80.9	214,622	161,672	75.3
United States (a).....	34,829	27,263	78.3	481,752	402,007	83.4
" (b).....	17,956	19,039	106.0	158,145	283,005	179.0
British India.....	30,143	33,040	109.6	318,005	379,306	119.3
Japan (a).....	1,241	1,236	99.6	27,657	25,849	93.5
" (b).....	41	32	78.8	650	683	105.1
Rye—						
Spain.....	1,847	1,800	97.5	28,782	27,779	96.5
United States.....	3,474	3,772	108.6	47,382	57,900	122.2
Barley—						
Spain.....	3,886	3,927	101.1	86,864	76,497	88.1
United States.....	7,674	8,379	109.2	180,923	213,996	118.3
Oats—						
Spain.....	1,398	1,425	101.9	30,272	31,104	102.7
United States.....	41,263	43,162	104.6	1,178,848	1,296,702	110.3

(a) Winter sown. (b) Spring sown.

CONDITION OF CROPS IN NORTHERN HEMISPHERE.

Denmark.—Advices to June 15 point to the conclusion that the actual condition of the crops forecasts a harvest decidedly below the normal.

France.—High temperature has generally prevailed during June. Rain storms have been reported from all districts, and in some departments were occasionally accompanied by hail. This weather has favoured all crops, and where growth was backward, the lost time has been recovered. Field work, such as weeding, top dressing, earthing up, had been carried on amid excellent surroundings. Wheat as a whole has improved, and spring sown crops are in quite a satisfactory condition. Barley and oats look splendid. Harvest has begun in the Mediterranean departments. Maize is coming on well. Potatoes are in vigorous growth, and promise good results. In many departments the area exceeds that during the years before the war.

Italy.—The weather in June has been generally very hot and rather too dry. In some places the want of rain is beginning to be felt. Local storms have done some slight damage.

Netherlands.—The warm weather of May and of the first fortnight of June has been in general fairly favourable, but some of the crops have been affected by the drought.

Russia in Europe.—Kieff reports of June 14 state that winter crops in that government were in satisfactory condition, but that spring crops were backward owing to the weather having been too dry and cool. Recent rains had improved the outlook. Round Kharkoff on the same date plentiful rains had greatly improved both winter and spring crops, and the outlook was on the whole quite satisfactory, especially for wheat.

Sweden.—Crops are in a backward state owing to the late spring and excessive drought. Winter sown cereals have also suffered a good deal from the severity of that season.

Switzerland.—June was dry and hot, in contrast to that month in 1916, and crops have come on well. Spring sown crops, particularly oats, have suffered more from the drought than the winter sowings have done. Insect pests and weeds have been a drawback here and there. The maize crop looks well as a whole. Potato crops as a rule look exceedingly well.

CROPS OF THE SOUTHERN HEMISPHERE.

In Australia the weather is favourable. In New Zealand crops have been affected in various districts by dry weather in some of them and by too much wet in others. The weather is unfavourable. Sowing has been effected in average conditions for all crops. Wheat and oats have germinated uniformly and with regularity.

New Zealand.—The area under wheat in 1916-17 was 219,998 acres, as compared with 329,202 acres in 1915-16 and 241,064 acres, the average from 1909-10 to 1913-14, or respectively 66.5 and 90.8 p.c. of the two last mentioned areas. The yield of wheat in 1916-17 was 5,037,082 bushels, as compared with 7,108,474 bushels in 1915-16 and 7,069,463 bushels, the average from 1909-10 to 1913-14, or

respectively 70.9 p.c. and 71.3 p.c. of the two last mentioned yields. The yield per acre is therefore 23.05 bushels for 1916-17, as compared with 21.56 bushels in 1915-16 and 29.29 the average from 1909-10 to 1913-14.

CABLEGRAM OF AUGUST 18, 1917.

Production of wheat in Ireland 4,347,000 bushels, or 153 p.c. of last year's crop and 237 p.c. of the average crop of the five years 1911-15. The total production of wheat in Spain, France, Ireland, United States, India and Japan is estimated at 1,365,904,000 bushels, 100.7 p.c. of the production of the same countries last year and 86.3 of their five year average. The production of rye in Spain, Ireland and the United States is 84,000,000 bushels, or 110 p.c. of last year and 126 p.c. of the five year average. The production of barley in the same countries as for rye is 287,826,000 bushels, or 105 p.c. of last year and 103.3 p.c. of the five year average. The production of oats in the same three countries is given as 1,480,938,000 bushels, or 117 p.c. of last year's production and 119 p.c. of the five year average.

AGRICULTURAL STATISTICS OF BRITISH COLUMBIA, 1917.

The Monthly Bulletin of April last described arrangements made with the Departments of Agriculture of the provinces of Quebec, Saskatchewan, Alberta and British Columbia for the joint collection of annual agricultural statistics beginning with the current year.¹ Under this arrangement, schedules were distributed in June to individual farmers in these provinces calling for the areas under field crops and the numbers of farm live stock, as classified. For Quebec, Saskatchewan and Alberta, the compilation of the returns received was undertaken by the Census and Statistics Office and is now on the point of completion, whilst for British Columbia, where the compilation was effected by the Provincial Department, the results were reported to the Census and Statistics Office by letter dated July 31; their publication was agreed to by telegram of August 9.

The following statements show the areas under field crops and the numbers of farm live stock in British Columbia for the year 1917, as estimated from the returns received:

I. Areas under Field Crops in British Columbia, 1917.

	Acres.		Acres.
Fall wheat.....	3,236	Hay and clover.....	129,254
Spring wheat.....	18,101	Alfalfa.....	8,681
All wheat.....	21,337	Pasture.....	565,024
Oats.....	60,234	Potatoes.....	15,024
Barley.....	5,524	Turnips.....	2,003
Flax.....	54	Mangolds.....	1,016
Rye.....	911	Sugar beets.....	401
Peas.....	1,338	Other root crops.....	1,170
Beans.....	2,117	Corn for fodder.....	2,239
Mixed grains.....	1,850	Grain in hay.....	18,990
Buckwheat.....	185	Green forage.....	1,810
Corn for husking.....	222	Other crops.....	2,392
Other grain crops.....	260	Fallow.....	9,268

¹Monthly Bulletin of Agricultural Statistics, Vol. 10, No. 104, 1917, p. 95.

II. Numbers of Farm Live Stock in British Columbia, 1917.

HORSES—		BEEF CATTLE—	
Stallions, 2 years old and over.....	984	Bulls, kept for breeding.....	3,018
Mares, 2 years old and over.....	20,220	Cows, 2 years old and over.....	47,884
Geldings, 2 years old and over.....	18,319	Yearlings.....	33,712
Colts and fillies under 2 years old..	8,408	Calves.....	29,190
Mules.....	156	All other beef cattle.....	39,720
Other horses and mules.....	7,193		
Total horses and mules.....	55,280	Total beef cattle.....	153,524
		Total cattle.....	240,343
DAIRY CATTLE—		SHEEP.....	
Bulls, kept for breeding.....	2,126		43,858
Milch cows, 2 years old and over		SWINE.....	
(in milk or in calf).....	49,005		37,688
Yearlings.....	16,421	POULTRY—	
Calves.....	17,998	Hens.....	600,229
All other dairy cattle.....	1,269	Chickens.....	735,449
		Geese.....	8,322
		Ducks.....	16,368
		Turkeys.....	7,632
Total dairy cattle.....	86,819	Total poultry.....	1,368,000

The total number of farms in British Columbia is about 15,000, and the total number of completed schedules received was 6,886, or about 46 per cent. For the first year this may be regarded as a fair response; but with the perfection of future arrangements and the better realization by occupiers of the local value and the national importance of accurate information respecting crops and live stock, a much larger percentage of returns may annually be anticipated. The larger the proportion of replies, the less need will there be for estimation, and consequently the more trustworthy will be the final results.

THE WEATHER DURING JULY.

The Dominion Meteorological Office reports that the mean temperature along the coast-line of British Columbia and in the Barkerville district was from 3 degrees to 6 degrees below normal, while in the southern interior portion of the province it varied from normal near the coast to 3 degrees above in eastern districts. In the Prairie Provinces the normal was exceeded by from 3 degrees to 6 degrees. In Ontario the very cool weather of the former part of the month was more than counterbalanced by the great warmth of the latter part in the northern portion, but this was not generally the case in the southern portion. In Quebec and northern New Brunswick mean temperatures ranged from normal to 3 degrees above, while in the remainder of the Maritime Provinces they ranged from average to 3 degrees below. In southern British Columbia, southern Alberta, Saskatchewan and western Manitoba the rainfall was light, amounting generally to less than one inch. In Ontario the normal precipitation was well exceeded, except in the region between Kingston and Haliburton, and in the district of Thunder Bay. From the Ottawa river to the Atlantic ocean there were frequent showers during the month, but although the normal rainfall was largely exceeded in western Quebec, it was not, except locally, reached in the region from the Saguenay River to Cape Breton Island.

STATISTICS OF CREAMERIES AND CHEESE FACTORIES, 1915 AND 1916.

A report of the Census and Statistics Office, now in the press and of which a preliminary summary was issued on August 9, 1917, gives the principal statistics of the factory production of butter and cheese in Canada for the year 1916, as compared with 1915. It has been prepared from data furnished by the Departments of Agriculture of the Provincial Governments by arrangements under which it is proposed to issue similar statistics annually in future, as well as, for the census years, to bring the whole of the dairying industry of Canada under more exhaustive review.

Table I shows the number of establishments and patrons, Table II the production and value of creamery butter and factory cheese and Table III the wholesale prices per lb. of creamery butter and factory cheese.

**I. Number of Establishments and Patrons of Creameries and Factories,
1915 and 1916.**

ESTABLISHMENTS.

Province.	Creameries.		Cheese Factories.		Combined Factories.		Condensed Milk Factories.		Total.	
	1915	1916	1915	1916	1915	1916	1915	1916	1915	1916
Prince Edward Island..	6	6	29	29	6	6	1	1	42	42
Nova Scotia.....	20	21	6	4	-	-	1	1	27	26
New Brunswick.....	18	18	23	23	2	2	-	-	43	43
Quebec.....	604	633	935	882	519	463	-	1	2,058	1,984
Ontario.....	163	167	850	847	142	142	9 ₁	9 ₁	1,164	1,165
Manitoba.....	36	36	22	21	-	-	1	1	59	58
Saskatchewan.....	28	32	1	-	-	-	-	-	29	32
Alberta.....	49	48	5	7	8	9	-	-	62	64
British Columbia.....	26	27	1	2	2	3	29	32
Total.....	950	993	1,871	1,813	678	624	14	16	3,513	3,446

PATRONS.

Prince Edward Island..	1,511	1,409	2,488	2,324	-	-	-	-	3,999	3,733
Nova Scotia.....	2,835	3,815	137	76	-	-	-	-	2,972	3,891
New Brunswick.....	1,188	1,211	619	559	84	91	-	-	1,891	1,861
Quebec.....	35,834	37,359	27,775	24,497	21,034	17,133	-	156	84,643	79,145
Ontario.....	37,351	44,367	33,318	34,655	7,401	7,655	-	648	78,070	87,325
Manitoba.....	10,309	10,600	2,000	2,400	-	-	-	-	12,309	13,000
Saskatchewan.....	11,200	12,300	-	-	-	-	-	-	11,200	12,300
Alberta.....	6,500	8,466	89	104	9,822	9,666	-	-	16,411	18,236
British Columbia.....	1,186	1,340	-	-	-	-	255	361	1,441	1,701
Total.....	107,905	120,867	66,426	64,615	38,341	34,545	255	1,165	212,927	221,192

¹Three of these are milk powder factories.

II. Production and Value of Creamery Butter and Factory Cheese, 1915 and 1916.

BUTTER.

Province.	Creameries.		Combined Factories.		Total.		Creameries.		Combined Factories.		Total.	
	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.
	lb.	lb.	lb.	lb.	lb.	lb.	\$	\$	\$	\$	\$	\$
Prince Edward Island.....	539,516	613,880	-	-	539,516	613,880	151,065	184,164	-	-	151,065	184,164
Nova Scotia.....	1,240,483	1,586,679	-	-	1,240,483	1,586,679	346,011	505,000	-	-	346,011	505,000
New Brunswick.....	729,863	664,751	46,553	45,181	776,416	709,932	217,937	221,162	13,901	15,031	231,838	236,193
Quebec.....	28,121,235	29,488,801	8,500,256	4,834,474	36,621,491	34,323,275	8,395,109	9,929,165	2,504,701	1,586,983	10,899,810	11,516,148
Ontario.....	25,022,550	23,417,377	1,391,561	1,262,732	26,414,120	24,680,109	7,130,403	7,637,796	404,250	394,201	7,534,653	8,031,997
Manitoba.....	5,839,667	6,574,510	-	-	5,839,667	6,574,510	1,693,503	2,038,109	-	-	1,693,503	2,038,109
Saskatchewan.....	3,811,014	4,310,669	-	-	3,811,014	4,310,669	1,055,000	1,338,180	-	-	1,055,000	1,338,180
Alberta.....	3,221,964	4,275,760	4,322,184	4,246,024	7,544,148	8,521,784	891,647	1,323,152	1,129,801	1,296,096	2,021,448	2,619,248
British Columbia.....	1,204,598	1,243,292	-	-	1,204,598	1,243,292	451,724	497,316	-	-	451,724	497,316
Total.....	69,730,899	72,175,719	14,260,554	10,388,411	83,991,453	82,564,130	20,332,399	23,674,044	4,052,653	3,292,311	24,385,052	26,966,355

CHEESE.

Province.	Cheese Factories.		Combined Factories.		Total.		Cheese Factories.		Combined Factories.		Total.	
	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.	1915.	1916.
	lb.	lb.	lb.	lb.	lb.	lb.	\$	\$	\$	\$	\$	\$
Prince Edward Island.....	2,260,000	2,121,736	-	-	2,260,000	2,121,736	327,700	409,495	-	-	327,700	409,495
Nova Scotia.....	125,580	94,727	-	-	125,580	94,727	18,837	17,051	-	-	18,837	17,051
New Brunswick.....	1,086,413	1,067,068	79,238	118,596	1,165,651	1,185,664	156,660	189,618	11,426	21,075	168,086	210,693
Quebec.....	34,832,111	38,069,681	10,285,002	23,847,069	54,217,113	61,906,750	4,898,358	6,873,544	2,673,333	4,371,560	7,571,691	11,245,104
Ontario.....	100,676,000	101,535,235	24,325,136	24,490,635	125,001,136	126,015,870	15,124,100	18,784,018	3,707,313	4,528,917	18,831,413	23,312,935
Manitoba.....	726,725	880,728	-	-	726,725	880,728	109,008	158,931	-	-	109,008	158,931
Alberta.....	90,690	135,435	290,942	609,687	381,632	745,122	14,691	24,728	53,750	129,725	68,441	154,453
British Columbia.....	-	-	10,000	18,000	10,000	18,000	-	-	2,000	3,960	2,000	3,960
Total.....	139,897,519	143,894,610	43,990,318	49,073,987	183,887,837	192,968,597	20,649,354	26,457,385	6,447,822	9,055,237	27,097,176	35,512,622

ESTABLISHMENTS, PATRONS AND DELIVERIES OF MILK AND CREAM.

The total number of creameries and factories operating in 1916 is reported as 3,446, including 993 creameries, 1,813 cheese factories, 624 combined factories (butter and cheese) and 16 condensed milk factories. The total number of patrons (i.e., dairy farmers contributing milk or cream) in 1916 was 221,192. The total deliveries in 1916 of milk amounted to 2,600,542,987 lb., and of cream to 157,620,636 lb.

The two chief dairying provinces of the Dominion are Ontario and Quebec. Both manufacture cheese and butter: in Ontario more cheese is made than butter; in Quebec more butter is made than cheese. In Ontario the total number of establishments operating in 1916 was 1,165, and the patrons numbered 87,325, whilst in Quebec the establishments numbered 1,984 and the patrons 79,145; so that the average number of patrons per establishment was 75 in Ontario and 40 in Quebec.

PRODUCTION OF CREAMERY BUTTER.

The total production of creamery butter in Canada in 1916 is returned as 82,564,130 lb. of the value of \$26,966,355, as compared with 83,991,453 lb. of the value of \$24,385,052 in 1915. Comparing the relative production of the provinces the production in 1916 is highest in Quebec with 34,323,275 lb. of the value of \$11,516,148, as compared with 24,680,109 lb. of the value of \$8,031,997 in Ontario. These two provinces together produce about 70 p.c. of the total creamery butter of Canada. Of the other provinces the production and value of creamery butter in 1916 were in relative order as follows: Alberta 8,521,784 lb., value \$2,619,248; Manitoba 6,574,510 lb., value \$2,038,109; Saskatchewan 4,310,669 lb., value \$1,338,180; Nova Scotia 1,586,679 lb., value \$505,000; British Columbia 1,243,292 lb., value \$497,316; New Brunswick 709,932 lb., value \$236,193; and Prince Edward Island 613,880 lb., value \$184,164. The average price per lb. of creamery butter for all Canada works out to 33 cents in 1916 as compared with 30 cents in 1915. By provinces in 1916 the highest price was in British Columbia, 42 cents, and the lowest in Prince Edward Island, 30 cents. In the other provinces the price per lb. for 1916 was as follows: Nova Scotia, 32 cents; New Brunswick, 33 cents; Quebec, 34 cents; Ontario, 33 cents; the prairie provinces, 31 cents.

PRODUCTION OF FACTORY CHEESE.

The total production of factory cheese in 1916 was 192,968,597 lb. of the value of \$35,512,622, as compared with 183,887, 837 lb. of the value of \$27,097,176 in 1915. By provinces the lead in production is taken by Ontario with a total quantity in 1916 of 126,015,870 lb. of the value of \$23,312,935, Quebec being second with 61,906,750

lb. of the value of \$11,245,104. These two provinces together account for 98 p.c. of the total production of factory cheese. The production and value of factory cheese in the other provinces in 1916 were as follows: Prince Edward Island 2,121,736 lb., value \$409,495; New Brunswick 1,185,664 lb., value \$210,693; Manitoba, 880,728 lb., value \$158,931; Alberta 745,122 lb., value \$154,453; Nova Scotia 94,727 lb., value \$17,051; and British Columbia 18,000 lb., value \$3,960. The average price per lb. of factory cheese for all Canada works out to 21 cents in 1916 as compared with 17 cents in 1915. In 1916 the average price is highest in British Columbia, 25 cents. In Quebec and Ontario the average price is 18 cents and in Alberta it is 21 cents.

COMPARATIVE STATISTICS OF THE PRODUCTION AND VALUE OF CREAMERY BUTTER AND FACTORY CHEESE.

In Table III the production and value of creamery butter and factory cheese for all Canada is compared for the years 1900, 1907, 1910, 1915 and 1916: for 1900 and 1910 the figures shown are those of the decennial census; for 1907 they are those of the special postal census of that year and for 1915 and 1916 they are compiled from the returns of the provincial Departments of Agriculture as in Tables I. and II.

III. Production and Value of Creamery Butter and Factory Cheese, 1900-07-10-15-16.

Year.	Establishments.	Creamery Butter.		Factory Cheese.	
		lb.	\$	lb.	\$
1900.....	3,576	36,066,739	7,240,972	220,833,269	22,221,430
1907.....	3,515	45,930,294	10,949,062	204,788,583	23,597,639
1910.....	3,625	64,698,165	15,645,845	199,904,205	21,587,124
1915.....	3,513	83,991,453	24,385,052	183,887,837	27,097,177
1916.....	3,446	82,564,130	26,966,355	192,968,597	35,512,622

TOTAL DAIRY PRODUCTION OF CANADA.

The statistics given above relate solely to the production of butter in creameries and of cheese in factories. They do not include butter made on the farm, which is sold under the general term of "dairy butter" and which constitutes the larger proportion of the total production. Nor do they include the small proportion of home-made cheese. There are no annual statistics of the production of home-made butter and cheese; but the Census of 1911 showed that in 1910 the total production of home-made butter was 137,110,200 lb., or 68 per cent of the total butter production, viz., 201,808,365 lb., and that for cheese in the same year the home-made produc

amounted to 1,371,092 lb., or 0.7 per cent of the total cheese production of 201,275,297 lb.

Under these conditions the total dairying output of Canada in other than census years can only be a matter of approximate calculation, based on the estimated number of milch cows, the factory production of butter and cheese and the exports and imports of all dairy products. In 1915 the estimated number of milch cows in Canada was 2,666,846 and in 1916 it was 2,608,345. In 1911 the Census showed that the average production of milk per cow was 3,805 lb., or, at the rate of 10 lb. per gallon, 380½ gallons. If we apply this average to the two years 1915 and 1916, we get a total milk production in the former year of 10,147,349,000 lb., and in the latter year of 9,924,752,700 lb. If it be assumed that (1) the estimates of the number of milch cows in Canada and (2) the average milk production per cow are approximately correct, we get results showing the total production of milk and its distribution in the form of dairying products for each of the two years 1915 and 1916 as set out in Table IV.

IV. Estimated Yield of Milk and Distribution of Dairy Products, 1915 and 1916.

EXPRESSED IN LB. OF MILK ("000" omitted).

Items.	1915.	1916.	1915.	1916.
Total Yield of Milk			10,147,349	9,924,753
Imports—				
Condensed milk.....	246	277		
Milk and cream, fresh.....	132	271		
Butter.....	130,205	48,111		
Cheese.....	12,095	7,985	142,678	56,644
			10,290,027	9,981,397
Distribution—				
Creamery butter.....	1,931,803	1,898,975		
Home-made butter.....	4,101,956	4,035,325		
Total butter.....	6,033,759	5,934,300		
Factory cheese.....	1,930,822	2,026,170		
Home-made cheese.....	19,483	20,466		
Total cheese.....	1,950,305	2,046,636		
Condensed milk, etc.....	120,000	120,000		
Exports of fresh cream.....	129,867	82,000		
Exports of fresh milk.....	4,220	7,370	8,238,151	8,190,306
Balance consumed as whole milk, ice cream, etc.....			2,051,576	1,791,091

In this table the quantities are expressed in terms of milk by weight. Butter, cheese, cream and condensed milk or cream have been converted into lb. of milk by the application in each case of recognized average formulæ. The quantities of home-made butter

and cheese have been estimated on the census basis that 68 per cent of the total represents home-made butter and that 1 per cent of the total represents home-made cheese.

CONSUMPTION OF WHOLE MILK.

After adding to the estimated production the imports of condensed milk, milk, cream, butter and cheese, and taking also into account the exports of milk and cream, for the calendar years 1915 and 1916, there remains a surplus for 1915 of 2,051,576,000 lb., and for 1916 of 1,791,091,000 lb. Estimating the population of Canada to be for both years eight millions, and that on the average 10 lb. of milk equal one gallon, the results obtained indicate an average per capita consumption of whole milk of 25.65 imperial gallons per annum, or 0.56 pint per diem in 1915 and 22.40 gallons per annum or 0.49 pint per diem in 1916. Thus, the calculations made from the available data tend to show that the daily consumption of whole milk in Canada is about half a pint for each person. This ration includes also ice cream, a certain unknown quantity of milk used for calf rearing, and milk used for all other purposes apart from those indicated in Table IV.

In this general connection it is of interest to compare the estimates of the whole milk consumption in Canada with those of the United States and of the United Kingdom. In the United States the average consumption in 1900 was placed at 25 imperial gallons per annum, or 0.56 pint per diem—a figure exactly equivalent to that of Canada as now given for 1915, and in the United Kingdom an estimate of 1904 placed the per capita consumption at 15 gallons per annum, or 0.33 pint per diem¹. For 1915 the average per capita consumption of whole milk in large cities of the United States is estimated at 0.60 pint per diem. There is little doubt that the larger per capita consumption of milk on this side of the Atlantic is due to the greater partiality for ice cream.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

¹Observations on the Production and Consumption of Meat and Dairy Products. By R. H. Rew, Journal of the Royal Statistical Society, London, England, Vol. LXVII, Part III, Sept. 30, 1904, pp. 413-429.

I. Weekly Range of Cash Prices per Bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	July 7.		July 14.		July 21.		July 28.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	2 20	— 2 30	2 28	— 2 40	2 40	— 2 48	2 34	— 2 40
No. 2 Nor.....	2 17	— 2 27	2 25	— 2 37	2 37	— 2 45	2 31	— 2 37
No. 3 Nor.....	2 12	— 2 22	2 20	— 2 34	2 32	— 2 42	2 26	— 2 32
No. 4.....	2 00	— 2 10	2 08	— 2 22	2 20	— 2 30	2 14	— 2 20
No. 5.....	1 76	— 1 85	1 83	— 1 99	1 95	— 2 07	1 89	— 1 95
No. 6.....	1 59	— 1 70	1 68	— 1 80	1 80	— 1 88	1 59	— 1 80
Feed.....	1 19	— 1 27	1 27	— 1 37	1 38	— 1 50	1 50	— 1 54
Oats—								
No. 2 C.W.....	0 72½	— 0 74½	0 72½	— 0 75½	0 73½	— 0 79½	0 78½	— 0 79½
No. 3 C.W.....	0 71½	— 0 73½	0 72½	— 0 74½	0 72½	— 0 77½	0 77	— 0 78
No. 1 Feed Ex.....	0 71½	— 0 73½	0 72½	— 0 74½	0 72½	— 0 77½	0 76½	— 0 78
No. 1 Feed.....	0 70	— 0 72	0 71	— 0 73½	0 70½	— 0 75½	0 74	— 0 76
No. 2 Feed.....	0 68½	— 0 70½	0 69	— 0 71½	0 68½	— 0 74½	0 71½	— 0 74½
Barley—								
No. 3 C.W.....	1 25	— 1 26	1 26	— 1 31	1 24	— 1 27	1 25	— 1 27
No. 4 C.W.....	1 20	— 1 22	1 22	— 1 26	1 21	— 1 22½	1 20	— 1 22½
Rejected.....	1 10	— 1 11	1 10	— 1 14	1 10	— 1 11	1 10	— 1 11
Feed.....	1 10	— 1 11	1 10	— 1 14	1 10	— 1 11	1 10	— 1 11
Flax—								
No. 1 N.W.C.....	2 53	— 2 65	2 58½	— 2 89½	2 90½	— 2 93	2 95½	— 3 15
No. 2 C.W.....	2 49½	— 2 61½	2 55	— 2 85½	2 86½	— 2 89	2 91½	— 3 12
No. 3 C.W.....	2 34½	— 2 46½	2 40	— 2 70½	2 71½	— 2 74	2 77	— 2 98

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	April.		May.		June.		July.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 16	— 1 30½	1 22	— 1 24	2 22	— 2 98	2 10	— 2 73
Chicago.....	1 17	— 1 25½	1 22½	— 1 22½	2 24	— 3 07	2 11	— 2 66
New York (f.o.b. afloat).....	1 25½	— 1 35½	1 29	— 1 31½	—	—	—	—
Corn, No. 2, mixed—								
St. Louis.....	0 73½	— 0 76	0 76	—	1 55	— 1 75½	1 77	— 2 31
New York (f.o.b. afloat).....	0 83½	— 0 86½	0 86	— 0 86½	1 66½	— 1 90½	1 90	— 2 40
Corn, No. 2—								
Chicago.....	0 74½	— 0 79	0 77½	— 0 78½	1 58	— 1 76	1 77½	— 2 32
Oats, No. 2—								
St. Louis.....	0 42½	— 0 45	0 43½	—	0 63	— 0 72	0 71	— 0 83½
Chicago.....	0 44½	— 0 47	0 45½	— 0 46	0 62	— 0 69	0 68½	— 0 85
Rye, No. 2—								
Chicago.....	0 94	— 0 97½	0 97	— 0 97½	2 34	— 2 40	2 10	— 2 43

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	July 2.		July 9.		July 16.		July 23.		July 30.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	2 62	—	2 62	—	—	—	—	—	—	—
“ No. 2.....	2 56	—	2 56	—	—	—	—	—	—	—
“ No. 3.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—	2 47½	—
“ No. 4.....	2 38½	—	2 38½	—	2 38½	—	2 38½	—	2 38½	—
“ Feed.....	2 17½	—	2 15½	—	—	—	—	—	—	—
American—										
Omaha Cert.....	2 51½	—	2 51½	—	2 51½	—	2 51½	—	2 51½	—
Montana Cert.....	2 54½	—	2 54½	—	2 54½	—	2 54½	—	2 54½	—
Red winter Western.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—	2 47½	—
Red winter common.....	2 38½	—	2 38½	—	2 38½	—	2 38½	—	2 38½	—
Argentine.....	2 47½—2 53½		2 47½—2 53½		2 47½—2 53½		2 47½—2 53½		2 47½—2 53½	
Australian.....	2 53½	—	2 59	—	2 53½	—	2 53½	—	2 53½	—
Indian.....	2 70½—2 73½		2 69½—2 70½		2 69½—2 70½		2 69½	—	2 69½	—
Californian.....	2 62	—	2 62	—	2 62	—	2 62	—	2 62	—
Oats (per bush.)—										
Canadian.....	1 73½—1 75½		1 68—1 70½		1 68—1 70½		1 65½—1 68		1 65½—1 68	
American.....	1 70½—1 73½		1 65½—1 68		1 65½—1 68		1 62½—1 65½		1 62½—1 65½	
Chilian.....	1 73½—1 75½		1 70½—1 73½		1 70½—1 73½		1 68—1 70½		1 65½—1 75½	
Flour (per 280 lb.)—										
Canadian good.....	19 47—19 95		19 47—19 95		19 47—19 95		19 71—20 20		19 47—19 95	
“ first bakers’.....	18 25—18 74		18 25—18 74		18 25—18 74		18 74—18 98		18 74—18 98	
“ common.....	17 76—18 00		17 76—18 00		17 76—18 00		18 00—18 25		18 00—18 25	
American spring good.....	19 47—20 20		19 47—20 20		19 47—20 20		19 47—20 20		19 47—20 20	
“ spring common.....	18 49—18 74		18 49—18 74		18 49—18 74		18 49—18 74		18 49—18 74	
Kansas.....	19 71—19 95		17 76—20 20		17 76—20 20		17 76—20 20		18 49—20 20	
Australian.....	19 22—19 95		19 22—19 95		19 95—20 44		19 95—20 44		19 71—23 20	
Japanese.....	18 49—18 74		18 25—18 49		18 49—18 74		18 49—18 74		18 25—18 49	

LIVERPOOL.

Description.	July 3.		July 10.		July 17.		July 24.		July 31.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 3 old....	—	—	—	—	—	—	2 50	—	2 50	—
Nor. Man. No. 4 old....	2 39—2 40½		2 41—2 42		2 41—2 42		2 41—2 42		2 41—2 42	
Nor. Man. No. 5 old....	—	—	2 28½	—	—	—	—	—	—	—
Nor. Duluth.....	—	—	—	—	—	—	2 46½	—	2 46½	—
No. 4 Hard winter.....	—	—	2 40½	—	2 40½	—	2 41	—	2 41	—
No. 3 mixed winter.....	—	—	—	—	2 45½	—	2 45½	—	2 45½	—
No. 4 mixed winter.....	—	—	—	—	—	—	2 41	—	2 42	—
Oats (per bush.)—										
Canadian.....	1 62½—1 67		1 56½—1 57½		1 57½—1 60½		1 56½—1 59½		1 60½—1 64	
American.....	1 60½—1 63½		1 56½—1 59½		1 54½—1 57½		1 51½—1 53½		1 54½—1 57½	
Chilian white.....	—	—	1 65½	—	—	—	—	—	—	—
Chilian tawny.....	1 64—1 65½		1 57½—1 59½		1 54½—1 57½		1 50½—1 51		1 51½—1 56½	
Flour (per 280 lb.)—										
Manitoba.....	22 75—22 99		22 51—22 75		—	—	—	—	—	—
Kansas.....	22 75—22 99		22 51—22 75		—	—	—	—	—	—

IV. Average Prices of British-grown Grain, 1917.

Week ended.	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
	s. d.	\$ cts.	s. d.	\$ cts.	s. d.	\$ cts.
July 7.....	78 1	2.375	69 5	2.027	55 2	1.462
" 14.....	78 2	2.378	70 10	2.068	55 1	1.459
" 21.....	78 3	2.380	72 1	2.105	55 2	1.462
" 28.....	78 3	2.380	65 7	1.915	55 2	1.462
Average.....	78 2	2.379	69 6	2.029	55 2	1.461

AREAS OF FIELD CROPS IN PRAIRIE PROVINCES,
1916.

The following is the finally revised statement of the areas under field crops in the Prairie Provinces in the year 1916, as returned by the Census of June 1, 1916:

Field Crops.	Manitoba.	Saskatchewan.	Alberta.	Totals for the three Provinces.
	acres.	acres.	acres.	acres.
Grains—				
Fall wheat.....	3,829	15,258	18,177	37,264
Spring wheat.....	2,717,111	9,016,851	2,586,798	4,320,810
All wheat.....	2,720,990	9,032,109	2,604,975	14,358,074
Barley.....	687,080	367,207	336,586	1,390,873
Oats.....	1,441,246	3,791,807	2,124,081	7,357,134
Rye.....	30,050	22,759	17,975	70,784
Corn.....	342	461	209	1,012
Buckwheat.....	388	95	62	545
Beans.....	37	36	38	111
Peas.....	374	1,627	644	2,645
Flax.....	15,084	542,034	95,063	652,781
Mixed grains.....	1,356	14,147	4,533	20,036
Forage crops—				
Hay.....	76,932	25,154	173,461	275,547
Alfalfa.....	4,422	3,086	20,612	28,120
Millet.....	2,392	1,824	1,162	5,378
Corn.....	9,830	2,253	675	12,758
Grain cut green.....	69,071	111,696	87,827	268,594
Other.....	12,967	8,468	7,053	28,488
Food crops—				
Potatoes.....	31,515	46,989	29,216	107,720
Turnips.....	1,075	1,054	1,130	3,259
Mangolds.....	402	189	272	863
Onions.....	168	47	36	251
Sugar beets.....	266	227	65	558
Other.....	1,168	104	197	1,469
Total crop area.....	5,107,755	13,973,373	5,505,872	24,587,000

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended August 31, 1917.

This report gives a preliminary estimate of the production in Canada of the principal grain crops (wheat, oats, rye, barley and flaxseed) for 1917, as compared with the final returns of 1916, as well as a statement of the condition of all field crops compiled from the returns of crop correspondents at the end of August. For Quebec, Saskatchewan, Alberta and British Columbia, the areas under field crops in 1917, used as a basis for the estimates of production, have been compiled from returns collected from individual farmers under arrangements carried out jointly by the Census and Statistics Office and the provincial Departments of Agriculture. The recent completion of the compilation of the returns collected by the agricultural census of the Prairie Provinces, taken in 1916, allows of the inclusion of the finally revised census figures for wheat, oats, barley, rye and flax for the year 1916, which are therefore given in Table I for purposes of comparison. The total yields of these crops for 1916 are estimated by application to the acreage of average yields per acre which were specially collected from 5,000 farmers in the Prairie Provinces after the close of the season. The result is an increase over previous estimates in the case of wheat, oats, barley and flaxseed, but a decrease in the case of rye. For wheat, the difference between the previous estimate and that now given in Table I is largely due to the fact that the former was based on the total yield of the area harvested, after deduction of areas affected by rust and hail, whereas the latter are based upon average yields per sown acre which, it is believed, allow for the losses thus occasioned. For the year 1917 the same procedure is followed, the total yields being based upon the sown acreage; but in a separate statement (Table II) an estimate is given of the areas which failed to produce grain owing to late seeding and subsequent drought. This statement applies only to oats, and is compiled from the returns of crop correspondents.

ESTIMATE OF TOTAL YIELDS OF GRAIN CROPS, 1916 AND 1917.

The preliminary estimate of this year's wheat crop in Canada is for a total of 249,147,500 bushels from 14,755,800 acres sown, as compared with 262,781,000 bushels from 15,369,709 acres sown in 1916, a decrease of total yield in 1917 of 13,633,500 bushels, or about 5 p.c. The average yields per acre are 16.79 bushels in 1917, as compared with 17.10 bushels in 1916. The total yield of oats in 1917 is estimated to be 439,823,100 bushels from 13,313,700 acres, as compared with 410,211,000 bushels from 10,996,487 sown acres in 1916, an increase of total yield in 1917 of 29,612,100 bushels, or

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about 7 p.c. The average yield per acre is 33 bushels in 1917, as against 37.30 bushels in 1916. For rye the estimate is 4,194,950 bushels from 211,870 acres, as compared with 2,876,400 bushels from 148,400 acres in 1916, the yield per acre being 19.80 bushels in 1917, as compared with 19.38 bushels in 1916. Barley yields 59,310,650 bushels from 2,392,200 acres, as against 42,770,000 bushels from 1,802,996 acres in 1916, the yields per acre being 24.80 and 23.72 bushels respectively. The total yield of flaxseed is placed at 7,455,470 bushels from 919,500 sown acres, as compared with 8,259,800 bushels from 657,781 sown acres in 1916, the average yield per acre being 8.11 bushels in 1917 and 12.56 bushels in 1916.

GRAIN YIELDS OF THE PRAIRIE PROVINCES.

The estimated total production of wheat in the three Prairie Provinces (Manitoba, Saskatchewan and Alberta) is 225,778,700 bushels from 13,619,370 acres, as compared with 242,314,000 bushels from 14,362,809 acres in 1916. In Manitoba the total yield of wheat for 1917 is 41,642,200 bushels, as compared with 29,667,000 bushels in 1916, in Saskatchewan 130,356,000 bushels as against 147,559,000 bushels and in Alberta 53,780,500 bushels against 65,088,000 bushels. Oats yield 268,189,350 bushels in the three Prairie Provinces, as compared with 313,916,000 bushels in 1916, barley 43,168,400 bushels against 33,419,000 bushels, rye 2,498,850 bushels against 1,545,000 bushels and flaxseed 7,339,470 bushels as against 8,212,500 bushels.

CONDITION OF FIELD CROPS.

At the end of August the condition of field crops for Canada, expressed in percentage of a standard representing a full crop, was as follows: Spring wheat 73, oats 76, barley 75, rye 82, peas 76, beans 81, buckwheat 85, mixed grains 88, flax 63, corn for husking 73, potatoes 77, turnips 84, mangolds, etc., 83, alfalfa 87, corn for fodder 81, sugar beets 89, pasture 87 and hay and clover 95. The figures by provinces are given in Table IV.

Census and Statistics Office,
Ottawa, September 19, 1917.

ERNEST H. GODFREY,
Editor.

I. Preliminary Estimate of the yield of Wheat, Oats, Barley, Rye and Flax, August 31, 1917, as compared with Estimate of 1916.

Field Crops.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	bush. per acre.	bush. per acre.	* bush.	bush.
Canada—						
Fall wheat.....	818,264	725,250	21.50	22.11	17,590,000	16,034,000
Spring wheat.....	14,551,445	14,030,550	16.85	16.61	245,191,000	233,113,500
All wheat.....	15,369,709	14,755,800	17.10	16.79	262,781,000	249,147,500
Oats.....	10,996,487	13,313,700	37.30	33.00	410,211,000	439,823,100
Barley.....	1,802,996	2,392,200	23.72	24.80	42,770,000	59,310,650
Rye.....	148,404	211,870	19.38	19.80	2,876,400	4,194,950
Flax.....	657,781	919,500	12.56	8.11	8,259,800	7,455,470

I. Preliminary Estimate of the yield of Wheat, Oats, Barley, Rye and Flax, August 31, 1917, as compared with Estimate of 1916.—con.

Field Crops.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	bush per acre.	bush. per acre.	bush.	bush.
P. E. Island—						
Wheat.....	34,500	36,100	16.75	14.90	578,000	536,000
Oats.....	199,000	201,100	37.25	36.25	7,413,000	7,286,000
Barley.....	3,600	3,500	29.25	28.50	105,000	100,000
Nova Scotia—						
Wheat.....	13,400	16,200	19.50	19.50	261,000	316,000
Oats.....	116,000	123,000	34.75	32.25	4,031,000	3,967,000
Barley.....	4,700	4,800	26.25	28.00	123,000	134,000
Rye.....	320	300	17.00	20.25	5,400	6,100
New Brunswick—						
Wheat.....	14,000	16,000	17.25	16.75	242,000	268,000
Oats.....	198,000	190,000	30.50	28.00	6,039,000	5,320,000
Barley.....	1,900	1,800	23.75	24.25	45,000	44,000
Quebec—						
Wheat.....	64,000	277,400	15.00	17.25	960,000	4,785,000
Oats.....	1,073,000	1,492,700	22.75	25.00	24,411,000	37,318,000
Barley.....	72,800	165,600	20.00	22.75	1,456,000	3,767,000
Rye.....	8,300	22,450	14.25	17.75	118,000	398,000
Flax.....	500	5,700	10.50	12.35	5,300	71,000
Ontario—						
Fall wheat.....	774,800	656,500	21.25	22.10	16,465,000	14,515,000
Spring wheat.....	90,200	113,000	16.25	21.25	1,466,000	2,401,000
All wheat.....	865,000	769,500	20.73	21.98	17,931,000	16,916,000
Oats.....	1,991,000	2,687,000	25.50	42.75	50,771,000	114,869,000
Barley.....	326,000	361,000	23.00	33.00	7,498,000	11,913,000
Rye.....	69,000	68,000	17.50	19.00	1,208,000	1,292,000
Flax.....	4,500	4,000	9.25	11.25	42,000	45,000
Manitoba—						
Fall wheat.....	3,829	3,860	15.93	20.00	61,000	77,200
Spring wheat.....	2,721,896	2,445,000	10.88	17.00	29,606,000	41,565,000
All wheat.....	2,725,725	2,448,860	10.88	17.00	29,667,000	41,642,200
Oats.....	1,443,599	1,500,000	33.55	32.25	48,439,000	48,375,000
Barley.....	687,503	708,000	19.97	22.75	13,729,000	16,107,000
Rye.....	30,050	37,000	18.54	18.75	557,000	694,000
Flax.....	15,684	16,300	13.38	9.25	210,000	151,000
Saskatchewan—						
Fall wheat.....	15,258	10,000	21.24	21.00	324,000	210,000
Spring wheat.....	9,016,851	8,263,250	16.33	15.75	147,235,000	130,146,000
All wheat.....	9,032,109	8,273,250	16.34	15.75	147,559,000	130,356,000
Oats.....	3,791,807	4,521,600	43.06	29.25	163,278,000	132,256,800
Barley.....	367,207	669,900	27.00	22.25	9,916,000	14,905,000
Rye.....	22,759	53,250	24.08	21.00	548,000	1,118,000
Flax.....	542,034	753,700	12.35	8.10	6,692,000	6,104,970
Alberta—						
Fall wheat.....	18,177	51,660	30.20	22.00	549,000	1,136,500
Spring wheat.....	2,586,798	2,845,600	24.95	18.50	64,539,000	52,644,000
All wheat.....	2,604,975	2,897,260	24.99	18.50	65,088,000	53,780,500
Oats.....	2,124,081	2,537,900	48.11	34.50	102,199,000	87,557,550
Barley.....	336,586	472,100	29.04	25.75	9,774,000	12,156,400
Rye.....	17,975	30,870	24.49	22.25	440,000	686,850
Flax.....	95,063	139,800	13.79	7.75	1,310,500	1,083,500
British Columbia—						
Fall wheat.....	6,200	3,230	30.75	29.50	191,000	95,300
Spring wheat.....	9,800	18,100	31.00	25.00	304,000	452,500
All wheat.....	16,000	21,330	30.94	25.75	495,000	547,800
Oats.....	60,000	60,500	60.50	47.50	3,630,000	2,873,750
Barley.....	2,700	5,500	45.75	33.50	124,000	184,250

NOTE.—The differences between the areas under field crops in 1916 and 1917 for the province of Quebec are due rather to improvement in the methods of collection than to actual increases in 1917 as compared with 1916.

ESTIMATE OF UNPRODUCTIVE AREAS.

Owing to the late spring and to drought during the summer, certain areas sown to oats in the Prairie Provinces and in British Columbia failed to produce grain, the crops being either totally destroyed or cut green. According to the reports made by crop correspondents to the Census and Statistics Office at the end of August, the areas sown to oats, which were thus estimated to be unproductive of grain, are as shown in Table II. The table shows that of the total area sown to oats in these four provinces, viz., 8,620,000 acres, 573,100 acres, or $6\frac{1}{2}$ p.c., were totally destroyed, and that 788,600 acres, or 9 p.c., were cut green, making the total area unproductive of grain to be 1,361,700 acres, or $15\frac{1}{2}$ p.c., and leaving 7,258,300 acres as the area to be harvested. These are preliminary estimates, and are subject to revision after the receipt of later reports.

II. Estimates of Areas sown to Oats either totally Unproductive or Cut Green, 1917.

Provinces.	Area sown.		Total loss.		Cut green.		Area not producing grain.		Harvested area.
	acres.	p.c.	acres.	p.c.	acres.	p.c.	acres.	acres.	
Manitoba.....	1,500,000	4	68,000	6	88,000	10	154,000	1,346,000	
Saskatchewan.....	4,521,600	6	289,400	11	479,300	17	768,700	3,752,900	
Alberta.....	2,537,900	8	215,700	9	215,800	17	431,500	2,106,400	
British Columbia.....	60,500	—	—	12	7,500	12	7,500	53,000	
Total.....	8,620,000	6½	573,100	9	788,600	15½	1,361,700	7,258,300	

III. Preliminary Estimate of the Area and Yield of Wheat, Oats, Barley, Rye and Flax in the three Prairie Provinces, August 31, 1917, compared with 1916.

Field Crops.	1916.	1917.	1916.	1917.
	acres.	acres.	bush.	bush.
Fall wheat.....	37,264	65,520	934,000	1,423,700
Spring wheat.....	14,325,545	13,553,850	241,380,000	224,355,000
All wheat.....	14,362,809	13,619,370	242,314,000	225,778,700
Oats.....	7,359,487	8,559,500	313,916,000	268,189,350
Barley.....	1,391,296	1,850,000	33,419,000	43,168,400
Rye.....	70,784	121,120	1,545,000	2,498,850
Flax.....	652,781	909,800	8,212,500	7,339,470

IV. Comparative Condition of Field Crops, August 31, 1914-17.

NOTE—100=Standard or full crop.

Field Crops.	1914	1915	1916	1917	Field Crops.	1914	1915	1916	1917
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada—					New Brunswick—con.				
Spring wheat.....	75	93	69	73	Peas.....	88	87	89	89
Oats.....	76	92	74	76	Beans.....	86	78	76	84
Barley.....	74	92	73	75	Buckwheat.....	93	81	84	99
Rye.....	79	91	80	82	Mixed grains.....	91	92	93	86
Peas.....	74	81	68	76	Potatoes.....	93	81	84	80
Beans.....	82	81	75	81	Turnips.....	85	92	89	92
Buckwheat.....	80	81	75	85	Mangolds, carrots, etc.....	89	92	90	95
Mixed grains.....	87	92	75	88	Alfalfa.....	—	—	62	58
Flax.....	63	85	76	63	Corn for fodder.....	74	88	88	78
Corn for husking.....	78	79	67	73	Sugar beets.....	89	89	98	91
Potatoes.....	76	82	72	77	Pasture.....	84	95	88	99
Turnips.....	78	88	77	84	Hay and clover.....	88	93	115	103
Mangolds, carrots, etc.....	78	88	78	83	Quebec—				
Alfalfa.....	72	89	94	87	Spring wheat.....	86	90	75	77
Corn for fodder.....	85	83	77	81	Oats.....	89	90	69	80
Sugar beets.....	79	87	76	89	Barley.....	87	91	73	78
Pasture.....	67	89	86	87	Rye.....	78	89	76	86
Hay and clover.....	71	71	103	95	Peas.....	78	86	67	76
P. E. Island—					Beans.....	79	81	80	78
Spring wheat.....	100	98	78	79	Buckwheat.....	76	75	78	81
Oats.....	101	97	90	86	Mixed grains.....	87	91	76	83
Barley.....	96	95	93	88	Flax.....	71	79	73	48
Peas.....	95	93	88	90	Corn for husking.....	75	79	76	73
Beans.....	94	92	84	89	Potatoes.....	84	80	65	75
Buckwheat.....	95	93	90	94	Turnips.....	79	85	77	85
Mixed grains.....	100	101	95	92	Mangolds, carrots, etc.....	78	82	77	84
Flax.....	88	100	94	92	Alfalfa.....	70	80	92	91
Potatoes.....	100	86	96	98	Corn for fodder.....	83	83	82	84
Turnips.....	98	95	87	98	Sugar beets.....	80	88	80	85
Mangolds, carrots, etc.....	95	97	93	96	Pasture.....	70	73	87	21
Alfalfa.....	80	103	100	80	Hay and clover.....	73	75	103	102
Corn for fodder.....	86	85	88	91	Ontario—				
Sugar beets.....	92	90	88	96	Spring wheat.....	80	94	68	90
Pasture.....	90	94	85	92	Oats.....	84	89	63	94
Hay and clover.....	93	101	95	86	Barley.....	83	91	60	92
Nova Scotia—					Rye.....	80	91	74	83
Spring wheat.....	97	92	95	86	Peas.....	66	77	55	77
Oats.....	94	95	95	87	Beans.....	81	72	61	79
Barley.....	94	94	93	96	Buckwheat.....	74	83	62	85
Rye.....	89	85	93	33	Mixed grains.....	86	91	60	94
Peas.....	93	92	91	85	Flax.....	81	85	64	88
Beans.....	92	86	86	88	Corn for husking.....	81	81	50	63
Buckwheat.....	95	91	89	88	Potatoes.....	83	78	38	87
Mixed grains.....	99	96	98	90	Turnips.....	81	87	55	89
Flax.....	100	88	100	100	Mangolds, carrots, etc.....	82	90	61	88
Potatoes.....	99	85	94	89	Alfalfa.....	71	91	97	94
Turnips.....	96	96	90	93	Corn for fodder.....	89	89	64	77
Mangolds, carrots, etc.....	96	92	88	89	Sugar beets.....	82	90	59	85
Alfalfa.....	88	79	105	100	Pasture.....	56	97	66	87
Corn for fodder.....	89	92	91	90	Hay and clover.....	60	78	108	98
Sugar beets.....	93	93	91	87	Manitoba—				
Pasture.....	87	98	91	92	Spring wheat.....	62	94	37	70
Hay and clover.....	79	107	107	84	Oats.....	55	89	73	62
New Brunswick—					Barley.....	51	91	64	62
Spring wheat.....	93	89	88	73	Rye.....	72	94	87	73
Oats.....	95	92	90	77	Peas.....	59	85	58	40
Barley.....	91	92	88	81	Beans.....	68	—	72	85
Rye.....	—	85	100	73	Mixed grains.....	48	90	98	78

IV. Comparative Condition of Field Crops, August 31, 1914-17—con.

NOTE—100=Standard or full crop.

Field Crops.	1914	1915	1916	1917	Field Crops.	1914	1915	1916	1917
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Manitoba—con.					Alberta—con.				
Flax.....	64	81	70	66	Barley.....	69	98	77	64
Potatoes.....	70	77	84	73	Rye.....	78	97	87	81
Turnips.....	62	73	86	77	Peas.....	65	88	82	76
Mangolds, carrots, etc...	55	73	89	78	Beans.....	67	91	88	81
Alfalfa.....	73	74	94	67	Mixed grains.....	78	93	81	82
Corn for fodder.....	79	52	96	72	Flax.....	58	95	80	56
Sugar beets.....	69	63	87	90	Potatoes.....	72	95	85	72
Pasture.....	60	66	92	61	Turnips.....	71	96	91	51
Hay and clover.....	62	64	101	58	Mangolds, carrots, etc...	73	98	93	46
Saskatchewan—					Alfalfa.....	77	98	84	67
Spring wheat.....	59	93	61	66	Corn for fodder.....	75	93	89	78
Oats.....	50	90	79	56	Sugar beets.....	73	96	100	78
Barley.....	48	92	81	62	Pasture.....	82	98	106	81
Rye.....	69	93	92	81	Hay and clover.....	80	99	89	82
Peas.....	57	96	69	77	British Columbia—				
Beans.....	72	100	43	73	Spring wheat.....	83	92	90	81
Mixed grains.....	59	96	89	58	Oats.....	82	90	93	83
Flax.....	53	88	81	57	Barley.....	90	92	89	80
Potatoes.....	43	86	90	70	Rye.....	90	96	79	90
Turnips.....	44	87	88	69	Peas.....	89	83	95	86
Mangolds, carrots, etc...	44	86	92	71	Mixed grains.....	73	92	90	90
Alfalfa.....	71	83	96	63	Potatoes.....	78	83	87	78
Corn for fodder.....	46	60	88	67	Turnips.....	79	85	84	83
Sugar beets.....	45	79	90	80	Mangolds, carrots, etc...	77	64	88	81
Pasture.....	63	82	96	69	Alfalfa.....	97	95	87	74
Hay and clover.....	78	79	99	70	Sugar beets.....	81	94	86	83
Alberta—					Pasture.....	64	64	80	66
Spring wheat.....	75	98	78	66	Hay and clover.....	89	90	86	83
Oats.....	70	100	79	64					

TELEGRAPHIC CROP REPORTS.

On September 4, 1917, the Census and Statistics Office issued the following special report on the condition of field crops throughout Canada, as compiled from telegrams despatched at the end of August:—

Atlantic Provinces.—In PRINCE EDWARD ISLAND the hay crop was heavier than anticipated. Pests have reduced wheat 20 p.c. below average. Other grains are full crop. Potatoes, except for a few blighted areas, should yield above average. Full crop of roots, vegetables and corn. In NOVA SCOTIA all crops made excellent growth. Labour scarce, haying slow, but hay being stored in good condition. Flax ripening nicely, hemp fair growth, considerable rust. In NEW BRUNSWICK August weather too wet and warm for best crop yields. Wheat and oats below average; potatoes going down with late blight, reducing crop prospects to about 60 p.c. of average yields. Roots promise well. Very heavy hay crop. Pastures good.

Quebec.—RIMOUSKI: Abundant yield of hay; grain and potatoes have fine appearance; plums good, apples small and a month late. LENNOXYVILLE: Considerable hay not cut and much grain ripe, but in bad shape through excessive rainfall. CAP ROUGE: Hay crop heaviest in years, but not yet all in and quality not good owing to frequent rains. All grain much below normal from same cause. Silage corn and potatoes poor; apples only half a crop.

Ontario.—OTTAWA: Harvesting is almost completed, and grain crops are giving a very fair yield; potatoes, roots and corn are doing well; pastures are short. PETERBOROUGH: Wheat, barley and oats yielding high; grain extra good sample; mangolds, turnips and

potatoes doing well; corn large acreage and heavy crop; pastures good; apple crop light. **OSHAWA:** Yield of wheat and oats above average. Lodged oats decrease crop and double labour, otherwise a record crop. Barley average crop; root crops good, corn fair. **HYDE PARK:** Wheat yielding 25 bushels per acre; oats in stook, grain light; barley, grain small, corn late and may not mature; potatoes and roots good. Large acreage of fall wheat will be sown if possible. **PETROLIA:** Ideal harvest weather; all grain crops harvested, except 10 p.c. of oats. Best season for years. Increased acreage being sown to fall wheat.

Manitoba.—**BRANDON:** Dry weather has continued throughout August. Cutting completed, threshing begun. Yield better than was feared, and quality excellent. **FRANKLIN:** Conditions much improved during month. Wheat will yield very fair, good sample. Oats and barley a little light. No damage by frost. **HARROWBY:** Wheat harvest well along, 15 bushels per acre. Oats and barley 40 p.c. cut for feed, will thresh 25 bushels; potatoes 30 p.c. of average.

Saskatchewan.—**ROSTERN:** Most wheat will grade 1 and 2. Yield 20 to 30 bushels. **SCOTT:** Wheat will probably average 16 bushels, barley 30, oats 30 to 45. Sufficient labourers for immediate requirements at \$4 per day. More help wanted for threshing.

Alberta.—The Alberta Department of Agriculture reports that crops have greatly improved on account of general rains, frequent showers and favourable weather conditions. It is now estimated that the yields will be a good average, if not a little better, although the previous dry weather permanently reduced average over a considerable area. With the exception of a number of destructive hailstorms there has been no damage to crops by frost or otherwise. Harvest operations are now general, in the lighter districts 50 to 75 p.c. of grain has been cut. Threshing will be general latter part of next week. No frost yet; all cereals will grade higher than usual; roots and live stock in excellent condition. **LETHBRIDGE:** Harvest well advanced in southern Alberta. Yields generally are somewhat lighter than anticipated. Oats and barley rather poor. Serious hailstorm at Hyde Park. No frost recorded. **LACOMBE:** Harvesting in central Alberta further advanced than for any previous season for ten years. Yield of grain below average, but superior in quality.

British Columbia.—**AGASSIZ:** August dry and hot. Grain medium crop, no damage from rain in stook; root crops and pastures badly need moisture. **SUMMERLAND:** Apples 10 p.c. more than last year and of best quality. Grain not well filled. Serious water shortage. **INVERMERE:** Good second cuts of alfalfa and clover under irrigation; roots and corn have made good growth. **SIDNEY:** All grain harvested in excellent weather. Yield not heavy, forage crops, roots and potatoes will be light; apples and other orchard fruit below average, pastures very short and rain much needed.

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—Wheat will not produce so good a yield as was anticipated in July, as joint worm, saw fly and rust have injured the crop considerably. Oats will give a good yield, and potatoes also, except in some few areas where blight is reported.

Nova Scotia.—August was wet and foggy, and this weather retarded the maturing of all crops and interfered with the housing of the hay crop. Potatoes are affected by late blight in some districts and will give only a medium yield. High gales injured the orchards in some parts of the province.

New Brunswick.—The rainfall during August was excessive. Rust has appeared on wheat and blight on potatoes; so that these crops will yield more lightly than was expected last month. A heavy hay crop was secured in fairly good condition, and the harvesting of grain is commencing.

Quebec.—Owing to the extremely wet weather, grain, corn and alfalfa have produced poor crops. Hay is over abundant, but the harvesting of the crop will be very difficult owing to the heavy rains and the shortage of labour. There are numerous reports of potatoes rusting and rotting.

Ontario.—The lateness of seeding and the alternate changes from heat to cold caused some unusual conditions this year, but

generally speaking, the harvest is very good. All high lands under cultivation gave excellent crops. The harvesting of grain crops is almost complete, and threshing is in full blast. With the exception of the small area destroyed during wet weather, everything looks promising. Oats and barley are heavy in straw, but there are many blank spaces on each head of oats, and neither of these two kinds of grain will yield as much as appearances would indicate. The hay crop is above the average, but owing to shortage of help a considerable quantity was wasted. Potatoes are plentiful, and no blight has appeared yet. Corn is only a fair crop, but is doing well. Small fruits are plentiful, apples are very poor and very scarce.

Mantoba.—By the end of August most of the wheat was cut, and the yield and quality were both proving better than anticipated after the long drought. In some districts red rust appeared just previous to cutting, but too late to do any injury. No damage from frosts have occurred. Hay is a light crop and straw is short; so that winter fodder will have to be conserved. Rains at the end of the month improved the condition of potatoes.

Saskatchewan.—Frequent showers during the last two weeks of August have improved the crop outlook, especially of potatoes and pastures. Wheat cutting was well advanced at the end of the month, and though the yields are not high the quality is good. Some losses were occasioned by patches of grain being too short for the binder, and the Hessian fly is said to have done some damage. If frosts keep off, late sown grain, which was only expected to be used as green fodder, may yet produce a grain crop. A fair yield of hay has been secured in good condition.

Alberta.—Grain crops have ripened somewhat unevenly, but little injury has resulted from hail, frosts or insect pests. In spite of the very dry season, a fair yield of good quality was being realized. Good rains during the month improved late grains, potatoes and pasture.

British Columbia.—The drought of July lowered the yield of grains somewhat. Hay was not so heavy a crop as last year. Roots and pasture need rain.

CROP REPORTS OF THE PROVINCIAL GOVERNMENTS.

Ontario.—The weekly reports of the Ontario Department of Agriculture state that rains delayed harvesting. There had, however, been practically no sprouting reported this season, and all the grains were as a rule well up to or above the weight of the measured bushel as revealed by threshing. The late harvest, the hard surface of the soil and the lack of experienced ploughmen have caused the seeding of fall wheat to be later than usual, but by September 24 a good acreage had been sown. In this connection the Government farm tractors have proved very serviceable, and there is little doubt that these tractors will be kept busy until the frost makes ploughing impossible. Threshing of grain is turning out well, although the

yield is hardly in keeping with the showing of straw, nor up to the earlier expectations of growers. Oats are relatively plumper in the grain than wheat. Both husking and silo corn have not cobbled as well as usual, and the crop generally will be below average. Potatoes have done well during the month, and there have been less rot and scab than were anticipated. Field roots are above average, though beginning (September 24) to feel the effects of drought. The condition of live stock is good; prices have declined during the month. Indications point to an increase in the number of pigs next spring. With plenty of grain and other fodders now in hand there is little likelihood of animals being sacrificed this fall or winter. Pastures are good and the milk flow well sustained. On September 24 it was reported that owing to favourable weather for outdoor work the labour stringency is not being felt so keenly as was expected, and should a fair share of open weather continue farmers generally will be able to complete the acreage of ploughing and other fall work intended.

Saskatchewan.—The Saskatchewan Department of Agriculture telegraphed (September 11) that wheat cutting was completed, and that some oats were still too green and were ripening slowly. Threshing had commenced, and wheat was turning out a good sample, with the yield higher than was expected. Labour was scarce and prices were high. Frost in some parts would injure late crops. Potatoes were a fair crop.

Alberta.—The Alberta Department of Agriculture telegraphed (September 8) that frosts had done more or less damage to vegetables, but that all grain, except late barley and oats, had been saved. On September 29 the following report was telegraphed: "Conditions during past month favourable for harvest operations on the whole, and cutting finished last week, excepting green feed in a few localities. Threshing commenced about the 15th instant and has proceeded without much interruption, rain delaying somewhat in a few districts. Yields are proving good with high grades everywhere. The labour situation has on the whole been very satisfactory, although wages are high and men not too plentiful. Fall ploughing is becoming quite general, and a large area is expected to be turned over. Root harvesting has commenced and gives promise of a very large yield. Another week of good weather should put us over the road with threshing operations." Reports announced good yields generally with high grades. In several districts 45 and 50 bushels of wheat, and oats at the 100 bushel per acre mark have been reported.

STOCKS OF GRAIN IN CANADA ON AUGUST 31, 1917, AND ESTIMATED EXPORTABLE SURPLUS OF WHEAT, 1917-18.

In 1914 and again in 1916 inquiries were instituted by the Census and Statistics Office, through its crop-reporting correspondents and the western postmasters, for the purpose of ascertaining as nearly as possible the quantities of wheat, barley and oats remaining in farmers'

hands at the close of the crop year on August 31. The data thus collected were of special value in estimating the available supplies of food and the quantities available for export during the ensuing year. For the current year, similar data have been collected from the crop-reporting correspondents of the Office, and, in addition, a schedule was addressed to a selection of the largest country elevator companies with the object of ascertaining what quantities of wheat, barley and oats were in store in those elevators on August 31, 1917. The schedules addressed to the crop correspondents called for estimates of the percentage of the crops of 1916 that still remained in farmers' hands, in their respective districts, on August 31, 1917. Table I gives the results of the compilation of the returns received, together with the corresponding figures obtained in 1914 and in 1916:

I. Estimate of Wheat, Barley and Oats in Farmers' Hands on August 31, 1914, 1916 and 1917.

Field Crops.	Total production in 1913.			Total production in 1915.			Total production in 1916.			Total production in 1917.		
	000 bush.	p.c.	bush.	000 bush.	p.c.	bush.	000 bush.	p.c.	bush.	000 bush.	p.c.	bush.
Canada—												
Wheat.....	231,717	0.94	2,177,400	426,747	3.20	13,657,500	262,781	1.14	2,997,300			
Barley.....	48,319	2.04	987,500	60,699	3.27	1,986,230	42,770	0.98	418,740			
Oats.....	404,669	3.57	14,450,800	523,684	7.62	39,916,700	410,211	4.00	16,524,500			
P. E. Island—												
Wheat.....	628	2.45	15,400	654	3.25	21,200	578	2.44	14,000			
Barley.....	111	0.83	1,000	107	0.32	340	105	0.32	340			
Oats.....	6,143	1.69	104,000	6,833	2.25	153,700	7,413	3.04	225,000			
Nova Scotia—												
Wheat.....	267	1.97	5,300	247	1.50	3,700	261	—	—			
Barley.....	134	1.06	1,400	128	0.71	900	123	—	—			
Oats.....	3,291	2.88	94,800	3,488	3.00	104,600	4,031	—	—			
New Brunswick—												
Wheat.....	269	1.35	3,600	267	1.00	2,700	242	2.19	5,300			
Barley.....	74	0.75	600	48	0.29	140	45	1.56	700			
Oats.....	5,946	2.56	152,000	5,560	2.50	139,000	6,039	4.66	281,000			
Quebec—												
Wheat.....	1,054	1.44	15,000	1,411	3.00	42,300	960	0.21	2,000			
Barley.....	2,263	1.90	43,000	2,255	2.50	56,400	1,456	0.17	2,500			
Oats.....	39,025	3.74	1,460,000	42,182	6.00	2,531,000	24,411	0.84	205,000			
Ontario—												
Wheat.....	19,851	3.12	619,000	30,252	7.75	2,345,000	17,931	1.46	262,000			
Barley.....	14,589	2.49	363,000	15,369	5.38	827,000	7,498	0.71	53,000			
Oats.....	105,159	5.01	5,268,000	122,810	10.00	12,810,000	50,771	2.25	1,142,000			
Manitoba—												
Wheat.....	53,331	0.56	299,000	79,434	2.00	1,588,700	29,667	0.30	89,000			
Barley.....	14,305	1.93	276,000	20,644	2.50	516,100	13,729	1.07	147,000			
Oats.....	56,759	3.16	1,794,000	63,965	5.00	3,198,300	48,439	3.14	1,521,000			
Saskatchewan—												
Wheat.....	121,559	0.45	547,000	243,481	3.00	7,304,400	147,559	1.05	1,549,000			
Barley.....	10,421	0.98	102,000	10,497	2.00	210,000	9,916	0.82	81,000			
Oats.....	114,112	2.55	2,910,000	171,765	7.25	12,453,000	163,278	5.32	8,686,000			
Alberta—												
Wheat.....	34,372	1.94	667,000	70,476	3.33	2,340,900	65,088	1.65	1,074,000			
Barley.....	6,334	3.15	200,000	11,544	3.25	375,200	9,774	1.37	134,000			
Oats.....	71,542	3.60	2,576,000	102,692	8.25	8,472,100	102,199	4.35	4,446,000			
B. Columbia—												
Wheat.....	386	1.58	6,100	525	0.50	2,600	495	0.40	2,000			
Barley.....	88	0.53	500	107	0.14	150	124	0.17	200			
Oats.....	2,692	3.42	92,000	4,391	1.25	55,000	3,630	0.51	18,500			

In response to the schedule, which was addressed to 58 of the larger country elevator companies, returns were received from 50 companies representing a total of 2,105 elevators operated, the eight companies who failed to reply representing 305 elevators. The quantities reported to be in store in these 2,105 country elevators on August 31, 1917, were as follows: Wheat 932,837 bushels, barley 64,765 bushels and oats 552,119 bushels. The quantities of wheat, barley and oats in store in the terminal elevators at August 31, 1917, are recorded in the Weekly Bulletin of the Department of Trade and Commerce of September 10, 1917. The total quantities of wheat, barley and oats in Canada at the end of August, 1917, according to these three separate sources of information, were, therefore, as shown in Table II.

II. Quantities of Wheat, Barley and Oats in Canada on August 31, 1917.

Quantities in—	Wheat.	Barley.	Oats.
	bush.	bush.	bush.
Farmers' hands.....	2,997,300	418,740	16,524,500
Terminal elevators.....	952,821	126,769	3,410,969
Interior terminal elevators.....	188,039	2,071	71,944
Public elevators.....	2,393,425	105,794	2,811,312
Country elevators.....	932,837	64,765	552,119
Total.....	7,464,422	718,139	23,370,844

The table shows therefore that upwards of 7,400,000 bushels of wheat, 718,000 bushels of barley and about 23,371,000 bushels of oats constituted the "carry over" into the new crop year ending August 31, 1918. The figures represent actual returns, except in the case of the quantities in farmers' hands, which are estimated from the reports of correspondents; the totals are under rather than over the mark, because account is not taken of grain in transit nor of grain in retail hands.

ESTIMATED EXPORTABLE SURPLUS OF WHEAT, 1917-18.

With the completion of the above inquiry and with the preliminary estimate of the total yield of 1917, as shown in Table I on page 220, we are in a position to make a tentative estimate of the exportable surplus of wheat for the coming crop year. The data are as in Table III.

III. Estimated Exportable Surplus of Wheat, 1917-18.

Items.	Bushels.	Bushels.
Carry-over from 1916-17.....		7,464,400
Allowance for imports, say.....		300,000
Crop of 1917 (preliminary estimate).....		249,147,500
		256,911,900
Loss in cleaning and for grain not of merchantable quality (10 p.c.).....	24,915,000	
Seed for crop of 1918, say 16 million acres at 1.75 bushel per acre.....	28,000,000	
Food: Population of 8 millions at 6.25 bushels per capita....	50,000,000	102,915,000
Balance available for export.....		153,996,900

The table indicates therefore a surplus of about 154 million bushels as available for export during the next crop year ending August 31, 1918, according to present data, which, however, are subject to revision when the later and final returns as to the results of this year's harvest shall have been received. Threshing reports to date indicate that the quality of this year's grain is turning out well. There may therefore be less loss in cleaning than that which is allowed for above. It is also possible that less than the 50 million bushels allowed may suffice for food. If the per capita allowance for this purpose should not exceed five bushels per head—an average found sufficient in other British countries—the exportable surplus of wheat might be increased by, say, another 10 million bushels. The actual exports of wheat and of wheat flour expressed as wheat for the crop year ended August 31, 1917, was 170,804,000 bushels, as compared with 289,794,162 bushels in 1915-16, 84,821,973 bushels in 1914-15 and 133,049,696 bushels in 1913-14.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperature during August has ranged a little lower than during the corresponding period of last year, the figures being as follows. For 1917, highest temperature 99.6, lowest 46, and mean 67.86; for 1916, highest 97.8, lowest 44 and mean temperature 70.25. The precipitation, distributed over fifteen different days, totals 3.4 inches, of which 1.16 inch was registered on the 16th; while a year ago the rainfall amounted to only 1.73 inch, recorded on thirteen different days. The bright sunshine for August averages 7.77 hours a day, as against 8.89 hours a day last year.

During the month the grain at the Experimental Farm has been harvested and threshed, the field oats averaging about 55 bushels per acre. The prospects for Indian corn have continued to improve, and there is likely to be better than an average crop both as to yield

and quality. In the district, early potatoes have done well and the potato crop, as a whole, is likely to be fair. The second cutting of mixed clover hay on land which averaged approximately $2\frac{1}{2}$ tons per acre earlier in the season, has yielded at the rate of about $1\frac{1}{4}$ ton per acre.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—“An abundance of rain has assured a full crop of roots, vegetables and corn. Cereals have matured satisfactorily, about one-tenth of the same having been cut during the month. The wheat crop will be below the average, owing to insect and fungous pests. The other grains will be a full crop. Hay has turned out better than was expected. Potatoes are most promising; a few fields have been attacked by blight, but the trouble is still local. Corn has grown strong, and is maturing well. Heavy wind storms on the 10th and 12th lodged many fields of grain and shook down many apples. The lodged grain in this neighbourhood has filled well, as it was not attacked by rust. Early Red Fife wheat was cut at the Station on August 15th, and stooked up well. Seven train loads of excursionists visited the Station on the 28th to witness praying demonstrations and have a day's outing.”

Kentville, N.S.—W. S. Blair, Superintendent, reports:—“August has been considerably warmer than the corresponding period for some years past, the mean temperature being 67·67, which is several degrees higher than it has been for this period at least during the four previous years. Rain fell on eleven days during the month, the precipitation totalling 5·15 inches, 1·37 inch of which was recorded on the 6th and 1·98 inch on the 12th, compared with an average of 2·15 inches for August from 1913 to 1916. The bright sunshine aggregates 202·1 hours, as against an average of 209·7 hours for this time during the four previous years. Haying, which had been late owing to unfavourable conditions in July, has been still further retarded by the more or less broken weather which prevailed during the first half of the month and, consequently, in many places it is not completed by the 31st. The heavy rains on the 6th and the 12th resulted in considerable injury to corn and roots on low areas. On the 10th, a violent wind did considerable damage to the corn, grain, potatoes and apple crops; it is thought that, as a result, the apple yield has been reduced by about fifteen per cent., leaving an estimated return of approximately 600,000 barrels of fruit of fair quality. Blight on potatoes put in its appearance soon after the wind storm, and many of the fields are likely to give light yields. At the Station, flax for fibre was pulled on the 7th and 8th, and the first grain harvesting occurred on the 23rd.”

Nappan, N.S.—W. W. Baird, Superintendent, reports:—“The weather during August has been very unsettled. Rain has been recorded on thirteen different days, giving a precipitation of 5·15 inches. The bright sunshine aggregates only 204·6 hours. The highest temperature recorded is 84, and the lowest 47, while the mean temperature is 67·38. All crops have made most satisfactory growth, especially roots and corn; but, in some sections, rust is much in

evidence, also blight on potatoes, as weather conditions have been favourable for the development of both diseases. The early-sown grain has ripened up quite rapidly during the last few days and will be fit to cut at the beginning of September. The later grain gives promise of a good average crop, provided the fall should be an open one. Haying has been very slow, with labour scarce, and the crop, which is not quite as good as was anticipated, especially on marsh land, is being stored in only fair condition. Flax is ripening up nicely and is about fit to pull. Hemp has made fair growth. The work engaged in at this Station, other than the caring for live stock, poultry and bees, has included the making of hay on upland and marsh, hoeing and weeding root crops, the sowing of twenty-five acres of roots for stecklings (which have made excellent growth during the month), clearing new land, picking fruit, looking after shrubs, flowers and lawns, and cleaning up in general. The clearing of the new land has been done by prisoners of war."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"August brought unfavourable weather for New Brunswick crops. Rain, mists, fog and cloudiness, with normal heat, encouraged plant diseases, retarded ripening, and damaged hay and grain. The precipitation is 6 inches, against only 1.3 inch last year, and a forty-three year average of 3.9 inches. The mean temperature is 63.7, compared with 67 in 1916 and an average of 63. The sunshine recorded aggregates only 195.65 hours, against 250 hours last year and an average of 224 hours for the month. One result of these conditions has been the lowering of the potato crop prospects to about 60 p.c. of a normal yield, and, should the weather continue damp and warm, there is danger of much loss from the rotting of the tubers. Wheat, oats and barley are reported considerably below the average in stand and probable yield. Root crops, where not drowned, are looking well. Pastures have been especially well maintained. On the Experimental Station, no grain, except winter rye, has yet been housed; wheat and oats are more or less cut and in stock. Forty-six acres of turnips for seed production next year were seeded from the 23rd of July to the 6th of August, and the thinning of this area has taken all the labour that could be spared from other work."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports:—"August has been cooler and wetter than usual,—the highest temperature recorded being 90.5, the lowest 36.6 and the mean 59.2, compared with extremes of 92.4 and 43.4 and a mean temperature of 65.2 a year ago; while rain fell on fifteen days giving a total precipitation of 3.63 inches, as against 0.75 of an inch last year, when it rained on four days. The weather has been very unfavourable for curing the hay crop, about three-quarters of which has been cut and stored, much of it in poor condition. At the Station, the second cutting has been saved, yielding at the rate of over a ton per acre in addition to about three tons per acre got off the same land earlier in the season. All the grain sown during the first days of May has been harvested and the threshing of the same has been

started, the wheat being likely to yield upwards of forty bushels to the acre. Hoed crops have made fair growth during the month, and the prospects are that there will be average yields. Field roots for stecklings are doing well."

Cap Rouge, Qué.—G. A. Langelier, Superintendent, reports:—"Compared with the average for the last five years, August has been warmer, wetter and duller than usual, the figures being, respectively, for 1917, mean 65.92, rainfall 6.69 inches, and 192.2 hours of sunshine, and the average for this period covering the five previous years being, mean 62.56, rainfall 4.55 inches, and 194.5 hours of sunshine. The main difference has been in the precipitation; it rained on thirteen different days from the 8th to the 31st, and at the latter date some hay is yet standing, whilst the grain which has been cut does not dry at all. Potatoes are rotting in the ground and corn for ensilage is poor. At the Station, however, the crop is one of the best in years, owing to underdrainage. All the land intended for roots next year was ploughed early and has already been disced a couple of times. Over one thousand farmers have visited the Station during the month, and they seemed to be very much interested in the different experiments undertaken at Cap Rouge."

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—"The weather during August has been very wet. The highest temperature recorded is 92, compared with 91 last August, and 85 two years ago. The minimum temperature is 45, as against 40 last year, while the mean is 65.12, compared with 64.67 last year. The precipitation totals 8.27 inches, which fell on sixteen days, while in 1916 it amounted to 3.91 inches and 3.47 inches in August two years ago. The sunshine recorded aggregates 204.8 hours, compared with 227.3 hours last year. Weather conditions have made it almost impossible for some farmers to get their hay in, and a lot remains to be cut in this district. Grain is ripening well and there is quite a lot of it cut, but, so far, it has been impossible to harvest it on account of excessive rains. Corn is doing well. Reports from different sections of the Eastern Townships indicate that potatoes are rotting badly and that the potato crop will be very light this fall."

Brandon, Man.—W. C. McKillican, Superintendent, reports:—"The drought continued throughout August, the total rainfall for the month being only 0.78 of an inch. This makes a total rainfall for the growing season (April to August, inclusive) of only 3.94 inches, the lightest on record for this locality. The crop is really much better than could be expected from such a small supply of moisture. Cutting is practically completed, and a start has been made at threshing on many farms. The quality of the wheat sample is exceptionally good. On the Experimental Farm, grain cutting is finished, except for some late oats, and about half the threshing is done. The corn crop was badly injured by frost on the night of the 27th; it was cut down at once and is being put into the silo. The yield is the lightest for many years."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"August has been quite warm, with sufficient rain to fill grain and bring on late oats and barley. Harvesting commenced about the 20th, and probably from 75 p.c. to 80 p.c. of the grain is cut by the end of the month. Labour is scarce in this district, and considerable grain is not yet in stook, but, owing to favourable weather, no harm has been done. A light frost was recorded on the 27th, which touched the corn and tender vegetables. Roots and vegetables have improved greatly since last reported on, and promise a good crop. Potatoes promise a fair yield of tubers of good quality. The work on the Experimental Farm has included the cutting and threshing of cereals on rotations, fields, plots, etc. The yields are good, and the quality of the grain is excellent."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—"The grain has been slow in ripening owing to the cool nights and frequent showers which have prevailed during August; but frost has held off and the grain is filling remarkably well and at the end of the month is nearly all ripe. Probably 75 p.c. of the wheat and 50 p.c. of the oats and barley have been harvested. The estimated yields per acre for the district are 25 bushels of wheat, 30 bushels of oats and 30 bushels of barley. All garden stuff is making splendid growth, and potatoes, especially, are a very promising crop. At the Station, efforts are being made to obtain water by drilling. Abundance of water is present at a depth of about 100 feet, but silt runs in with the water to such an extent that after standing for a few hours in the well casing the flow is stopped."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—"The drought has continued through August, with a total precipitation of 1.16 inch, this being much lower than is usual for this period. The mean temperature, 59.7, is about normal. Grain crops, while light and weedy in many places, give promise of heavier yields than were anticipated a month ago. A few districts have suffered from hail, and frost has done some damage in a few sections, but, for the most part, the crops are being harvested in good condition. At the end of the month, at least 65 p.c. of the grain is in the stook, with the remainder ripening rapidly. At the Station, cutting is practically completed, and threshing commenced on the 31st."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—"The warm, dry weather experienced during August forced grain crops to maturity rapidly, and has been favourable for curing hay, all of which was saved in excellent condition. Harvesting in central Alberta is further advanced at the close of August than in any previous season for ten years. Yields of grain will be below the average, but the quality is superior, particularly in the case of wheat. In central Alberta, as a whole, cutting is probably fifty per cent finished, with the remaining portion of the harvest ready for cutting as rapidly as the binders can reach it. Record prices have been established for live stock during the month. On the 24th, grass fat steers brought 9½ cents and hogs 19 cents per lb. in Calgary yards. Breeding ewes are in keen demand, but stocker cattle are dull."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"The harvest in southern Alberta is well advanced, being somewhat earlier than usual, due principally to the dry weather during June and July hastening maturity. By the end of August practically all the wheat in the eastern part has been cut, while in the western part from 70 p.c. to 80 p.c. has been cut. Crops between Lethbridge and Calgary, on both the MacLeod and Aldersyde branches of the C.P.R., are particularly good. The same can be said of the Cardston, Spring Coulee, Magrath and Warner districts. Farther east, however, the rainfall was less, and only crops seeded on summer fallow are giving fair returns, the balance being poor,—in fact, in some of the drier localities, even summer-fallowed land is not giving very good returns. Threshing has started, and, with good weather, will be general early in the first week in September. A severe hail-storm, covering quite a large area from High River east, occurred during the latter part of the month. No frost has been registered at the Lethbridge Station during August. It would appear that the yield of wheat generally is likely to be somewhat lower than anticipated by farmers, as the kernels are lean and the heads have not filled out as well as could be desired, owing to the dry weather. With the exception of certain localities, the yield of oats and barley will be light. In most districts, flax that was sown in good season will be a fair crop, but more than half of it was sown too late and either did not germinate properly or else is too green at the present time to have a chance of ripening. At the Station, practically all grain crops on the dry land are cut by the end of August, as well as some of the crops on the irrigated land. Threshing has been started. The yields are only going to be about half as good as last year."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"The weather conditions during August have been favourable for the harvesting of the second cuts of alfalfa and clover. With a mean temperature of 60.3, fodder corn and root crops have made good growth. The harvesting of grain will be a fortnight later than last year. The vegetable crops at the Station have done well, and ripe tomatoes are now being gathered. The Windermere district fall fair, held on the Experimental Station grounds on the 29th and 30th, brought together a large number of ranchers and other visitors. There was a marked improvement in the live stock classes and in the entries made by Indians. Owing to the late and dry season, the showing of vegetables was not up to the usual standard. Considerable interest was again evinced in the butter-making competitions. A flock of turkeys at the Station are doing well and promise to make fine birds by Christmas."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"The weather throughout the whole of August has been very hot and dry, and there has been a great shortage of irrigation water throughout the valley. The present estimate is that the apple crop will be about ten per cent more than last year, but, if the drought continues, this will probably be reduced. Apples are of the best quality. Pears are only a medium crop. Grain has not filled well, owing to lack

of moisture. The third crop of alfalfa is light. Reports indicate that there is not a good crop of potatoes, in spite of the fact that there was a big area planted, and scab is bad in places."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"Conditions during August have been quite favourable for harvesting and threshing, but the dry weather of July and the early part of August hastened the maturing of the grain and reduced the yields somewhat. Threshing in this valley is almost completed, with medium yields and a good sample of grain. Root crops and pastures are in need of rain. Fodder corn promises to be a good crop. The live stock in the district is in very good condition, and the demand for all classes is quite good."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"Excellent harvest weather has prevailed during the whole of August. All grain crops have been harvested and considerable threshing done. Autumn wheat areas have yielded from 30 to 50 bushels per acre, spring wheats from 15 to 30 bushels, oats from 20 to 100 bushels. The average of all grain crops is about fifteen per cent lower than for normal seasons. Corn and mangold did not develop as usual, owing to continued dry weather. The potatoes dug during the month gave a very light yield, and the prospect for late varieties is poor. Apples, pears, plums and other orchard fruits will be below average. Pastures are very short and dry. Milk yields are being maintained by supplementary feeding. Dairy produce and live stock are in great demand."

Meteorological Report for August, 1917.

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of August are given in the following table:—

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.	99.6	46.0	67.86	3.40	436	241.0
Charlottetown, P.E.I.	88.0	49.0	68.21	4.93	436	227.9
Kentville, N.S.	87.0	42.0	67.67	5.15	435	202.1
Nappan, N.S.	84.0	47.0	67.38	5.15	437	204.6
Fredericton, N.B.	90.5	39.0	63.70	6.00	437	195.7
Ste. Anne de la Pocatière, Que.	90.5	36.6	59.20	3.63	440	218.2
Cap Rouge, Que.	92.0	44.2	65.92	6.69	437	192.2
Lennoxville, Que.	92.0	45.0	65.12	8.27	436	204.8
Brandon, Man.	94.0	29.0	62.20	0.78	447	271.8
Indian Head, Sask.	89.0	33.0	60.32	1.83	448	269.2
Rosthern, Sask.	87.4	37.7	60.24	1.94	446	300.8
Scott, Sask.	90.0	34.7	59.70	1.16	446	284.2
Lacombe, Alta.	85.8	30.9	58.50	1.89	455	254.4
Lethbridge, Alta.	89.0	35.0	61.30	2.00	446	321.3
Invermere, B.C.	88.0	36.0	60.30	1.20	449	300.4
Sumnerland, B.C.	96.0	50.0	69.75	0.18	447	326.9
Agassiz, B.C.	89.0	43.0	64.88	1.10	445	278.8
Sidney, Vancouver I., B.C.	81.0	49.0	73.72	0.44	444	339.4

Ottawa, September 15th, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (September 1) that August was everywhere wet and windy. The storms appear to have been most severe in the south, especially the southwest, although some progress could be made with the harvest during the middle of the month in many areas. The grain has been very generally laid throughout the country, and the use of machinery in cutting it will be much restricted. Harvesting has been more seriously hindered in the south, where the grain that has not yet been cut is generally over-ripe; while a good deal of hay has been lying out throughout the month. With fine weather, however, harvesting operations would be pushed on rapidly. The grain harvest generally began throughout the country during August; and probably the bulk has been cut, but in most districts comparatively little has been carted. From most parts sprouting of the grain is reported. Owing largely to the high winds having shaken out a good deal of grain, particularly oats and barley, the prospective yields are not so good as a month ago, while the quality has also generally been affected. None of the grain crops are up to the average, but barley is generally the best and oats are the poorest. Prospects are worst in the eastern counties. Beans are a very bad crop, but peas are better, though considerably below the average. Potatoes are everywhere over average, especially in the eastern counties, although not quite up to the promise of a month ago. They have suffered somewhat from the wet. Disease appears to be prevalent in the southwest; but apart from that area, although it is mentioned in many other parts of the country, there is generally less than usual, and some districts are reported free from it. Turnips and swedes are average or rather over throughout the west and south, but much under normal on the eastern side of the country from Essex to Northumberland; so that on the whole prospects are for a crop rather below average. Their disappointing appearance in the east is largely due to the difficulty of obtaining a plant earlier in the summer, and to damage by fly. In some parts of the country the rains during August have improved the crop, but in others it has been too wet for these roots. Mangolds are universally promising, and this is the only crop to show improvement during the month. All roots would now be much benefited by sunshine.

The gales have blown down much fruit all over the country. Nevertheless, the quantity of apples, pears, and plums is still large, particularly the two latter. Pastures have now plenty of grass, which has grown well during the month; but it is frequently sodden and generally of poor quality. Warm weather would improve it. Partly owing to the condition of the grass, cattle have only done moderately during the month; while the bad weather has affected sheep more decidedly. Labour is still short, but the deficiency has hardly been so acute during August as in some recent months, as, with the assistance of soldiers, women and schoolboys, farmers have

managed to keep pace with the work. Cleaning of root fields, has, however, been much neglected; and with the pressure of harvest work as soon as the fine weather permits, the deficiency is expected to be seriously felt, especially of men able to use the scythe, of whom more than usual may be wanted owing to so much of the grain being beaten down.

Summarizing the returns, and expressing an average crop by 100, the appearance of the crops on September 1 indicated probable yields which may be expressed by the following percentages: Wheat 93; barley 97; oats 90; beans 80; peas 91; potatoes 104; turnips and swedes 96; mangolds 103; hops 99.

Scotland.—The Board of Agriculture (September 1) reports generally wet weather in August, which will make the grain harvest tedious and expensive, but appears to have caused no serious crop damage, except in certain parts. At the end of August much of the barley and oats was over-ripe and the harvest was only just started; the yields of these crops are expected to be about 3 p.c. over average. A small decrease in the acreage of wheat and barley is confirmed, but the land under oats has increased 50,000 acres, the present total of 1,040,000 acres being the largest since 1896.

India.—The Indian Department of Statistics issued (August 13) the final general memorandum on the wheat crop of 1916-17. The total area under wheat in India is placed at 32,940,000 acres, as against 30,320,000 acres in 1915-16, an increase of nearly 9 p.c. The total yield is estimated at 379,232,000 bushels, as against 323,008,000 bushels, an increase of 56,224,000 bushels, or 17 p.c. The figures of both area and yield are the highest on record.

Russia.—Broomhall's Corn Trade News of September 18 states that a mail advice from Petrograd, dated August 5, n.s., reports that rains continued too long and were more than were necessary for the crops. Rains in the central regions impeded harvesting, and at the same time hindered the maturing of spring grains. The rains have, however, now ceased, and warm, sunny weather has set in which is having a favourable influence on the spring crops. The quality of the new crops in parts of the middle black soil zone has not come up to expectations. The Don province and also northern Caucasia have harvested good crops. Continued drought in Finland has had a very unfavourable effect on the crops there, and the yield is expected to be below average; in some parts the yield will even be bad.

United States.—The Crop Reporting Board of the United States Department of Agriculture issued (September 7) estimates of the yield of the principal field crops, with statement of condition as follows:

Crops.	Area.	Per cent of 1916.	Yield per acre.			Yield in millions of bushels.			
			1916.	1917 ¹ .	Average 1911-1915.	1916.	Aug. forecast 1917 ¹ .	Sept. forecast 1917 ¹ .	Average 1911-1915.
	acres.	p.c.	bush.	bush.	bush.	bush.	bush.	bush.	bush.
Winter wheat.....	—	—	13.8	15.1 ²	16.3	482	417 ²	417 ²	542
Spring wheat.....	19,039	106.0	8.8	13.1	14.0	158	236	250	264
All wheat.....	46,692	88.5	12.1	14.3	15.4	640	653	668	806
Corn.....	121,045	114.2	24.4	26.8	26.0	2,583	3,191	3,248	2,754
Oats.....	43,161	103.9	30.1	35.5	31.7	1,252	1,456	1,533	1,230
Barley.....	8,379	109.2	23.6	24.3	26.5	181	203	204	197
Rye.....	3,772	122.2	15.3	14.9 ²	16.5	47.4	56 ²	56 ²	41.4
Buckwheat.....	965	114.2	14.0	21.0	20.4	11.8	19.9	20.2	16.5
White potatoes.....	4,348	122.5	80.4	106.2	98.3	285	467	462	363
Sweet potatoes.....	904	116.8	91.7	97.5	95.4	71	86.4	88.2	60.3
Flax.....	1,939	120.8	9.6	5.7	8.6	15.5	12.8	11.0	18.6
Hay (tame).....	68,717	96.0	1.53 lb.	1.36 ² lb.	1.31 lb.	110 lb.	100 lb.	91.7 ² lb.	86.6 lb.
Tobacco.....	1,418	100.5	815.0	861.0	788.6	1,151	1,270	1,221	984

¹Interpreted from condition reports.²Preliminary estimate.

The condition of spring wheat on September 1, 1917, or at the time of harvest, was 71.2 p.c. of the normal, as compared with 48.6 p.c. last year and 74 p.c. the ten year average. Corn is 76.7 as compared with 71.3 last year and 75.2 p.c., the average; oats are 90.4 compared with 78 last year and 77.8 p.c., the average; barley is 76.3 against 74.6 last year and 78.9 p.c., the average. Of other crops the condition on September 1 was as follows: Buckwheat 90.2 against 78.5 and 83.4; white potatoes 82.7 against 67.4 and 74.8; sweet potatoes 85.7 against 82.7 and 83.6; tobacco 84.5 against 85.5 and 78.9; flax 50.2 against 84.8 and 78; rice 78.4 against 91.2 and 88, and sugar beets 91.7 against 88.7 and 89.4. The total yield of wheat is now placed 668 million bushels, compared with 640 million bushels last year and 806 million bushels for the average of the years 1911-15, whilst corn is a record crop of 3,248,000,000 bushels, as compared with 2,583,000,000 bushels in 1916 and 2,754,000,000 bushels, the average of the years 1911-15.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The following table showing the area and estimated production of wheat, rye, barley and oats in 1917, compared with 1916, in countries of the northern hemisphere, is taken from the August issue of the Bulletin of Agricultural and Commercial Statistics:

Area and Production of Wheat, Rye, Barley and Oats, 1917, compared with 1916.

Countries.	1916.	1917.	Per cent of 1916.	1916.	1917.	Per cent of 1916.
	acres.	acres.	p.c.	bush.	bush.	p.c.
Wheat—						
Spain.....	10,149	10,224	105.0	152,329	141,007	92.6
France.....	12,856	10,611	82.5	214,621	161,672	75.3
Ireland.....	76	124	162.3	2,827	4,348	153.8
United States (a).....	34,829	27,653	79.4	481,752	417,007	86.6
“ (b).....	17,956	19,039	106.0	158,145	236,002	149.2
British India.....	30,142	33,040	109.6	318,005	379,306	119.3
Japan (a).....	1,241	1,236	99.6	27,657	25,850	93.5
“ (b).....	41	33	78.8	650	682	105.1
Rye—						
Spain.....	1,847	1,800	97.5	28,782	27,779	96.5
Ireland.....	7	8	115.6	192	222	115.6
United States.....	3,096	3,772	121.8	47,382	56,000	118.2
Barley—						
Spain.....	3,886	3,927	101.1	86,863	76,497	88.1
Ireland.....	150	177	118.0	6,537	7,873	120.4
United States.....	7,674	8,379	109.2	180,923	202,996	112.2
Japan.....	3,109	2,738	88.1	—	76,505	—
Oats—						
Spain.....	1,398	1,425	101.9	30,272	31,104	102.7
Ireland.....	1,072	1,464	136.6	58,685	79,464	135.4
United States.....	41,540	43,162	103.9	1,178,338	1,370,356	116.3

(a) Winter wheat. (b) Spring wheat.

Corn in Spain.—The provisional estimate of the yield of corn in Spain for the year 1917 is 25,738,000 bushels, as compared with 28,642,000 bushels in 1916 and 27,672,000 bushels, the annual average for the five years 1911-15. The yield in 1917 is therefore 10.1 p.c. below that of last year and 7 p.c. below average.

CROPS OF THE SOUTHERN HEMISPHERE.

Argentina.—The first forecasts of areas sown for the season of 1917-18 are as follows: Wheat: 17,582,000 acres, against 16,089,000 acres in 1916-17 and 16,455,000 acres the average for the five years 1911-12 to 1915-16, these figures representing for 1917-18 9.3 p.c. more than in 1916-17 and 6.8 p.c. above the average. Oats: 2,854,000 acres against 2,525,000 acres in 1916-17 and 2,803,000 acres, the average for the five years 1911-12 to 1915-16, or 13 p.c. more than in 1916-17 and 1.8 p.c. above average. Flaxseed: 3,311,000 acres against 3,207,000 acres in 1916-17 and 4,194,000 acres, the five year average for the years 1911-12 to 1915-16, or 3.2 p.c. above 1916-17 and 21 p.c. below average.

ENGLISH CROP AND LIVE STOCK RETURNS, 1917.

The English Board of Agriculture and Fisheries issued on August 25, 1917, a preliminary statement of the areas under field crops and of the numbers of live stock in 1917 as compared with 1916. Table I gives the areas under field crops and grass and Table II the numbers of live stock.

I. Areas of Field Crops in England and Wales, 1916 and 1917.

Field Crops.	1916.	1917.	Difference between 1916 and 1917.	Field Crops.	1916.	1917.	Difference between 1916 and 1917.
	acres.	acres.	acres.		acres.	acres.	acres.
Wheat—				Potatoes.....	427,950	508,190	+ 80,240
Autumn sown.....	1,787,320	1,724,600	— 62,720	Turnips and swedes.....	938,160	972,370	+ 34,210
Spring sown.....	124,890	193,950	+ 69,060	Mangolds.....	378,140	398,740	+ 10,600
All wheat.....	1,912,210	1,918,550	+ 6,340	Clover and grasses.....	2,590,310	2,499,660	— 90,650
Barley.....	1,332,080	1,460,600	+128,520	Permanent grasses.....	16,022,980	15,835,560	—187,420
Oats.....	2,084,670	2,257,480	+172,810	Hops.....	31,350	16,950	— 14,400
Rye.....	53,480	56,020	+ 2,540	Orchards.....	251,300	259,450	+ 8,150
Beans.....	236,260	210,860	— 25,400	Small fruit.....	73,230	71,940	— 1,290
Peas.....	112,680	131,000	+ 18,320	Other field crops			
Buckwheat.....	3,300	4,700	+ 1,400	and bare fallow.....	877,250	748,980	—128,300

The above statement shows that about 190,000 acres of permanent grass have been brought under the plough since June, 1916, the arable area being 195,000 acres more than a year ago. The acreage under wheat is slightly greater than a year ago, a decrease of 63,000 acres in that sown in the autumn being rather more than counterbalanced by increased spring sowings. Barley and oats are being grown more extensively than last year, the former showing an increase of 128,500 acres and the latter one of 173,000 acres; the area under oats is the largest recorded since 1904. Of the pulse crops, beans have been reduced by 25,000 acres and peas increased by 18,000 acres, as compared with last year. The acreage under potatoes has been increased by 80,000 acres, or nearly one-fifth, and is about 10 p.c. greater than the highest previously recorded. The area under roots has also been extended, turnips and swedes by 34,000 acres, and mangolds by nearly 11,000 acres. Green fodder crops have been grown on reduced areas. Mustard has lost the large increase recorded last year, and the area is now below that of 1915. Bare fallow was reduced by 66,500 acres. The area of clover and rotation grasses is 90,000 acres less than last year, nearly all the reduction being in that reserved for hay. The area from which meadow hay was taken also shows a reduction, and altogether the hay area is down by nearly 108,000 acres.

The number of horses on farms increased by 13,000, those used for agricultural purposes showing an increase of 23,000. There are, however, 5,000 less foals than in 1916. The total number of cattle has again been increased, and is the largest ever recorded. The number of cows in milk on June 4 was 24,000 less than a year ago, but the total dairy herd is 35,000 larger, the number of heifers carrying their first calves having been increased by nearly 40,000, whilst there were nearly 20,000 more cows in calf but not in milk. Both calves, and cattle from one to two years old, have been reduced in numbers, while those over two years have increased. Sheep show a considerable reduction; the number of ewes kept for breeding declining by

170,000, and lambs by 570,000. Both sows and other pigs were being kept in smaller numbers, and the total number of pigs was 250,000 less than last year.

II. Numbers of Farm Live Stock in England and Wales, 1916 and 1917.

Description.	1916.	1917.	Difference between 1916 and 1917. Increase (+) Decrease (-)	
	No.	No.	No.	p.c.
Horses—				
For agricultural purposes, including mares for breeding.....	772,770	796,040	+ 23,270	+ 3.0
Unbroken, including (One year and above stallions: { Under one year.....	227,170 109,810	237,400 104,360	+ 10,230 - 5,450	+ 4.5 - 5.0
Others.....	249,820	235,020	- 14,800	- 5.9
Total horses.....	1,359,570	1,372,820	+ 13,250	+ 1.0
Cattle—				
Cows and heifers in milk.....	1,855,450	1,831,440	- 24,010	- 1.3
Cows in calf, but not in milk.....	252,050	271,540	+ 19,490	+ 7.7
Heifers in calf.....	322,180	361,820	+ 39,640	+12.3
Other cattle: Two years and above.....	1,067,770	1,093,770	+ 26,000	+ 2.4
{ One year and under two.....	1,374,090	1,353,320	- 20,770	- 1.5
{ Under one year.....	1,344,240	1,315,260	- 28,980	- 2.2
Total cattle.....	6,215,780	6,227,150	+ 11,370	+ 0.2
Sheep—				
Ewes kept for breeding.....	7,047,110	6,872,030	-175,080	- 2.5
Other sheep: (One year and above.....	3,596,960	3,563,520	- 33,440	- 0.9
{ Under one year.....	7,307,050	6,734,310	-572,740	- 7.8
Total sheep.....	17,951,120	17,169,860	-781,260	- 4.4
Swine—				
Sows kept for breeding.....	283,000	254,290	- 28,710	-10.1
Other pigs.....	1,884,940	1,664,250	-220,690	-11.7
Total swine.....	2,167,940	1,918,540	-249,400	-11.5

CANADIAN ANNUAL AGRICULTURAL STATISTICS, 1917.

In accordance with arrangements previously described,¹ the compilation has now been completed of the returns received from farmers in Quebec, Saskatchewan, Alberta and British Columbia of the areas sown in 1917 to the principal field crops and of the numbers of farm live stock in June, 1917. For the province of Quebec the returns received were 28,133 out of 133,729, the number of occupiers of 11 acres and upwards according to the Census of 1911; from Saskatchewan the returns received were 35,592 out of 103,912, the number of occupiers according to the Census of 1916; from Alberta the returns received were 14,444 out of 69,305, the number of occupiers according to the Census of 1916; and from British Columbia the returns received were 6,886 out of about 15,000, the estimated number of agricultural occupiers in that province. Consequently the proportion of the replies received to the total number of farmers was, approximately, in Quebec 21, in Saskatchewan 34, in Alberta 21 and in British Columbia 46 per cent.

¹Monthly Bulletin of Agricultural Statistics, Vol 10, No. 104, 1917, p. 95; Vol. 10, No. 108, 1917, p. 208.

Using the totals of the returns received from occupiers as representing actual facts and aided by the knowledge of local conditions possessed by the provincial Departments of Agriculture, as well as by the census returns for purposes of general control, the Census and Statistics Office and the provincial Departments of the four provinces, respectively, have agreed upon final estimates of the acreages sown to the principal field crops in 1917 and of the numbers of farm live stock in June, 1917, classified according to the schedules issued for each province. These estimates are now in the hands of the provincial Departments of Agriculture for publication by counties in Quebec and by local crop districts in the other provinces. The totals for each province are given in Table I (Field Crops) and in Table II (Live Stock).

I. Areas sown to Field Crops in Quebec, Saskatchewan, Alberta, and British Columbia, 1917.

QUEBEC.

Crops.	Acreage.	Crops.	Acreage.
Wheat.....	277,409	Alfalfa.....	3,818
Oats.....	1,492,709	Pasture.....	2,685,359
Barley.....	165,597	Potatoes.....	226,917
Flax.....	5,726	Turnips and mangolds.....	49,746
Rye.....	22,454	Beet roots.....	11,428
Peas.....	66,457	Other root crops.....	9,018
Beans.....	55,157	Green forage.....	47,784
Mixed grains.....	122,819	Other forage crops.....	27,593
Buckwheat.....	163,577	Fallow.....	764,631
Corn.....	143,369		
Other grain crops.....	18,711	Total of crops and fallow....	9,322,262
Hay and clover.....	2,961,983		

SASKATCHEWAN.

Wheat.....	8,273,253	Mangolds.....	1,566
Oats.....	4,521,642	Sugar beets.....	2,138
Barley.....	669,927	Other root crops.....	3,600
Flax.....	753,700	Corn for fodder.....	15,658
Rye.....	53,269	Green forage.....	102,313
Peas.....	2,605	Other forage crops.....	14,846
Mixed grains.....	39,500	Fallow.....	3,758,941
Hay.....	260,275	Gardens.....	42,929
Alfalfa.....	9,500		
Potatoes.....	67,700	Total of crops and fallow....	18,597,162
Turnips.....	3,800		

ALBERTA.

Fall wheat.....	51,692	Potatoes.....	48,917
Spring wheat.....	2,845,644	Turnips.....	5,748
All wheat.....	2,897,336	Mangolds.....	996
Oats.....	2,537,883	Sugar beets.....	1,151
Barley.....	472,112	Other root crops.....	3,052
Flax.....	139,827	Corn for fodder.....	3,976
Rye.....	30,883	Green forage.....	19,854
Peas.....	1,851	Other forage crops.....	18,033
Mixed grains.....	24,027	Fallow.....	1,153,106
Other grain crops.....	49,114	Garden.....	26,068
Hay ¹	493,522		
Alfalfa.....	31,396	Total of crops and fallow....	8,233,420
Pasture ²	274,568		

¹Cultivated grasses for hay.

²Cultivated grasses for pasture.

I. Areas sown to Field Crops in Quebec, Saskatchewan, Alberta and British Columbia, 1917—con.

BRITISH COLUMBIA.

Crops.	Acreage.	Crops.	Acreage.
Fall wheat.....	3,236	Alfalfa.....	8,681
Spring wheat.....	18,101	Pasture.....	565,024
All wheat.....	21,337	Potatoes.....	15,024
Oats.....	60,234	Turnips.....	2,003
Barley.....	5,524	Mangolds.....	1,016
Flax.....	54	Sugar beets.....	401
Rye.....	911	Other root crops.....	1,170
Peas.....	1,338	Corn for fodder.....	2,239
Beans.....	2,117	Grain in hay.....	18,990
Mixed grains.....	1,850	Green forage.....	1,810
Buckwheat.....	185	Other crops.....	2,392
Corn for husking.....	222	Fallow.....	9,268
Other grain crops.....	260		
Hay and clover.....	129,254	Total of crops and fallow....	851,304

NOTE.—The schedules for Saskatchewan and Alberta called for the areas of "Cultivated grasses for hay" and "Cultivated grasses for pasture," but it is apparent that the distinction between wild and tame hay and pasture was not carefully observed, and therefore the figures for hay in Saskatchewan and for hay and pasture in Alberta do not represent the actual totals for either description.

II. Numbers of Farm Live Stock in Quebec, Saskatchewan, Alberta and British Columbia, June, 1917.

QUEBEC.

	No.		No.
HORSES—		CATTLE—	
Stallions, 2 years old and over.....	25,421	Bulls, kept for breeding.....	111,248
Mares, 2 years old and over....	175,523	Milch cows (in milk or in calf).....	911,023
Geldings, 2 years old and over.....	128,046	Calves, under 1 year old.....	481,540
Colts and fillies under 2 years old.....	50,286	All other cattle.....	365,222
Total horses.....	379,270	Total cattle.....	1,869,033
		SHEEP.....	849,148
		SWINE.....	712,087
		POULTRY.....	5,679,278

SASKATCHEWAN.

HORSES—		All other cattle.....	426,452
Stallions, 2 years old and over.....	13,486	Total cattle.....	1,211,090
Mares, 2 years old and over....	352,199	SHEEP.....	127,892
Geldings, 2 years old and over.....	360,640	SWINE.....	573,938
Colts and fillies under 2 years old.....	153,976	POULTRY—	
Total horses.....	880,301	Hens.....	3,605,514
MULES.....	8,371	Chickens.....	3,787,203
CATTLE—		Turkeys.....	204,322
Bulls, kept for breeding.....	17,077	Geese.....	93,780
Milch cows.....	354,403	Ducks.....	156,922
Calves, born in 1917.....	283,371	Total poultry.....	7,847,741
Steers, 2 years old and over....	129,787		

II. Numbers of Farm Live Stock in Quebec, Saskatchewan, Alberta and British Columbia, June, 1917—*con.*

ALBERTA.

	No.		No.
HORSES—		SHEEP.....	276,966
Mares, 2 years old and over...	292,113	SWINE.....	730,237
Geldings, 2 years old and over...	247,366	POULTRY—	
Colts and fillies, under 2 years	178,838	Hens.....	2,901,857
Total horses.....	718,317	Turkeys.....	159,177
CATTLE—		Geese.....	79,720
Bulls, kept for breeding.....	41,840	Ducks.....	122,463
Milch cows.....	325,861	Total poultry.....	3,263,217
Steers, 2 years old and over...	187,339		
Calves, born in 1917.....	363,583		
All other cattle.....	616,671		
Total cattle.....	1,535,294		

BRITISH COLUMBIA.

HORSES—		BEEF CATTLE—	
Stallions, 2 years old and over	984	Bulls, kept for breeding.....	3,018
Mares, 2 years old and over...	20,220	Cows, 2 years old and over...	47,884
Geldings, 2 years old and over	18,319	Yearlings.....	33,712
Colts and fillies under 2 years		Calves.....	29,190
old.....	8,408	All other beef cattle.....	39,720
Mules.....	156	Total beef cattle.....	153,524
Other horses and mules.....	7,193	Total cattle.....	240,343
Total horses and mules...	55,280	SHEEP.....	43,858
DAIRY CATTLE—		SWINE.....	37,688
Bulls, kept for breeding.....	2,126	POULTRY—	
Milch cows, 2 years old and		Hens.....	600,229
over (in milk or in calf).....	49,005	Chickens.....	735,449
Yearlings.....	16,421	Geese.....	8,322
Calves.....	17,998	Ducks.....	16,368
All other dairy cattle.....	1,269	Turkeys.....	7,632
Total dairy cattle.....	86,819	Total poultry.....	1,368,000

The areas under field crops for each of the four provinces in Table I of this article are also included in Table I on page 221, and they thus form the basis for the preliminary estimates of yield by the application to the areas of the average yields per acre as returned by crop correspondents at the end of August.

It will be noted that the percentage of replies ranges from 21 to 46, which, for the first year, and considering that the collection of annual agricultural statistics obtained by means of returns collected from individual occupiers is a new departure, may be regarded as affording encouragement to further efforts in the same direction. In Quebec, Saskatchewan and Alberta the co-operation of the provincial Education Departments has been of great value, and the school teachers and school children in those provinces have carried out the work entrusted to them with zeal and enthusiasm. With the gradual perfection of arrangements as the result of experience, and with an increasing realization on the part of farmers of the national and local importance of accurate annual agricultural statistics, the proportion

of replies will, it is hoped, so increase that eventually the necessity for estimation may be reduced to a minimum. The anticipated adhesion of Ontario, Manitoba and the Atlantic Provinces next year will secure further local developments and tend towards complete nationalization of the Annual Agricultural Statistics of the Dominion.

ESTIMATED NUMBERS OF FARM LIVE STOCK, 1912-1917.

The collection in June, 1917, of returns of the numbers of farm live stock from individual farmers in the provinces of Quebec, Saskatchewan, Alberta and British Columbia, and their publication in Table II on page 244 renders it necessary to bring up to date the estimated numbers of farm live stock for the whole of Canada which were published in the issue for July last (Vol. 10, No. 107, pp. 167-168). Accordingly the following statement gives the total figures for horses, milch cows, other cattle, all cattle, sheep and swine by provinces and for the whole of Canada for the years 1912 to 1917.

Estimated Numbers of Farm Live Stock, 1912-1917.

Live Stock.	1912.	1913.	1914.	1915.	1916.	1917.
	No.	No.	No.	No.	No.	No.
Canada—						
Horses.....	2,602,357	2,866,008	2,947,738	2,996,099	3,258,342	3,412,749
Milch cows.....	2,604,488	2,740,434	2,673,286	2,666,846	2,833,433	3,202,283
Other cattle.....	3,827,373	3,915,687	3,363,531	3,399,155	3,760,718	4,718,657
Total cattle.....	6,431,861	6,656,121	6,036,817	6,066,001	6,594,151	7,920,940
Sheep.....	2,082,381	2,128,531	2,058,045	2,038,662	2,022,941	2,369,358
Swine.....	3,477,310	3,448,326	3,434,261	3,111,900	3,474,840	3,619,382
Prince Edward Island—						
Horses.....	35,638	35,952	36,114	36,898	38,562	38,948
Milch cows.....	49,415	48,565	47,317	47,043	46,032	46,032
Other cattle.....	64,688	64,261	61,048	59,503	57,260	54,970
Total cattle.....	114,103	112,826	108,365	106,546	103,292	101,002
Sheep.....	87,793	85,660	85,351	86,640	88,797	90,573
Swine.....	50,462	43,762	41,718	40,792	38,300	35,236
Nova Scotia—						
Horses.....	61,735	62,550	62,581	63,244	64,193	64,193
Milch cows.....	130,104	130,468	128,237	128,814	130,141	131,442
Other cattle.....	156,051	153,726	148,269	144,458	140,673	135,046
Total cattle.....	186,155	184,194	276,506	273,272	270,814	266,488
Sheep.....	216,135	217,734	211,921	205,542	200,979	200,979
Swine.....	61,194	56,580	53,892	53,402	51,928	49,850
New Brunswick—						
Horses.....	65,582	65,103	65,702	65,827	65,169	65,169
Milch cows.....	110,507	106,904	102,713	101,665	100,221	100,221
Other cattle.....	113,136	107,864	99,256	96,437	92,223	89,456
Total cattle.....	223,643	214,768	201,969	198,102	192,444	189,677
Sheep.....	148,723	135,115	121,739	111,026	105,997	103,877
Swine.....	85,905	77,014	73,325	72,533	70,683	69,269
Quebec—						
Horses.....	367,402	369,974	372,009	372,567	332,628	379,276
Milch cows.....	755,770	761,816	733,476	720,420	639,805	911,023
Other cattle.....	695,906	693,540	625,958	612,500	535,693	958,010
Total cattle.....	1,451,676	1,455,356	1,359,434	1,332,920	1,175,498	1,869,033
Sheep.....	620,881	602,751	571,287	554,491	497,711	849,148
Swine.....	747,254	661,768	634,569	632,729	531,303	712,087

Estimated Numbers of Farm Live Stock, 1912-1917—con.

Live Stock.	1912.	1913.	1914.	1915.	1916.	1917.
Ontario—	No.	No.	No.	No.	No.	No.
Horses.....	805,271	902,628	904,975	903,527	896,208	887,246
Milch cows.....	1,033,392	1,141,071	1,085,843	1,077,808	1,082,119	1,082,119
Other cattle.....	1,380,890	1,460,015	970,445	935,606	901,924	805,847
Total cattle.....	2,414,282	2,601,086	2,056,288	2,013,414	1,984,043	1,947,966
Sheep.....	877,462	705,848	640,416	611,789	589,581	595,477
Swine.....	1,693,594	1,652,440	1,553,624	1,469,573	1,404,618	1,236,064
Manitoba—						
Horses.....	293,776	304,088	316,707	317,847	324,175	324,175
Milch cows.....	148,471	152,792	156,306	157,494	196,288	202,177
Other cattle.....	267,130	256,926	251,996	240,603	357,870	357,870
Total cattle.....	415,601	409,718	408,302	404,097	554,158	560,047
Sheep.....	40,800	42,840	45,303	50,880	76,750	80,588
Swine.....	183,370	184,745	186,271	163,308	205,898	175,013
Saskatchewan—						
Horses.....	551,645	580,386	609,521	630,062	841,907	880,301
Milch cows.....	184,896	194,843	204,624	211,684	322,185	354,403
Other cattle.....	461,244	468,255	474,436	543,609	689,208	856,687
Total cattle.....	646,140	663,098	679,060	755,293	1,011,393	1,211,090
Sheep.....	114,810	115,568	126,027	133,311	124,237	127,892
Swine.....	344,298	386,784	454,703	411,324	530,727	573,938
Alberta—						
Horses.....	451,573	484,809	519,424	544,772	634,188	718,317
Milch cows.....	157,922	168,376	179,068	183,974	277,324	325,861
Other cattle.....	587,307	610,917	633,032	660,000	882,766	1,209,433
Total cattle.....	745,229	779,293	812,100	843,974	1,160,090	1,535,294
Sheep.....	135,075	178,015	211,001	238,579	292,620	276,966
Swine.....	278,747	350,692	397,123	229,696	603,554	730,237
British Columbia—						
Horses.....	59,735	60,518	60,705	61,355	61,312	55,124
Milch cows.....	34,011	35,599	35,702	37,944	39,318	49,005
Other cattle.....	101,021	100,183	99,091	100,439	103,101	191,338
Total cattle.....	135,032	135,782	134,793	138,383	142,419	240,343
Sheep.....	40,702	45,000	45,000	46,404	46,269	43,858
Swine.....	32,485	34,541	39,021	38,543	37,829	37,688

In this table the figures of 1917 for the provinces of Quebec, Saskatchewan, Alberta and British Columbia are as collected this year in June; but for the other provinces the figures are as estimated from the reports of correspondents on the basis of the census. For 1916, the figures for the three Prairie Provinces are those of the recently issued Reports on the Census of 1916, whilst for the other provinces they are estimated from the reports of correspondents. For each of the years 1912 to 1915 the figures for all provinces represent estimates based on the reports of correspondents.

According to the revised table the total numbers of farm live stock in Canada in June, 1917, were as follows: Horses 3,412,749 (3,258,342); milch cows 3,202,283 (2,833,433); other cattle 4,718,657 (3,760,718); all cattle 7,920,940 (6,594,151); sheep 2,369,358 (2,022,941); swine 3,619,382 (3,474,840). The figures within round brackets are those of 1916.

THE WEATHER DURING AUGUST.

The Dominion Meteorological Office reports that with regard to temperature August has been a fairly average month in all parts of the Dominion. The largest positive departure from normal, about 3°, occurred in the province of Quebec, and the largest negative

departures, also about 3°, occurred in southern Alberta and near Lake Superior. There were no periods of excessive heat, and on the other hand there was no abnormally cool periods, and while in the Prairie Provinces there were a few light ground frosts towards the close of the month they were too slight to cause appreciable damage. In the West the rainfall was for the most part less than average, but in the more central portions of both Saskatchewan and Alberta the fall was about normal. The larger part of Ontario had a somewhat excessive rainfall, but there was a deficiency in most of the counties immediately north of Lakes Erie and Ontario, with the exception of York, where several heavy thunderstorms occurred. Nearly all portions of Quebec and the Maritime Provinces had a rainfall much in excess of the average.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the Weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce per long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William.

Grain and Grade.	August 4.		August 11.		August 18.		August 25.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.	2 38	— 2 40	2 40	—	2 40	—	2 40	—
No. 2 Nor.	2 35	— 2 37½	2 38	— 2 40	2 40	—	2 40	—
No. 3 Nor.	2 30	— 2 32½	2 33	— 2 37	2 38	— 2 40	2 38	— 2 40
No. 4.	2 18	— 2 24½	2 24	— 2 29	2 30	— 2 35	2 32	— 2 36
No. 5.	1 93	— 2 00½	2 02	— 2 10	2 12	— 2 17	2 14	— 2 18
No. 6.	1 66	— 1 74	1 75	— 1 85	1 87	— 1 92	1 88	— 1 93
Feed	1 54	— 1 64	1 66	— 1 72	1 72	—	1 69	— 1 72
Oats—								
No. 2 C.W.	0 74	— 0 79	0 69	— 0 75	0 63	— 0 67	0 62	— 0 63½
No. 3 C.W.	0 74	— 0 76	0 68	— 0 74	0 66	—	0 60	— 0 61½
No. 1 Feed Ex.	0 72	— 0 76	0 68	— 0 74	0 66	—	0 60	— 0 61½
No. 1 Feed.	0 70	— 0 73	0 65	— 0 70	0 64	—	0 58	— 0 59½
No. 2 Feed.	0 70	—	0 63	— 0 68	0 62	—	0 57	— 0 58½
Barley—								
No. 3 C.W.	1 20	— 1 25	1 20	— 1 25	1 22	— 1 24	1 17	— 1 22
No. 4 C.W.	1 15	— 1 20	1 15	— 1 22	1 18	— 1 20	1 13	— 1 18
Rejected	1 09	— 1 11	1 11	— 1 13	1 13	—	1 10	— 1 13
Feed.	1 09	— 1 11	1 11	— 1 13	1 13	—	1 10	— 1 13
Flax—								
No. 1 N.W.C.	3 23	— 3 35	3 27½	— 3 35½	3 27	— 3 39½	3 33½	— 3 59½
No. 2 C.W.	3 16½	— 3 30½	3 21½	— 3 30½	3 21	— 3 33½	3 27½	— 3 52½
No. 3 C.W.	3 06	— 3 18	3 10½	— 3 19½	3 11	— 3 21½	3 17½	— 3 42½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	May.		June.		July.		August.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	1 22	—1 24	2 22	—2 98	2 10	—2 73	2 14	—2 61
Chicago.....	1 22½	—1 22½	2 24	—3 07	2 11	—2 66	2 12	—2 60
New York (f.o.b. afloat).....	1 29	—1 31½	—	—	—	—	2 25	—2 60
Corn, No. 2, mixed—								
St. Louis.....	0 76	—	1 55	—1 75½	1 77	—2 31	1 61	—2 33
New York (f.o.b. afloat).....	0 86	—0 86½	1 66½	—1 90½	1 90	—2 40	1 85	—2 49
Corn, No. 2—								
Chicago.....	0 77½	—0 78½	1 58	—1 76	1 77½	—2 32	1 69	—2 36
Oats, No. 2—								
St. Louis.....	0 43½	—	0 63	—0 72	0 71	—0 83½	0 52½	—0 77
Chicago.....	0 45½	—0 46	0 62	—0 69	0 68½	—0 85	0 51	—0 80
Rye, No. 2—								
Chicago.....	0 97	—0 97½	2 34	—2 40	2 10	—2 44	1 65	—2 15

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	August 6.		August 13.		August 20.		August 27.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	2 62	—	2 62	—	—	—	—	—
“ No. 2.....	2 57½	—	2 57½	—	—	—	—	—
“ No. 3.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—
“ No. 4.....	2 38½	—	2 38½	—	2 38½	—	2 38½	—
“ No. 5.....	—	—	—	—	—	—	2 32½	—
American—								
Montana Cert.....	2 54½	—	2 54½	—	2 54½	—	2 54½	—
Omaha Cert.....	2 51½	—	2 51½	—	2 51½	—	2 51½	—
Red winter Western.....	2 47½	—	2 47½	—	2 47½	—	2 47½	—
“ common.....	2 38½	—	2 38½	—	2 38½	—	2 38½	—
Argentine.....	2 47½	—2 53½	2 47½	—2 53½	2 47½	—2 53½	2 47½	—2 53½
Australian.....	2 59	—	2 59	—	2 59	—	2 59	—
Indian.....	2 68½	—2 72½	2 68½	—2 72½	2 67½	—2 70½	2 64½	—2 67½
Californian.....	2 62	—	2 62	—	2 62	—	2 62	—
Oats (per bush.)—								
Canadian.....	1 65½	—1 68	1 65½	—1 68	1 65½	—1 68	1 62½	—1 65½
American.....	1 62½	—1 65½	1 62½	—1 65½	1 62½	—1 65½	1 57½	—1 60½
Chilian.....	1 65½	—1 75½	1 65½	—1 75½	1 65½	—1 75½	1 65½	—1 75½
Flour (per 280 lb.)—								
Canadian good.....	19 47	—19 95	19 47	—19 95	19 47	—19 95	19 47	—19 95
“ first bakers'.....	18 74	—18 98	18 74	—18 98	18 74	—18 98	18 74	—18 98
“ common.....	18 00	—18 25	18 00	—18 25	18 00	—18 25	18 00	—18 25
American spring good.....	19 47	—20 20	19 47	—20 20	19 47	—20 20	19 47	—20 20
“ spring common.....	18 49	—18 74	18 49	—18 74	18 49	—18 74	18 49	—18 74
“ second clears.....	15 09	—15 33	15 09	—15 33	15 09	—15 33	15 09	—15 33
Kansas best.....	19 95	—20 20	19 95	—20 20	—	—	—	—
“ F.A.Q.....	18 49	—18 74	18 49	—18 74	18 49	—18 74	18 49	—18 74
Australian.....	19 47	—19 95	19 47	—19 95	—	—	—	—
Japanese.....	18 25	—18 49	18 25	—18 49	18 25	—18 49	18 25	—18 49

III. Range of Prices of Imported Grain and Flour at British Markets, 1917—con.**LIVERPOOL.**

Description.	August 7.		August 14.		August 21.		August 28.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
Nor. Man. No. 1.....	—	—	—	—	2 66½	—	—	—
“ No. 3.....	—	—	—	—	2 50	—	—	—
“ No. 4.....	2 40½	2 42	2 41	2 42½	2 41	2 42½	—	—
“ No. 4 special.....	2 37½	—	2 39	—	—	—	—	—
Tough.....	—	—	2 49½	—	2 44½	—	—	—
No. 3 hard winter.....	2 45	—	—	—	2 45½	—	—	—
No. 4 “.....	2 41	—	2 41	—	—	—	—	—
No. 3 mixed winter.....	2 45	—	2 45½	—	—	—	2 45½	—
No. 4 “.....	2 40½	—	2 40½	—	—	—	—	—
Oats—								
Canadian.....	1 57½	1 62½	1 54½	1 59½	1 53½	1 57½	1 53½	1 56½
Chilian white.....	—	—	—	—	1 60½	1 62½	1 60½	—
“ black.....	1 62½	—	—	—	—	—	—	—
“ tawny.....	1 51½	1 56½	1 51½	1 54½	1 50½	1 51½	1 50½	1 51½
“ mixed.....	—	—	—	—	1 51½	1 53½	—	—

IV. Average Prices of British-grown Grain, 1917.

Week ended.	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
	s. d.	\$ cts.	s. d.	\$ cts.	s. d.	\$ cts.
August 4.....	78 2	2.378	73 6	2.146	55 0	1.457
“ 11.....	78 4	2.377	76 1	2.222	55 0	1.457
“ 18.....	78 7	2.390	68 11	2.012	55 6	1.471
“ 25.....	76 7	2.329	70 7	2.061	54 7	1.446
Average.....	77 11	2.368	72 3	2.111	55 0	1.458

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended September 30, 1917.

This report gives the second or provisional estimate of the yield of the principal grain crops of Canada in 1917, a statement of the quality of these crops at the time of harvesting and the condition of root crops on September 30. The report is compiled from the returns of crop correspondents made at the end of September.

YIELD OF PRINCIPAL GRAIN CROPS.

The estimates of the yield per acre of wheat, oats, barley and flax are somewhat lower than those reported at the end of August, and the reduction applies to all the provinces. The later returns being based to a larger extent upon threshing results appear to indicate that the first estimates, based upon the appearance of the crops in the field, were too high. The total yield of wheat for Canada is now provisionally estimated at 231,730,200 bushels, the average yield per acre being $15\frac{3}{4}$ bushels, as compared with $16\frac{3}{4}$ bushels reported a month ago and with 17 bushels the yield of 1916. Of oats the total yield is 393,570,000 bushels, as compared with 410,211,000 bushels in 1916, the average yield per acre being $29\frac{1}{2}$ bushels in 1917 as compared with 37.30 bushels in 1916. Barley yields 51,684,000 bushels, as compared with 42,770,000 bushels in 1916, the average per acre being $21\frac{1}{2}$ bushels as compared with 23.72 bushels in 1916. The yield of rye is 4,239,800 bushels, which is slightly more than the quantity returned a month ago; the yield per acre is 20 bushels as against 19.3 bushels in 1916. For the three Prairie Provinces the yields are as follows: Wheat, 209,794,200 bushels, oats 237,925,000, rye 2,534,000 bushels, barley 36,727,000 bushels, flaxseed 6,747,000 bushels. The total yields of the remaining grain crops, now reported for the first time this year, are as follows: peas 3,373,000 bushels from 194,425 acres, an average of $17\frac{1}{4}$ bushels per acre; beans 1,389,700 bushels from 92,457 acres, average 15 bushels per acre; buckwheat, 8,217,000 bushels from 395,977 acres, or $20\frac{3}{4}$ bushels per acre; mixed grains 16,461,400 bushels from 497,236 acres, 33 bushels per acre and corn for husking 9,177,400 bushels from 303,369 acres, an average of $30\frac{1}{4}$ bushels per acre.

QUALITY OF GRAIN CROPS.

Correspondents were asked to report on the quality of the grain crops at the time of harvest, as measured against a standard of 100, representing grain well headed, well filled, well saved and unaffected to any appreciable extent by frost, rust, smut, etc. The

average results for the whole of Canada are as follows: Fall wheat 76, spring wheat 72, all wheat 73, oats 74, barley 75, rye 79, peas 69, beans 71, buckwheat 63, mixed grains 79, flax 67, corn for husking 67. The figures are generally high for Ontario, wheat being 80, oats 92 and barley 89. In Quebec wheat is 67 and oats are 74. In the Prairie Provinces wheat is 75 in Manitoba, 70 in Saskatchewan and 75 in Alberta. Oats are 62 in Manitoba, 57 in Saskatchewan and 56 in Alberta.

CONDITION OF ROOT AND FODDER CROPS.

The condition of root and fodder crops, measured against a standard of 100 as representing a full crop, was, on September 30, as follows: potatoes 64, turnips 72, mangolds, carrots, etc., 77, sugar beets 76, corn for fodder 72 and alfalfa 81. The condition of the potato crop by provinces was on September 30 as follows: Prince Edward Island 81, Nova Scotia 77, New Brunswick 57, Quebec 47, Ontario 80, Manitoba 69, Saskatchewan 71, Alberta 89 and British Columbia 70.

Census and Statistics Office,
Ottawa, October 18, 1917.

ERNEST H. GODFREY,
Editor.

I. Provisional Estimate of the Yield of Cereal Crops, September 30, 1917, compared with 1916.

Field Crops.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	bush. per acre.	bush. per acre.	bush.*	bush.
Canada—						
Fall wheat.....	818,264	725,300	21.50	21.75	17,590,000	15,708,200
Spring wheat.....	14,551,445	14,030,530	16.85	15.50	245,191,000	216,022,000
All wheat.....	15,369,709	14,755,850	17.10	15.75	262,781,000	231,730,200
Oats.....	10,996,487	13,313,400	37.30	29.50	410,211,000	393,570,000
Barley.....	1,802,996	2,392,200	23.72	21.50	42,770,000	51,684,000
Rye.....	148,404	211,880	19.38	20.00	2,876,400	4,239,800
Peas.....	151,790	194,425	14.50	17.25	2,218,100	3,372,000
Beans.....	32,500	92,457	12.70	15.00	412,600	1,389,700
Buckwheat.....	341,500	395,977	17.50	20.75	5,976,000	8,217,000
Flax.....	657,781	919,500	12.56	7.50	8,259,800	6,872,700
Mixed grains.....	412,670	497,236	25.75	33.00	10,584,750	16,461,400
Corn for husking.....	173,000	303,369	36.25	30.25	6,282,000	9,177,400
P. E. Island—						
Spring wheat.....	34,500	36,000	16.75	13.50	578,000	486,000
Oats.....	199,000	201,000	37.25	33.75	7,413,000	6,784,000
Barley.....	3,600	3,500	29.25	29.50	105,000	103,000
Peas.....	80	60	22.25	24.75	1,300	1,500
Buckwheat.....	2,500	2,500	27.25	28.33	68,000	71,000
Mixed grains.....	8,000	7,800	41.25	36.75	330,000	209,000
Nova Scotia—						
Spring wheat.....	13,400	16,200	19.50	17.00	261,000	275,000
Oats.....	116,000	123,000	34.75	28.75	4,031,000	3,536,000
Barley.....	4,700	4,800	26.25	23.25	123,000	112,000
Rye.....	320	300	17.00	16.00	5,400	4,800
Peas.....	180	170	17.75	16.50	3,200	2,800
Beans.....	850	1,000	16.25	20.75	13,800	20,800
Buckwheat.....	10,000	10,900	24.50	19.75	245,000	215,000
Mixed grains.....	4,100	4,000	34.00	28.50	139,000	114,000
New Brunswick—						
Spring wheat.....	14,000	16,000	17.25	14.75	242,000	236,000
Oats.....	198,000	190,000	30.50	27.25	6,039,000	5,178,000
Barley.....	1,900	1,800	23.75	23.30	45,000	42,000
Peas.....	400	400	16.50	18.33	6,600	7,300
Beans.....	250	300	15.25	19.50	3,800	5,900
Buckwheat.....	53,000	57,000	22.75	20.00	1,206,000	1,140,000
Mixed grains.....	870	840	34.25	26.25	30,000	22,000

I. Provisional Estimate of the Yield of Cereal Crops, September 30, 1917, compared with 1916—con.

Field Crops.	1916.	1917.	1916.	1917.	1916.	1917.
	acres.	acres.	bush. per acre.	bush. per acre.	bush.	bush.
Quebec—						
Spring wheat.....	64,000	277,400	15-00	14-25	960,000	3,953,000
Oats.....	1,073,000	1,492,700	22-75	22-75	24,411,000	33,959,000
Barley.....	72,800	165,600	20-00	20-00	1,456,000	3,312,000
Rye.....	8,300	22,450	14-25	19-75	118,000	443,000
Peas.....	21,600	66,457	14-00	13-50	302,000	897,000
Beans.....	4,400	55,157	17-75	15-25	78,000	841,000
Buckwheat.....	101,000	163,577	19-00	17-25	1,919,000	2,822,000
Flax.....	500	5,700	10-50	12-00	5,300	68,700
Mixed grains.....	91,000	122,819	20-25	25-00	1,843,000	3,070,400
Corn for husking.....	13,000	143,369	24-75	23-00	322,000	3,297,400
Ontario—						
Fall wheat.....	774,800	656,500	21-25	21-50	16,465,000	14,115,000
Spring wheat.....	90,200	113,000	16-25	20-50	1,466,000	2,317,000
All wheat.....	865,000	769,500	20-73	21-25	17,931,000	16,432,000
Oats.....	1,991,000	2,687,000	25-50	38-50	50,771,000	103,450,000
Barley.....	326,000	361,000	23-00	31-00	7,498,000	11,191,000
Rye.....	69,000	68,000	17-50	18-50	1,208,000	1,258,000
Peas.....	126,000	126,000	14-25	19-25	1,796,000	2,426,000
Beans.....	27,000	36,000	11-75	14-50	317,000	522,000
Buckwheat.....	175,000	162,000	14-50	24-50	2,538,000	3,969,000
Flax.....	4,500	4,000	9-25	14-25	42,000	57,000
Mixed grains.....	286,000	295,000	26-00	38-00	7,436,000	11,210,000
Corn for husking.....	160,000	160,000	37-25	36-75	5,960,000	5,880,000
Manitoba—						
Fall wheat.....	3,829	3,860	15-93	20-00	61,000	77,200
Spring wheat.....	2,721,896	2,445,000	10-88	15-50	29,606,000	37,898,000
All wheat.....	2,725,725	2,448,860	10-88	15-50	29,667,000	37,975,200
Oats.....	1,443,599	1,500,000	33-55	27-00	48,439,000	40,500,000
Barley.....	687,503	708,000	19-97	19-50	13,729,000	13,806,000
Rye.....	30,050	37,000	18-54	17-00	557,000	629,000
Flax.....	15,684	16,300	13-38	8-00	210,000	130,000
Mixed grains.....	1,400	1,400	32-25	31-00	45,000	43,000
Saskatchewan—						
Fall wheat.....	15,258	10,000	21-24	21-00	324,000	210,000
Spring wheat.....	9,016,851	8,263,250	16-33	14-25	147,235,000	117,751,000
All wheat.....	9,032,109	8,273,250	16-34	14-25	147,559,000	117,961,000
Oats.....	3,791,807	4,521,600	43-06	25-00	163,278,000	113,040,000
Barley.....	367,207	669,990	27-00	18-50	9,916,000	12,393,000
Rye.....	22,759	53,250	24-08	21-00	548,000	1,118,000
Peas.....	1,600	(2,605)	32-50	—	52,000	—
Flax.....	542,034	753,700	12-35	7-25	6,692,000	5,464,000
Mixed grains.....	14,150	39,500	35-00	24-00	495,250	948,000
Alberta—						
Fall wheat.....	18,177	51,700	30-20	23-50	549,000	1,214,000
Spring wheat.....	2,586,798	2,845,690	24-95	18-50	64,539,000	52,644,000
All wheat.....	2,604,975	2,897,300	24-99	18-75	65,088,000	53,858,000
Oats.....	2,124,081	2,537,900	48-11	33-25	102,199,000	84,385,000
Barley.....	336,586	472,100	29-04	22-25	9,774,000	10,528,000
Rye.....	17,975	30,880	24-49	25-50	440,000	787,000
Peas.....	650	(1,851)	20-00	—	13,000	—
Flax.....	95,063	139,800	13-79	8-25	1,310,500	1,153,000
Mixed grains.....	4,550	24,027	30-00	32-50	136,500	780,000
British Columbia—						
Fall wheat.....	6,200	3,240	30-75	28-50	191,000	92,000
Spring wheat.....	9,800	18,100	31-00	25-50	304,000	462,000
All wheat.....	16,000	21,340	30-94	26-00	495,000	554,000
Oats.....	60,000	60,200	60-50	45-25	3,630,000	2,738,000
Barley.....	2,700	5,500	45-75	35-75	124,000	197,000
Peas.....	1,300	1,338	33-75	27-33	44,000	38,000
Mixed grains.....	2,600	1,850	50-00	25-00	130,000	65,000

II. Comparative Quality of Cereal Crops, September 30, 1914-17.

NOTE.—100=Grain well headed, well filled, well saved and unaffected to any appreciable extent by frost, rain, smut, etc.

Field Crops.	Sept. 30, 1914.	Sept. 30, 1915.	Sept. 30, 1916.	Sept. 30, 1917.	Field Crops.	Sept. 30, 1914.	Sept. 30, 1915.	Sept. 30, 1916.	Sept. 30, 1917.
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada—					Ontario—				
Fall wheat.....	75	91	78	76	Fall wheat.....	75	89	78	75
Spring wheat.....	81	93	68	72	Spring wheat.....	88	89	67	87
All wheat.....	78	92	70	73	All wheat.....	82	89	74	80
Oats.....	79	90	75	74	Oats.....	85	89	60	92
Barley.....	77	91	72	75	Barley.....	86	91	63	89
Rye.....	82	93	84	79	Rye.....	82	92	82	85
Peas.....	75	80	66	69	Peas.....	66	70	55	76
Beans.....	82	83	74	71	Beans.....	75	65	57	70
Buckwheat.....	81	79	71	63	Buckwheat.....	80	81	62	74
Mixed grains.....	90	91	74	79	Mixed grains.....	89	91	65	81
Flax.....	64	84	76	67	Flax.....	85	85	72	81
Corn for husking.....	81	84	67	67	Corn for husking.....	84	86	52	55
P. E. Island—					Manitoba—				
Spring wheat.....	100	93	78	59	Fall wheat.....	56	85	87	100
Oats.....	98	88	92	79	Spring wheat.....	73	93	44	75
Barley.....	95	90	91	86	All wheat.....	65	89	45	75
Peas.....	93	83	84	85	Oats.....	66	88	71	62
Beans.....	93	84	80	87	Barley.....	54	86	60	63
Buckwheat.....	88	86	87	83	Rye.....	65	88	90	72
Mixed grains.....	99	92	96	85	Mixed grains.....	61	98	79	82
Flax.....	100	97	88	98	Flax.....	55	69	72	62
Nova Scotia—					Saskatchewan—				
Spring wheat.....	94	89	90	76	Fall wheat.....	66	98	78	—
Oats.....	95	92	92	79	Spring wheat.....	64	96	60	70
Barley.....	91	89	86	81	All wheat.....	65	97	60	—
Rye.....	90	98	100	100	Oats.....	51	92	81	57
Peas.....	87	85	93	92	Barley.....	48	92	78	66
Beans.....	85	86	80	82	Rye.....	58	100	100	74
Buckwheat.....	88	84	83	71	Peas.....	63	94	93	88
Mixed grains.....	96	90	92	81	Beans.....	65	88	100	50
Flax.....	92	100	—	75	Flax.....	51	85	78	58
New Brunswick—					Alberta—				
Spring wheat.....	94	91	88	67	Fall wheat.....	71	94	80	88
Oats.....	97	89	92	69	Spring wheat.....	78	97	73	73
Barley.....	94	87	93	74	All wheat.....	74	96	74	75
Peas.....	91	86	88	78	Oats.....	74	89	82	56
Beans.....	84	83	86	76	Barley.....	74	91	76	72
Buckwheat.....	86	68	78	59	Rye.....	83	97	89	91
Mixed grains.....	93	82	93	76	Peas.....	59	90	72	88
Quebec—					Mixed grains.....	77	97	85	79
Spring wheat.....	90	92	72	67	Flax.....	65	94	82	58
Oats.....	92	92	70	74	British Columbia—				
Barley.....	90	92	71	73	Fall wheat.....	82	96	90	72
Rye.....	88	90	78	76	Spring wheat.....	83	92	91	73
Peas.....	81	85	63	63	All wheat.....	82	94	91	72
Beans.....	86	88	77	70	Oats.....	84	94	91	70
Buckwheat.....	78	78	70	57	Barley.....	76	90	91	76
Mixed grains.....	91	93	72	77	Rye.....	90	98	92	75
Flax.....	81	84	71	74	Peas.....	94	85	91	73
Corn for husking.....	79	83	74	71	Mixed grains.....	88	91	92	86

III. Comparative Condition of Fodder and Root Crops for the months of July, August and September, 1917.

NOTE.—100=Standard or full crop.

Field Crops.	July 31, 1917.	Aug. 31, 1917.	Sept. 30, 1917.	Field Crops.	July 31, 1917.	Aug. 31, 1917.	Sept. 30, 1917.
	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.
Canada—				Ontario—			
Potatoes.....	84	77	64	Potatoes.....	87	87	81
Turnips.....	90	84	72	Turnips.....	90	89	76
Mangolds, carrots, etc.	86	83	77	Mangolds, carrots, etc.	89	88	79
Sugar beets.....	88	89	76	Sugar beets.....	86	85	76
Corn for fodder.....	77	81	72	Corn for fodder.....	76	77	71
Alfalfa.....	86	87	81	Alfalfa.....	95	94	88
P. E. Island—				Manitoba—			
Potatoes.....	97	98	81	Potatoes.....	83	73	69
Turnips.....	94	98	79	Turnips.....	82	77	67
Mangolds, carrots, etc.	91	96	87	Mangolds, carrots, etc.	78	78	72
Sugar beets.....	86	96	83	Sugar beets.....	—	90	74
Corn for fodder.....	85	91	93	Corn for fodder.....	67	72	59
Alfalfa.....	—	80	—	Alfalfa.....	62	67	70
Nova Scotia—				Saskatchewan—			
Potatoes.....	98	89	77	Potatoes.....	74	70	71
Turnips.....	94	93	77	Turnips.....	70	69	65
Mangolds, carrots, etc.	92	89	86	Mangolds, carrots, etc.	66	71	71
Sugar beets.....	93	87	86	Sugar beets.....	75	80	70
Corn for fodder.....	95	90	88	Corn for fodder.....	60	67	54
Alfalfa.....	93	100	—	Alfalfa.....	52	63	60
New Brunswick—				Alberta—			
Potatoes.....	96	80	57	Potatoes.....	67	72	89
Turnips.....	93	92	75	Turnips.....	66	51	75
Mangolds, carrots, etc.	95	95	85	Mangolds, carrots, etc.	69	46	73
Sugar beets.....	89	91	85	Sugar beets.....	73	78	73
Corn for fodder.....	75	78	75	Corn for fodder.....	75	78	43
Alfalfa.....	—	58	80	Alfalfa.....	75	67	72
Quebec—				British Columbia—			
Potatoes.....	86	75	47	Potatoes.....	84	78	70
Turnips.....	101	85	71	Turnips.....	87	83	70
Mangolds, carrots, etc.	87	84	75	Mangolds, carrots, etc.	83	81	78
Sugar beets.....	89	85	74	Sugar beets.....	81	83	74
Corn for fodder.....	80	84	75	Corn for fodder.....	—	—	79
Alfalfa.....	93	91	83	Alfalfa.....	87	74	76

IV. Harvested Area and Provisional Estimate of the Yield of Cereal Crops and Flax in Manitoba, Saskatchewan and Alberta, 1917.

Crops.	Area.	Yield per Acre.	Total Yield.
	acres.	bush.	bush.
Fall wheat.....	65,520	23.00	1,501,200
Spring wheat.....	13,553,850	15.25	208,293,000
All wheat.....	13,619,370	15.50	209,794,200
Oats.....	8,559,500	27.75	237,925,000
Barley.....	1,850,000	19.75	36,727,000
Rye.....	121,120	21.00	2,534,000
Flax.....	909,800	7.50	6,747,000

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—All cereal crops have suffered from blight and rust, especially wheat. One correspondent remarks that some farmers have not yet cut their oats. Potatoes, though showing great promise of a good crop, have suffered in a marked degree, chiefly from blight; also from frost and the potato bug. Other root crops have been damaged, especially turnips, by the dry weather in September.

Nova Scotia.—Heavy frosts during September damaged all crops. Buckwheat in many cases was almost totally destroyed. Potatoes are excellent in some localities, while others report loss by blight and rust. The yield of late grain will be poor. Threshing is late. Pastures are good, and the weather is favourable for harvest.

New Brunswick.—All grain crops are below average, especially wheat and oats. Buckwheat and beans have suffered from early frosts. Potatoes are only about half a crop, owing to blight, rot and rust. Other root crops have suffered in a more or less degree, and only promise a light crop.

Quebec.—The field crops in general have suffered very much from the excessive humidity and great heat of the end of July and August; and the early frosts of September did considerable damage to corn, buckwheat and beans, and to other crops not yet ripened. Potatoes are disappointing; there will be but a small yield, as great quantities have rotted in the ground.

Ontario.—As a rule the grain crops have turned out well, although in many cases the yield of oats did not come up to the expectations formed from appearances in the field. Corn is a poor crop, and was badly injured by frosts on September 9 and 10, as were also buckwheat and beans. Root crops are poor, suffering from drought; and the dry weather has also prevented fall ploughing. A good deal of blight and rot of potatoes is reported.

Manitoba.—Wheat and other grain crops are good both in quality and yield. Threshing has been somewhat retarded by wet weather, but is almost finished in southern Manitoba. Root crops, especially potatoes, have suffered from frosts and drought in May and early June. Some farmers report that pigweed has choked the growth of grains.

Saskatchewan.—The fine weather of the month was favourable for threshing operations, which in most parts have been completed. Generally speaking, grain has graded high, although, owing to the dry summer, the yield is not so heavy as last year. Potatoes and other roots are a fair crop; little damage from frost has been reported.

Alberta.—The grain crop has been harvested in good condition and will be of good quality, although the yield will be lighter than was expected. Threshing is general, and is being done under favourable weather conditions. All root crops have improved greatly in September. The drought and frosts of August are causes of the lower yields.

British Columbia.—The late rains improved pastures, and roots are doing well, but potatoes are small on account of early drought. Crops are in good condition, although early frosts have done slight damage. Little threshing has been done.

CROP REPORTS OF THE PROVINCIAL GOVERNMENTS.

Ontario.—On October 1 the Ontario Department of Agriculture reported that fall wheat seeding was about completed. A large acreage has been got in despite the fact that the land had been so dry and hard. What has come up looked well, and there was a fair prospect of the crop meeting the winter in good condition. Winter rye was still being sown. In Kent, the chief bean raising district of the province, the late crop had been caught by frost, which would prevent ripening more or less, and greatly lower the average yield per acre. On October 8 it was reported that recent rains had helped to put some of the dry, hard clay soil in condition for fall ploughing, and this work had been pushed along as fast as horses and machinery could draw the ploughs. There was still a steady and strong demand for the use of Government tractors for this purpose. Fall wheat sowing was at an end, with a large area to its credit, but the putting in of more winter rye would still be risked if the weather permitted. Corn was being hurried into the silo. Much of it was caught by frost about the 10th and 16th of September, but the quality has been but little affected, taken as a whole. Potatoes were being dug later than usual this year. Some rot on heavy clay fields was complained of, but on loamy and sandy soils there had been practically no injury, and the crop generally was of excellent quality. Roots were highly spoken of both as to yield and quality, but comparatively few had yet been pulled. Clover looked as if it would be in good condition for wintering. It had also been a favourable season for clover seed, which had had little or no injury from frost.

On October 15 beans and buckwheat were reported as more or less injured by frost. Considerable husking corn also got nipped, and will be unfit for seed, although good enough for feed; while from the same cause the general quality of silage will be inferior compared with that of more recent years. Rains had been delaying corn cutting. Most of the fall wheat will enter the winter with a good top, but some has been sown rather late, and there had been but little October growth. Potatoes on the whole will be a fair to good crop both as to yield and quality should rot not develop. They had done remarkably well in the Fort William and some other districts of northern Ontario. The Durham county representative states that this season had proved to the satisfaction of many farmers that spraying with Bordeaux mixture would control the potato blight. Some mangolds, turnips and sugar beets had been pulled, and were generally turning out most satisfactorily, although a number of turnip fields in Bruce, Oxford and Durham were reported to be injured by the Zebra caterpillar.

Tobacco in Essex had been all harvested and mostly sold at 18½ cents

a pound for the Burley variety. Pastures have been somewhat helped by recent rains, although the week was rather too cold for much growth. Young clover looked well. Tomatoes had been late in ripening, and a larger quantity of green ones than usual had to be picked to escape the frost. The onion crop, which was growing in importance in some of the western counties, had been pulled. At Leamington they had been selling at \$2.30 a bag, f.o.b. On October 22 the report was that farmers in all sections had been busy harvesting potatoes, and there were still considerable quantities to be taken up, in some sections 25 p.c. and in others even higher. The yield was reported as being about the average, and rot was mentioned only in a few sections and was apparently not assuming any serious proportions. Prices continued at from \$1 to \$1.50 per bag at local points. This report also stated that live stock conditions almost unanimously received favourable mention. The fodder supply was on the whole very good both in quantity and quality, and a considerable number of farmers were reported to be taking advantage of the announcement a short time ago by which the freight on earload lots of breeding stock was prepaid to rural Ontario points. Carloads had been shipped from the stockyards to several sections, and the farmers were making arrangements to use the fodder to the best advantage. At an auction sale in Peel county recently the lowest price for grade sheep was \$23, while purebred ewes brought as high as \$55. A grade dairy cow was reported as changing hands in another county for \$250.

Saskatchewan.—A press bulletin of the Saskatchewan Department of Agriculture, dated October 13, estimates the total value to farmers of their live stock in 1917 at \$247,901,865, distributed as follows: horse and mules \$142,187,680.00; cows \$35,440,300.00; other cattle \$52,401,220.00; sheep \$1,918,380.00; swine \$11,478,760; poultry \$3,696,358.50; turkeys \$510,805.00; geese \$140,670.00; ducks \$117 691.50.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during September have ranged much the same as last year,—the highest being 80·9, the lowest 31·6 and the mean 56·59, compared with extremes of 83 and 36 and a mean temperature of 58·83 in September, 1916. The precipitation totals 1·2 inch, distributed over eleven different days; while the rainfall for this time last year amounted to 3·15 inches. The bright sunshine averages 6·84 hours a day, as against 5·3 hours a year ago.

During the last two weeks of the month, the Indian corn at the Experimental Farm has been cut and put into the silos, the yield being upwards of fifteen tons per acre of corn of very good quality. Roots have done well, and promise to yield more than an average crop. Considerable ploughing and discing have been done on areas to be devoted to hoed crops next year.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—"September has been very favourable for harvesting grain. No frost has been registered at the Station buildings, the lowest temperature there being 39. In a swamp, about one thousand feet away, twelve white frosts have been recorded, the lowest temperature being 24. Potato vines in many sections of the province have been killed; at this Station only a few local areas have been touched, while the cucumbers, corn, squash, tomatoes and dahlias escaped injury. The weather, at the time of the Charlottetown Exhibition, was warm, and a very large attendance was recorded. The potatoes dug at the Station have turned out well, with very little rot. There is still some late grain out at the close of the month; it has filled well, and is in good condition. Roots and corn are very promising."

Kentville, N.S.—W. S. Blair, Superintendent, reports:—"The month of September has been fine throughout. The rainfall aggregates 3.72 inches, of which 1.78 inch fell on the night of the 20th. The temperature has been lower than usual, and a killing frost did much damage to potatoes and corn in various parts of the Annapolis valley during the nights from the 8th to the 12th, inclusive. Slight frost injury was noticed at this Station on the morning of the 9th and 12th. The yields of grain grown on wet soils have not been large, but on reasonably dry areas they have been good. The wheat yield, on the whole, was light. Corn on naturally dry soil, where early seeded, is good; but on wet soils it is a light crop. The same may be said of roots. Many fields of late planted potatoes have been killed by frost. The potato yield, on the whole, throughout the valley, will be light, averaging probably less than 150 bushels of marketable potatoes per acre. The yield at this Station, on well drained land, where the planting was done early, is large, being about 250 bushels per acre."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"September has been exceptionally fine, with frosts on the 15th and 25th. The heaviest rain during the month occurred on the 22nd. Taking it altogether, it has been a very fine month for the harvesting of crops. All ripe grain has been stored in excellent condition, but the yields are very light. The corn at this Farm yielded abundantly and was stored in good condition. Some of the fruit has been gathered in; the yield of crab apples is very good, but apples have not done so well. The bees have been working on Golden Rod during the month, the honey flow being only fair as compared with other years. A rather high tide occurred about the first of the month, washing out parts of the dyke here and there. Fortunately, most of the hay was harvested before this occurred. The frost experienced on the night of the 15th caused considerable damage to some of the flowers and vegetables. The prisoners of war have been employed in ditching on the new field and in macadamizing the barnyard. All live stock at the Experimental Farm is in good condition."

Fredericton, N.B.—W. W. Hubbard, Superintendent reports:—"After a very wet and cloudy August, September brought an unusually sunny and dry month, which has been most favourable for harvesting operations. The precipitation is only 1.05 inch, against

3.2 inches last year and a 43-year average of 3.4 inches. The hours of sunshine total 201.75, against 180 hours last year, and an average of 180 hours. The mean temperature is 53.2,—somewhat lower than the average, which is 56, and against 57 for September, 1916. There were killing frosts in many low-lying sections on the 8th and the 9th, and again on the 12th, followed by still other frosts on the 23rd and the 24th. As most crops were late, these frosts did a great deal of damage to buckwheat, potatoes and garden truck. At this Station, not very much harm was done before the 12th, when buckwheat, corn, tomatoes, squash and some potatoes were hurt. At the end of the month, many potatoes are yet green. Crops generally, at the Station and throughout central New Brunswick, are the poorest for many years. The very late, cold spring, and the deluge in June and again in August, hurt everything on low-lying areas. Oats are not threshing out more than half an average crop. Wheat and buckwheat are not half the average yield; and potatoes thus far dug do not average more than 110 bushels per acre. With the high cost of seed, fertilizer, and labour, potato growers are likely to have heavy losses unless prices are abnormally high. On the plot where the cost of production has been kept accurately at this Station, the cost figures will run to nearly \$140 for the acre, and, based on a yield of 100 bushels per acre, the price would have to be \$1.40 per bushel, or \$2.10 per 90 pound bag, to break even."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports:—"The temperatures recorded during September, while ranging lower than the year before, are about the same as the average for the last five years,—the highest being 77.5, the lowest 31.4 and the mean 50.6; while for the corresponding period of 1916 the extremes were 89 and 36 and the mean temperature 57.2. The precipitation totals 1.18 inch distributed over five days, as compared with 3.07 inches, distributed over fourteen days during September, 1916. The sunshine averages 7 hours a day, against 4.8 hours a day in 1916. The temperature fell below freezing three nights during the month, with the first killing frost on the 7th, when two degrees of frost checked the growth of corn, tender vegetables and garden annuals. Unfortunately, this unusually early frost also caused some injury to the late sown grain, which was in the milk stage. A very fine spell followed the frost, and almost all grain is cut by the 30th. At the Station, threshing was completed early in the month, and the corn was cut and stored in the silo by the 15th, or immediately after the killing frost, the crop being above the average in weight, but of a poor quality. Field roots have made good progress and promise to be a good crop, both in the case of those sown for feed and those sown later for seed production purposes. The work engaging attention at the Station has included a good deal of cultivating and harrowing of fallows, ploughing stubbles, and preparing the land for planting the hedge around the orchard and poultry yard."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—"September has been colder, drier and brighter than the average of the corresponding month for the last five years, the figures being,

respectively, 53.4 and 55.5 for mean temperature, 2.47 and 4.16 inches for precipitation, 162.3 and 156.4 for hours of sunshine. The fine weather was especially welcomed by those farmers who had not yet finished haying, as well as by those who had grain to save or potatoes to lift. At the end of the month, all the grain at the Station is threshed and stored, the corn is in the silo, and all the ploughing done, excepting for the land now growing roots. The yield of grain is higher than the average, due to most of the Station land being tile-drained, but the weight per bushel is lower. The foundation has been started for a much needed calf barn."

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—"The weather during September has been generally fair, with some rain as well as a frost on the night of the 23rd, which killed all tender plants in the garden. The highest temperature recorded is 79, compared with 80 last year, while the lowest is 24, as against 32 last year and 24 two years ago. The mean temperature is 52.78, compared with 55.41 a year ago. The sunshine recorded totals 188.1 hours, compared with 133.2 last year. The precipitation amounts to 1.78 inch, as against 5.64 inches last year. The fine weather which has prevailed has enabled farmers to finish the harvesting of their grain as well as most of their corn. The excessive amount of rain experienced in this district throughout the summer has been very detrimental to the potato crop, which is not up to the average, blight having appeared before the tubers were matured, and this has affected the yield and also caused considerable decay. At the Station, the lambs were weaned the first part of the month and turned on to the second crop of clover; they are making very satisfactory gains."

Brandon, Man.—W. C. McKillican, Superintendent, reports:—"Good threshing weather prevailed during the first ten days of September, but after that there were showers and damp weather that interfered with threshing operations. The crop is turning out rather better than might be expected under the drought conditions of the whole season, but it is still very light; oats and barley suffered more severely than wheat. A start has been made at fall ploughing; the land was very dry for this work, but conditions have been improved by the showers of the latter part of the month. On the Experimental Farm, threshing was completed before the dry weather ceased, and an excellent sample of grain has been obtained. A good proportion of the fall ploughing has been completed during the month, and a large amount of manure spread on the land."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"September has been very favourable for harvesting operations, and 60 p.c. of the grain is threshed by the end of the month. The yields reported from well-worked land are good, while the sample in almost all cases is excellent. A great deal of the crop is being delivered to the elevators daily. Threshing outfits report some difficulty in securing men, and in many cases are running short-handed. The work on the Experimental Farm has included threshing, working summerfallows and ploughing stubble, taking up vegetables and caring for the live stock and poultry."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—
“The yield in the Rosthern district this year is greater than it has been since 1913, and threshing is being carried on under ideal weather conditions. A great deal of the wheat is grading No. 1 and very little of it as low as No. 3. At the Experimental Station, the wheat under field conditions has yielded from 18 to 30 bushels per acre, barley from 42 to 55 bushels and oats from 43 to 72 bushels per acre, the difference depending upon the nature of the previous crops. The yield of potatoes is larger than any since 1913.”

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—
“Good threshing weather has prevailed during September. The total rainfall only amounts to 0.37 of an inch. As a result, at the end of the month only about 35 p.c. of the crop remains unthreshed. While the crops of oats and barley will be light, wheat is yielding somewhat higher than was generally expected, giving an average return of about fifteen bushels per acre. At the Station, threshing is practically completed at the end of the month, and the live stock now have the run of the stubble fields. One car of feeder steers has been purchased for winter feeding experiments. A poultry plant—including one large permanent house and one portable house and an administration building, which have been under course of erection during the summer—is now about completed.”

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—
“Weather conditions during September have been favourable, and in many districts harvesting operations were completed early in the month, while threshing was well forward throughout this entire section of Alberta by September 30. The yields of all cereals are higher than were expected earlier in the season, and the quality was never better. Wheat yields of forty bushels and even as high as fifty bushels to the acre are reported, while thirty to thirty-five bushel yields are frequent. Since the great bulk of the deliveries have so far graded high, the cash return per acre for this season's crop is likely to be the largest on record. The supply of fodder available for winter use is also very satisfactory. The heavy rains of the early part of the season were conducive to the free growth of vegetables and the yields of prairie hay are extremely heavy. The weather throughout haying was such that the hay has been put up in good condition. In some districts dry weather is reported to be interfering with fall ploughing, but, since the work is well advanced for the season, it is likely that a great deal of fall ploughing will be satisfactorily done.”

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—
“There were two degrees of frost registered on the 5th of September, but no other frost until the 29th when five degrees were registered. During the month there have been six different showers, which interfered quite materially with threshing, although the rainfall totals only 1.67 inch. Threshing in southern Alberta, generally, is well advanced; in some localities it is completed, and over the entire area there is probably 80 p.c. done. The tendency among the farmers appears to be to store the grain in field bins and to start fall ploughing. With the present favourable weather, it would appear that an unusually large amount of fall ploughing will be accomplished.”

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"Although the precipitation for September is only 0.75 of an inch, rain has fallen on ten days. This has prolonged the harvesting of grain and corn and of second cuts of hay. There was a killing frost on the 6th, when all tomatoes, squash and potatoes were cut. In spite of the short season, the flower borders at the Experimental Station have never done so well, and a larger crop of ripe tomatoes was gathered than in previous years. Coyotes have been very troublesome during the past month and have paid marauding visits to the chicken runs of many of the ranchers in this neighbourhood."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"The weather during September has been warm, with very little rain. Crops throughout the valley are suffering in consequence. Potatoes are turning out very small. Apples will be a good crop; in the southern part of the valley there will be about ten per cent more than last year, the fruit being of first quality. Up to now, there has been very little fall ploughing done, and rye, seeded as a cover crop, has made a poor stand. The stockings for carrot seed at this Station have improved very much and are a perfect stand, and, if they come through the winter well, should produce good seed. Mangolds for the same purpose, which were sown much later, are making better progress since the cooler nights came. Threshing commenced the middle of September. Grain did not fill as it should have done."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"The weather for September has been considerably cooler, with more rain than the previous month, 3.44 inches of precipitation being recorded. No frost has occurred. The root crops are improving wonderfully with the fall rains, although some of the farmers have already disposed of their turnips to the evaporators at an excellent price. The potato crop is a very good one, with prices around \$18 per ton. Some of the corn has been placed in the silo; it has reached proper maturity for good silage. The live stock in the district is in good condition. The demand for butcher animals is good, especially for sheep and hogs. Dairy produce is also in demand. Some of the early pullets are laying well. Eggs are selling at over fifty cents a dozen."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"The weather conditions during September have been favourable to the completion of threshing operations and straw baling. Some ploughing was done throughout the district in preparation for autumn cereals. A greater area will be seeded this fall than ever before. A good crop of plums, prunes and early autumn apples has been gathered during the month, the same being largely consumed by the local markets and canneries. The potato crop, where harvested, has been below the average in production in the southern districts of the Island, but in the central districts a good average crop is being harvested. Where irrigation has been practised, two good crops of potatoes have been harvested from the same land. Prices for feed grains are very high, so much so that many of the Hindu dairymen are selling out and going to the logging and mining camps. Large quantities of vegetable produce have been grown on

the vacant lots of the towns and cities; this has tended to keep the prices for such commodities below the average. Live stock is in good condition, and prices for poultry and meat products are high."

Meteorological Record for September, 1917.

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of September are given in the following table:—

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Pos-sible.	Actual.
Ottawa, Ont.....	80.9	31.6	56.59	1.20	376	205.3
Charlottetown, P.E.I.....	76.0	39.0	56.03	1.71	376	246.5
Kentville, N.S.....	78.0	31.0	53.94	3.72	376	214.7
Nappan, N.S.....	78.0	29.0	53.69	0.90	376	198.5
Fredericton, N.B.....	80.0	29.0	53.20	1.05	376	201.8
Ste. Anne de la Pocatière, Que.....	77.5	31.4	50.60	1.18	377	209.2
Cap Rouge, Que.....	77.0	29.2	53.40	2.47	376	162.3
Lennoxville, Que.....	79.0	24.0	52.78	1.78	376	188.1
Brandon, Man.....	90.4	21.2	55.10	1.08	378	179.1
Indian Head, Sask.....	87.0	20.0	52.73	0.71	375	175.8
Rosthern, Sask.....	84.3	22.7	52.98	0.64	378	216.0
Scott, Sask.....	85.8	23.0	52.20	0.37	378	180.4
Lacombe, Alberta.....	81.0	23.9	49.40	2.04	375	175.3
Lethbridge, Alberta.....	85.0	27.0	54.50	1.67	378	197.3
Invermere, B.C.....	80.0	27.0	51.70	0.75	379	142.9
Summerland, B.C.....	82.0	41.0	59.73	0.89	378	187.1
Agassiz, B.C.....	83.0	34.0	58.49	3.44	378	128.7
Sidney, Vancouver I., B.C.....	76.5	42.0	56.00	1.35	377	145.1

Ottawa, October 13, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reported (October 1) that September was on the whole favourable to agriculture in the eastern half of the country; on the western side the weather was more unsettled, and harvest operations were delayed accordingly. Over the greater part of England the grain was secured, generally, by the second or third week of the month, in satisfactory condition; but in the west a certain quantity still remained to be carted, and some in Wales had still to be cut, while much was harvested in damp condition. The potato crop is now being lifted; in some districts much progress has been made, and in others little has been done, especially in the west, where the late harvest and rainy weather have rather postponed this work. There is a good deal of disease in the south-west, but the position does not appear to be so bad as was feared; and in the rest of the country there is very little disease. Except in the northwest, the crop is everywhere above average, especially in the eastern counties, and the yield is expected to be 4 p.c. above average. Turnips and swedes are bad in the eastern and northeastern counties,

where there is a thin plant; but elsewhere they appear to be average, and even over in the southwest. On the whole the yield is expected to be 5 p.c. below the average. Mangolds, on the other hand, are everywhere satisfactory, though they might have been improved by warmer weather, and the yield will probably be 3 p.c. over average. In the east, preparation of the land for autumn sowing has made good progress under favourable conditions, and some wheat and winter oats have already been sown. In the west, lateness of the harvest has allowed of very little being done towards getting the land ready for the new crops. The stubbles are everywhere very full of weeds. Seeds are everywhere a promising plant, although in several of the western districts they have suffered some damage from the grain being laid. Pastures are full of keep, more so than usual at this time of year, but it is mostly not of very good quality, owing to the wet. Live stock have generally improved during the month. There is still great scarcity of skilled labour, but women and soldiers have everywhere been of great assistance, and now that the harvest is over, the situation is a little easier than it has been for some time past.

United States.—The Monthly Crop Report for October of the United States Department of Agriculture gives the following estimates of the acreage, condition and yield of the principal field crops of the United States for 1917 with comparative figures of condition and yield:—

Crops.	Area.		Condition.		Yield per Acre.		Total Yield.	
	1917.	per cent of 1916.	Oct. 1 1917.	Ten year average.	1916.	1917 indicated.	1916 final estimate.	Oct. 1 1917 indicated.
	000 acres.	p.c.	p.c.	p.c.	bush.	bush.	000 bush.	000 bush.
Corn.....	121,045	114.2	75.9	75.2	24.4	26.5	2,583,241	3,210,795 ¹
Winter wheat.....	27,653	79.4	—	—	13.8	15.1	481,744	417,347 ¹
Spring wheat.....	19,039	106.0	—	—	8.8	12.7	158,142	242,450 ¹
All wheat.....	46,692	88.5	—	—	12.1	14.1	639,886	659,797 ¹
Oats.....	43,161	103.9	—	—	30.1	36.6	1,251,992	1,580,714 ¹
Barley.....	8,379	109.2	—	—	23.6	24.1	180,927	201,659 ¹
Rye.....	3,772	122.2	—	—	15.3	14.9	47,383	56,044 ¹
Buckwheat.....	965	114.2	74.8	79.2	14.0	18.5	11,840	17,895
White potatoes.....	4,348	122.5	79.0	72.6	80.4	104.2	285,437	452,923
Sweet potatoes.....	904	116.8	83.2	81.1	91.7	95.5	907	87,244
Flax.....	1,939	120.8	51.3	76.8	9.6	5.8	15,450	11,335
Rice.....	968	111.8	79.7	86.1	47.0	34.3	40,702	33,256
					lb.	lb.	lb.	lb.
Tobacco.....	1,418 ²	100.5	87.8	81.9	815.0	876.4	1,150,622	1,243,023
					tons.	tons.	bales.	bales.
Cotton.....	34,600 ²	96.0	60.4	65.7	156.0	168.3	11,450	12,047
					tons.	tons.	tons.	tons.
Hay (tame).....	51,353	93.4	—	—	1.64	1.49	89,991	76,490 ¹
Hay (wild).....	16,267	97.8	—	—	1.19	0.94	19,795	15,225 ¹
Sugar beets.....	806	105.0	89.7	88.7	9.36	10.67	6.228	7.832

¹ Preliminary estimate.² Planted acreage.

In the above table the yields for wheat, oats, barley, rye, and hay represent the preliminary estimates of the Department; for the other crops the yields are as indicated by their condition on October 31. The total yield of wheat is estimated at 659,797,000 bushels, as compared with 639,886,000 bushels, the final estimate of 1916. The oat crop is estimated to yield 1,580,714,000 bushels as compared with 1,251,992,000 bushels in 1916. Potatoes are estimated at 452,923,000 bushels, compared with 285,437,000 bushels in 1916.

The prices in cents per bushel of the principal cereals on October 1, 1917, as compared with 1916, are as follows, the prices of last year being placed within brackets: Wheat 200·6 (136·3), corn 175·1 (82·3), oats 62·3 (44·5), barley 113·9 (76·5), rye 169·8 (104·1), buckwheat 154·4 (90·4), potatoes 122·1 (112·0), flax 308·5 (199·2), hay per ton 14·29 (10·36).

INTERNATIONAL INSTITUTE OF AGRICULTURE.

A cablegram from the International Institute of Agriculture, dated October 22nd, stated that the total production of wheat in Spain, France, Scotland, Ireland, Italy, Netherlands, Sweden, Switzerland, Canada, United States, India, Japan and Algeria is 1,774,582,000 bushels, or 99 p.c. of the production of the same countries in 1916 and 85·2 p.c. of their five years' average. The total production of rye in Spain, France, Ireland, Italy, Netherlands, Sweden, Switzerland, Canada and the United States is 146,326,000 bushels, or 84·8 p.c. of 1916 and 92·5 p.c. of the average. The total production of barley in the same countries as for wheat, less India, is 517,153,000 bushels, or 99·7 p.c. of 1916, and 95·4 p.c. of the average. The total production of oats in the same countries as for wheat, less India and Japan, is 2,407,661,000 bushels, or 116·3 p.c. of 1916, and 114 p.c. of the average. The total production of corn in Spain, Italy, Switzerland, Canada, and United States is 3,331,414,000 bushels, or 123·7 p.c. of 1916 and 115·4 p.c. of the average. The total production of rice in Spain, Italy and United States is 3,088,000 tons, or 98·3 p.c. of 1916 and 115·6 p.c. of the average.

ESTIMATED WHEAT SURPLUS OF THE UNITED STATES AND CANADA.

An estimate of the wheat surplus in the United States appears in the Monthly Crop Report of October 1917. The preliminary estimate of the production of wheat in the United States for 1917 is 659,797,000 bushels. At the normal average rate of 5·3 bushels per capita for a population of 103,635,000 the normal requirement for food will be 549,811,000 bushels, and the quantity required for seed is placed at 87,271,000 bushels. This leaves a surplus of 22,715,000 bushels. The normal per capita consumption of wheat is estimated at 5·3 bushels as the average for the whole of the United States. The estimate is arrived at in two ways. Several years ago an investigation was made among distributors of flour as to the average amount of flour consumed per person, and the amount was reduced to its wheat

equivalent. Studies of data of wheat production, exports, etc., indicate that the apparent domestic consumption of wheat in the United States usually varies from year to year between 4.9 bushels and 5.5 bushels, averaging about 5.3 bushels. Last year the conditions were unusual, and the apparent per capita consumption was about $4\frac{3}{4}$ bushels, or almost 10 p.c. less than the normal. This year's wheat situation resembles last year rather than the normal, and therefore the food requirements may be reduced by 10 p.c. to 494,830,000 bushels, which makes the exportable surplus to be 77,696,000 bushels, as compared with 108,844,000 bushels, the average annual surplus for the five years 1909-13, based upon the estimated normal consumption. For the five years 1909-13 the actual average annual exports were 102,518,000 bushels.

The estimated exportable wheat surplus of Canada, according to the calculations given on page 230 of the Monthly Bulletin for September, but allowing for a smaller estimate of the total crop as in Table I on page 252, is in round figures 138,300,000; so that the total estimated wheat surplus of the United States and Canada combined is 216,000,000 bushels, or 226,000,000 bushels, if, as is possible, the per capita consumption of wheat in Canada should approximate to that of the United States and be not more than 5 bushels per head.

THE WEATHER DURING SEPTEMBER.

The Dominion Meteorological Office reports that the mean temperature was above average in the western provinces and in some parts of British Columbia, the greatest departure amounting to about 5°, occurring in northern Saskatchewan. From Lake Superior to the Maritime Provinces it was below average, the departure varying in different localities from 1° to 5°. The rainfall was slightly above average over a portion of southern Alberta and southwestern Saskatchewan, while in all other parts of the Dominion it was much below the usual amount for September. Over the larger portion of the Prairie Provinces the fall was less than one inch; this was also the case in the counties bordering on the western half of Lake Ontario and over a large area lying to the northward of the Ottawa river in Quebec. From eastern Manitoba to the Maritime Provinces, with the exception of the above-mentioned areas in Ontario and Quebec, the fall ranged between one and two and one-half inches.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the Weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash

on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	Sept. 1.		Sept. 8.		Sept. 15.		Sept. 22.		Sept. 29.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—										
No. 1 Nor.....	2 21	-2 40	2 21	-2 24	2 21	-2 22	2 21	-	2 21	-
No. 2 Nor.....	2 19	-2 40	2 19	-2 22	2 18	-2 20	2 18	-	2 18	-
No. 3 Nor.....	2 13	-2 33½	2 14	-2 16	2 15	-2 17	2 15	-	2 15	-
No. 4.....	2 03	-2 22	2 04	-2 07	2 08	-2 10	2 10	-2 11	2 09	-2 10
No. 5.....	1 78	-1 97	1 79	-1 83	1 84	-1 89	1 89	-1 93	1 93	-1 94
No. 6.....	1 60	-1 71	1 61	-1 70	1 72	-1 78	1 78	-1 83	1 83	-1 85
Feed.....	1 50	-	1 51	-1 63	1 65	-1 70	1 70	-1 75	1 75	-
Oats—										
No. 2 C.W.....	0 62½	-0 65½	0 64½	-0 67½	0 66½	-0 68½	0 66½	-0 67½	0 66½	-0 68½
No. 3 C.W.....	0 61½	-0 64	0 62½	-0 65½	0 64½	-0 67	0 64½	-0 65	0 63½	-0 66½
No. 1 Feed Ex.....	0 61½	-0 64	0 62½	-0 65½	0 64½	-0 67	0 64½	-0 65	0 63½	-0 66½
No. 1 Feed.....	0 59½	-0 62	0 60½	-0 63½	0 63½	-0 65½	0 63½	-0 64½	0 62½	-0 66½
No. 2 Feed.....	0 58½	-0 61	0 59½	-0 63½	0 62½	-0 65	0 62½	-0 64½	0 62½	-0 65½
Barley—										
No. 3 C.W.....	1 18	-	1 18	-1 21	1 21	-1 24	1 20	-1 25	1 23	-1 25
No. 4 C.W.....	1 14	-	1 14	-1 16	1 17	-1 20	1 16	-1 21	1 19	-1 21
Rejected.....	1 10	-1 12	1 10	-1 12	1 13	-1 15	1 12	-1 15	1 12	-1 15½
Feed.....	1 10	-1 12	1 10	-1 12	1 13	-1 15	1 12	-1 15	1 12	-1 15½
Flax—										
No. 1 N.W.C.....	3 30½	-3 60	3 14½	-3 31½	3 18	-3 27	3 21	-3 33	3 23½	-3 31
No. 2 C.W.....	3 22	-3 51	3 06	-3 23½	3 11½	-3 20½	3 14½	-3 27	3 17½	-3 25
No. 3 C.W.....	3 12	-3 41	2 95½	-3 12½	3 01	-3 10	3 04	-3 16	3 06½	-3 14

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	June.		July.		August.		September.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	2 22	-2 98	2 10	-2 73	2 14	-2 61	2 15	-2 27
Chicago.....	2 24	-3 07	2 11	-2 60	2 12	-2 60	2 17	-2 20
New York (f.o.b. afloat).....	-	-	-	-	2 25	-2 60	2 28	-
Corn, No. 2, mixed—								
St. Louis.....	1 55	-1 75½	1 77	-2 31	1 61	-2 33	1 90	-2 22
New York (f.o.b. afloat).....	1 66½	-1 90½	1 90	-2 40	1 85	-2 49	2 05	-2 32
Corn, No. 2—								
Chicago.....	1 58	-1 76	1 77½	-2 32	1 69	-2 36	1 95	-2 24
Oats, No. 2—								
St. Louis.....	0 63	-0 72	0 71	-0 83½	0 52½	-0 77	0 56½	-0 63
Chicago.....	0 62	-0 69	0 68½	-0 85	0 51	-0 80	0 56½	-0 61½
Rye, No. 2—								
Chicago.....	2 34	-2 40	2 10	-2 44	1 65	-2 15	1 79	-1 92

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

LIVERPOOL,

Description.	Sept. 4.		Sept. 11.		Sept. 18.		Sept. 25.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 3.....	2 50½	—	—	—	2 25½	—	2 25½	—
Nor. Man. No. 4.....	—	—	2 38½	—	2 17½	—	2 17½	—
Kiln dried.....	2 55½	—	2 55½	—	—	—	—	—
No. 2 hard winter.....	—	—	—	—	—	—	2 33½	—
Oats (per bush.)—								
Chilian white.....	1 62½	—	1 64	—	1 65½	—	1 65½	—
Chilian tawny.....	1 54½—1 56½	—	1 53½—1 56½	—	1 55½—1 56½	—	1 55½—1 56½	—
American clipped white.....	1 54½—1 56½	—	1 54½—1 56½	—	1 54½—1 56½	—	1 54½—1 56½	—
Can. Feed No. 1.....	1 59½—1 60½	—	1 59½—1 60½	—	1 59½—1 60½	—	1 59½—1 60½	—
Can. Western No. 2.....	1 60—1 60½	—	1 60—1 60½	—	1 59½—1 60½	—	1 59½—1 60½	—

MARK LANE, LONDON, E.C.

Description.	Sept. 3.		Sept. 10.		Sept. 17.		Sept. 24.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	—	—	—	—	2 35 ³ / ₄	—	—	—
“ No. 2.....	—	—	—	—	2 30 ¹ / ₂	—	—	—
“ Tough.....	—	—	2 50 ¹ / ₂	—	—	—	—	—
“ No. 3.....	2 47 ¹ / ₂	—	2 47 ¹ / ₂	—	2 25	—	2 25	—
“ No. 4.....	2 38 ¹ / ₂	—	2 38 ¹ / ₂	—	2 17 ¹ / ₂	—	2 17 ¹ / ₂	—
“ No. 5.....	2 26 ¹ / ₂	—	2 26 ¹ / ₂	—	2 10 ¹ / ₂	—	2 10 ¹ / ₂	—
“ No. 6.....	2 17 ¹ / ₂	—	2 17 ³ / ₄	—	1 98 ¹ / ₂	—	1 98 ¹ / ₂	—
American—								
Montana Cert.....	2 54 ¹ / ₂	—	—	—	—	—	—	—
Omaha Cert.....	2 51 ¹ / ₂	—	—	—	—	—	—	—
Spring.....	—	—	2 56—2 62	2 26 ¹ / ₂ —2 32 ¹ / ₂	2 26 ¹ / ₂ —2 32 ¹ / ₂	2 26 ¹ / ₂ —2 32 ¹ / ₂	2 26 ¹ / ₂ —2 32 ¹ / ₂	2 26 ¹ / ₂ —2 32 ¹ / ₂
Hard winter.....	—	—	2 50 ¹ / ₂ —2 53 ¹ / ₂	2 29 ¹ / ₂ —2 33 ¹ / ₂	2 29 ¹ / ₂ —2 33 ¹ / ₂	2 29 ¹ / ₂ —2 33 ¹ / ₂	2 29 ¹ / ₂ —2 33 ¹ / ₂	2 29 ¹ / ₂ —2 33 ¹ / ₂
Red Winter Western.....	2 47 ¹ / ₂	—	2 35 ¹ / ₂ —2 47 ¹ / ₂	2 22—2 26 ¹ / ₂	2 22—2 26 ¹ / ₂	2 22—2 26 ¹ / ₂	2 22—2 26 ¹ / ₂	2 22—2 26 ¹ / ₂
“ common.....	2 38 ¹ / ₂	—	—	—	—	—	—	—
Australian.....	2 59	—	2 59	—	2 41 ¹ / ₂	—	2 41 ¹ / ₂	—
Indian—								
White.....	2 67 ¹ / ₂	—	2 64 ¹ / ₂	—	2 42 ³ / ₄ —2 45 ³ / ₄	—	—	—
Red.....	2 64 ¹ / ₂	—	2 62	—	2 41 ¹ / ₂	—	2 41 ¹ / ₂	—
Californian.....	2 62	—	2 62	—	2 32 ¹ / ₂ —2 38 ¹ / ₂	—	—	—
Argentine.....	—	—	—	—	2 32 ¹ / ₂ —2 35 ¹ / ₂	—	2 32 ¹ / ₂ —2 35 ¹ / ₂	—
Blue Stem.....	—	—	—	—	—	—	2 32 ¹ / ₂ —2 35 ¹ / ₂	—
Walla Walla.....	—	—	—	—	—	—	2 29 ¹ / ₂ —2 32 ¹ / ₂	—
Oats (per bush.)—								
Canadian.....	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂	1 62 ¹ / ₂ —1 65 ¹ / ₂
American.....	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂	1 57 ¹ / ₂ —1 60 ¹ / ₂
Chilian.....	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂	1 65 ¹ / ₂ —1 75 ¹ / ₂
Flour (per 280 lb.)—								
Canadian, Good.....	—	—	19 71—19 95	19 71—19 95	19 71—19 95	—	—	—
“ first bakers.....	18 74—18 98	18 74—18 98	18 74—18 98	18 74—18 98	18 74—18 98	—	—	—
“ common.....	18 00—18 25	18 00—18 25	18 00—18 25	18 00—18 25	18 00—18 25	—	—	—
“ soft winter.....	—	—	—	—	—	—	—	—
“ Export.....	—	—	—	—	—	—	13 02	—
“ Patent.....	—	—	—	—	—	—	13 02	—
Manitoba, 76 p.c.....	—	—	—	—	18 25—18 40	—	—	—
American, spring, best.....	—	—	19 71—19 95	19 71—19 95	—	—	—	—
“ first bakers.....	18 98—19 22	18 98—19 22	18 98—19 22	18 98—19 22	—	—	—	—
“ common.....	18 49—18 74	18 49—18 74	18 49—18 74	18 49—18 74	—	—	—	—
“ first clears.....	—	—	—	18 00—18 25	—	—	—	—
“ second clears.....	15 09—15 33	15 09—15 33	15 09—15 33	15 09—15 33	15 09—15 33	15 09—15 33	15 09—15 33	15 09—15 33
Kansas, best.....	—	—	19 47—19 71	19 47—19 71	—	—	—	—
“ F.A.Q.....	—	—	18 98—19 22	18 98—19 22	—	—	—	—
Australian.....	—	—	19 71—19 95	19 71—19 95	19 71—19 95	19 71—19 95	19 71—19 95	19 71—19 95
Japanese.....	18 25—18 49	18 25—18 49	18 25—18 49	18 25—18 49	18 25—18 49	18 25—18 49	18 25—18 49	18 25—18 49

IV. Average Prices of British-grown Grain, 1917.

Week ended—	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
	s. d.	\$ c.	s. d.	\$ c.	s. d.	\$ c.
July 7.....	78 1	2.375	69 5	2.027	55 2	1.462
" 14.....	78 2	2.378	70 10	2.068	55 1	1.459
" 21.....	78 3	2.380	72 1	2.105	55 2	1.462
" 28.....	78 3	2.380	65 7	1.915	55 2	1.462
Average.....	78 2	2.379	69 6	2.029	55 2	1.461
August 4.....	78 2	2.378	73 6	2.146	55 0	1.457
" 11.....	78 4	2.377	76 1	2.222	55 0	1.457
" 18.....	78 7	2.390	68 11	2.012	55 6	1.471
" 25.....	76 7	2.329	70 7	2.061	54 7	1.446
Average.....	77 11	2.368	72 3	2.111	55 0	1.458
September 1.....	72 1	2.193	60 4	1.761	49 0	1.299
" 8.....	71 6	2.175	59 3	1.730	46 7	1.235
" 15.....	70 7	2.147	57 2	1.669	45 0	1.193
" 22.....	70 8	2.149	56 10	1.659	45 8	1.211
" 29.....	70 6	2.145	58 5	1.706	44 7	1.182
Average.....	71 1	2.162	58 5	1.705	46 2	1.221

FRUIT PRODUCTION OF THE PRAIRIE PROVINCES.

(As returned by the Census of June 1, 1916.)

QUANTITIES.

Fruits.	Manitoba.	Saskatchewan.	Alberta.	Total.
	quarts.	quarts.	quarts.	quarts.
Strawberries.....	2,736	5,280	15,971	23,987
Raspberries.....	27,693	29,307	10,038	58,038
Currants.....	17,795	21,290	11,836	59,921
Gooseberries.....	4,763	10,297	5,366	20,426
Other small fruits.....	327	2,932	—	3,259
	bush.	bush.	bush.	bush.
Apples.....	962	171	303 ¹	—
Other orchard fruits.....	1,101	1,261	262	2,624

VALUES.

	\$	\$	\$	\$
Strawberries.....	477	655	1,309	2,441
Raspberries.....	4,905	2,314	1,127	8,346
Currants.....	3,108	3,482	2,257	8,847
Gooseberries.....	567	1,376	573	2,516
Other small fruits.....	180	433	—	613
Apples.....	1,733	531	1,173	3,437
Other orchard fruits.....	820	1,069	270	2,159

¹barrels.

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DOMINION STATISTICIAN AND CONTROLLER OF CENSUS: R. H. COATS, B.A., F.S.S.
EDITOR: ERNEST H. GODFREY, F.S.S. CENSUS AND STATISTICS OFFICE,
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA.

FIELD CROPS OF CANADA.

Report for the month ended October 31, 1917.

The following is a report of the Census and Statistics Office on the yield, quality and value of the root and fodder crops of 1917, the acreage and condition on October 31 of fall wheat sown for 1918 and the progress of fall ploughing.

ROOT AND FODDER CROPS.

The area this year under root and fodder crops consisting of potatoes, turnips, etc., hay and clover, alfalfa, fodder corn and sugar beets amounts to about 9,521,500 acres, as compared with 8,843,500 acres in 1916, all crops excepting sugar beets sharing in the increase. In total value, at local prices, these crops amount for 1917 to \$267,664,300, as compared with \$246,761,200 in 1916. The total yield of hay and clover is estimated to be 13,684,700 tons from 8,225,000 acres, as compared with last year's high record of 14,527,000 tons from 7,821,200 acres, and it is higher than in any year previous to 1916. The yield per acre, 1.66 ton, comparing with 1.86 ton last year, is higher than in any year since 1910, when it was 1.82 ton. The average value per ton is \$10.40 as against \$11.60 last year. Potatoes yield a total of 79,892,000 bushels, as compared with 63,297,000 bushels last year and 62,604,000 bushels in 1915; but the increase for this year is due to the larger area planted (656,958 acres as compared with 473,000 acres in 1916) and not to the yield per acre, which averaging only 121.61 bushels is the lowest on record, excepting the year 1910, when the average was 119.36 bushels. The average yield last year was 133.82 bushels; in 1915 it was 130.81 bushels and in 1914 180 bushels, the record year. The average value of the potato crop is \$1 per bushel as against 81 cents last year, and the total value of the crop is \$81,355,000 as compared with \$50,982,300 last year.

By provinces the potato yield is highest in Prince Edward Island and Nova Scotia, 175 bushels, the remaining provinces being in order of yield in bushels per acre as follows: British Columbia 166.55; Alberta 151.46; New Brunswick 149.80; Ontario 133.67; Saskatchewan 133; Manitoba 106; Quebec 80. The prices per bushel by provinces are as follows: Quebec \$1.38; Ontario \$1; Nova Scotia 92 cents; British Columbia 91 cents; Saskatchewan 85 cents; Manitoba and Alberta 76 cents and Prince Edward Island 75 cents. The quality of the tubers is 92 per cent of the standard in Nova Scotia and 65 per cent in Quebec; in the other provinces the quality is between 80 and 89 per cent.

The total yield of turnips and other roots is estimated at 63,451,000 bushels from 218,233 acres, as compared with 36,921,100 bushels from 141,839 acres in 1916. Of fodder corn the yield is 2,103,570 tons as against 1,907,800 tons in 1916. Alfalfa yields 262,400 tons against 286,750 tons last year and sugar beet 117,600 tons against 71,000 tons.

FALL WHEAT AND FALL PLOUGHING.

The area estimated to be sown to fall wheat for the season of 1918 is 711,112 acres, or 4 p.c. less than the area sown in 1916 for the crop of 1917; in Ontario the hard and dry condition of the soil made it difficult to sow fall wheat, and the area sown is estimated to be about 4 p.c. less than last year. In Alberta there is shown to be a slight increase, or 61,384 acres as compared with 60,776 acres. There are also small areas sown to fall wheat in Manitoba, 4,129 acres, Saskatchewan 11,883 acres and British Columbia 3,476 acres. The condition of fall wheat on October 31 for all Canada is 80 p.c. of the standard, as compared with 76 p.c. last year. In Ontario the condition is 80 p.c. and in Alberta it is 91 p.c. Of the total land intended for next year's crops 53 p.c. is estimated to have been ploughed by October 31, the percentage proportions in the West being 40 for Manitoba, compared with 47 last year, 37 for Saskatchewan as against 28 and 38 for Alberta as against 21.

Census and Statistics Office,
Ottawa, November 16, 1917.

ERNEST H. GODFREY,
Editor.

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1916 and 1917.

Field Crops.	Area.	Yield per acre.	Total Yield.	Quality.	Average price.	Total Value.
	acres.	bush.	bush.	p.c.	per bush. \$	\$
Canada—						
Potatoes.....	1916 472,992	133.82	63,297,000	84	0.81	50,982,300
	1917 656,958	121.61	79,892,000	78	1.02	81,355,000
Turnips and other roots.	1916 141,839	264.24	36,921,100	86	0.39	14,329,000
	1917 218,233	290.75	63,451,000	86	0.46	29,253,000
		tons.	tons.		per ton.	
Hay and clover.....	1916 7,821,257	1.86	14,527,000	93	11.60	168,547,900
	1917 8,225,034	1.66	13,684,700	89	10.40	142,320,300
Fodder corn.....	1916 293,058	6.65	1,907,800	78	4.92	9,396,000
	1917 297,488	7.07	2,103,570	79	5.18	10,900,960
Sugar beets.....	1916 15,000	4.75	71,000	78	6.20	440,000
	1917 14,000	8.46	117,600	79	6.75	793,800
Alfalfa.....	1916 99,350	2.91	286,750	92	10.09	3,066,000
	1917 109,825	2.39	262,400	90	11.59	3,041,300
P. E. Island—		bush.	bush.		per bu.	
Potatoes.....	1916 31,000	206.00	6,386,000	95	0.52	3,321,000
	1917 35,000	175.00	6,125,000	89	0.75	4,594,000
Turnips and other roots.	1916 8,000	477.00	3,816,000	96	0.28	1,068,000
	1917 8,100	505.39	4,094,000	88	0.31	1,269,000

1. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1916 and 1917—con.

Field Crops.	Area.	Yield per acre.	Total Yield	Quality.	Average price.	Total Value
P. E. Island—con.		tons.	tons.		per ton.	\$
Hay and clover..... 1916	199,000	1.70	338,000	93	11.56	3,907,000
1917	197,000	1.55	305,400	99	12.67	3,869,000
Fodder corn..... 1916	250	13.00	3,300	100	2.50	8,300
1917	250	7.00	1,800	80	5.00	9,000
Nova Scotia—		bush.	bush.		per bu.	
Potatoes..... 1916	34,500	201.00	6,935,000	91	0.69	4,785,000
1917	41,000	174.94	7,173,000	83	0.92	6,599,000
Turnips and other roots. 1916	9,000	404.00	3,636,000	89	0.42	1,527,000
1917	9,100	350.93	3,193,000	85	0.47	1,501,000
Hay and clover..... 1916	553,000	1.80	995,000	96	12.25	12,189,000
1917	542,000	1.65	894,300	89	11.83	10,580,000
Fodder corn..... 1916	500	8.75	4,400	90	2.50	11,000
1917	480	6.20	4,400	99	6.00	26,400
Alfalfa..... 1916	30	5.00	150	—	15.00	2,300
1917	30	3.50	100	75	15.00	1,500
New Brunswick—		bush.	bush.		per bu.	
Potatoes..... 1916	39,000	192.00	7,488,000	89	0.84	6,290,000
1917	46,000	149.80	6,891,000	80	1.13	7,787,000
Turnips and other roots. 1916	7,700	411.00	3,165,000	94	0.45	1,424,000
1917	7,700	300.54	2,314,000	89	0.61	1,412,000
Hay and clover..... 1916	574,000	1.48	850,000	94	11.27	9,563,000
1917	568,000	1.60	909,000	94	10.29	9,354,000
Fodder corn..... 1916	100	10.00	1,000	97	4.00	4,000
1917	85	9.00	770	88	6.00	4,600
Quebec—		bush.	bush.		per bu.	
Potatoes..... 1916	112,000	131.00	14,672,000	76	0.97	14,232,000
1917	226,917	80.02	18,158,000	65	1.38	25,058,000
Turnips and other roots. 1916	10,000	265.00	2,650,000	88	0.48	1,272,000
1917	70,192	224.51	15,759,000	88	0.59	9,298,000
Hay and clover..... 1916	2,985,000	1.75	5,224,000	93	11.00	57,464,000
1917	2,961,983	1.71	5,065,000	85	9.58	48,523,000
Alfalfa..... 1916	2,600	2.65	7,000	87	9.50	67,000
1917	3,818	2.26	8,600	85	8.37	72,000
Ontario—		bush.	bush.		per bu.	
Potatoes..... 1916	133,000	61.00	8,113,000	77	1.28	10,385,000
1917	142,000	133.67	18,981,000	85	1.00	18,981,000
Turnips and other roots. 1916	97,000	211.00	20,467,000	74	0.36	7,368,000
1917	94,000	340.93	32,047,000	83	0.35	11,216,000
Hay and clover..... 1916	3,059,000	2.00	6,118,000	95	11.90	72,804,000
1917	2,998,000	1.70	5,097,000	92	10.26	52,295,000
Fodder corn..... 1916	248,000	6.50	1,612,000	64	4.80	7,738,000
1917	265,000	7.54	1,998,000	76	5.00	9,990,000
Sugar beets..... 1916	15,000	4.75	71,000	78	6.20	440,000
1917	14,000	8.40	117,600	79	6.75	793,800
Alfalfa..... 1916	56,000	3.00	168,000	94	9.75	1,638,000
1917	52,000	2.74	142,500	89	10.08	1,436,000

I. Estimated Area, Yield, Quality and Value of Potato, Root and Fodder Crops, 1916 and 1917—con.

Field Crops.		Area.	Yield per acre.	Total Yield.	Quality.	Average price.	Total Value.
		acres.	bush.	bush.	p.c.	per bush.	\$
Manitoba—							
Potatoes.....	1916	31,987	147.22	4,709,000	92	0.61	2,872,500
	1917	34,400	105.90	3,643,000	82	0.76	2,769,000
Turnips and other roots.	1916	3,118	145.00	452,000	91	0.49	221,500
	1917	2,500	185.12	463,000	77	0.63	292,000
Hay and clover.....	1916	77,642	1.83	142,000	93	7.80	1,107,600
	1917	75,000	1.00	75,000	85	11.11	833,300
Fodder corn.....	1916	9,830	2.75	27,000	99	4.67	126,000
	1917	9,800	4.86	47,600	78	7.50	357,000
Alfalfa.....	1916	4,422	2.75	12,200	85	11.83	144,300
	1917	4,400	2.07	9,100	88	13.45	122,400
Saskatchewan—			bush.	bush.		per bu.	
Potatoes.....	1916	46,989	155.76	7,319,000	93	0.62	4,537,800
	1917	67,700	133.09	9,010,000	86	0.85	7,659,000
Turnips and other roots.	1916	1,621	252.93	410,000	88	0.57	233,700
	1917	11,104	155.55	1,727,000	80	0.91	1,572,000
Hay and clover.....	1916	25,154	2.35	59,000	92	5.85	345,200
	1917	260,275	1.42	369,600	85	10.12	3,740,000
Fodder corn.....	1916	2,253	2.60	5,900	86	6.00	35,400
	1917	15,658	2.00	31,300	88	8.00	250,400
Alfalfa.....	1916	3,086	2.85	8,800	86	10.25	90,200
	1917	9,500	1.61	15,300	80	13.40	205,000
Alberta—			bush.	bush.		per bu.	
Potatoes.....	1916	29,216	163.71	4,783,000	84	0.53	2,535,000
	1917	48,917	151.46	7,409,000	88	0.76	5,631,000
Turnips and other roots.	1916	1,700	270.41	475,000	92	0.61	289,800
	1917	10,947	207.56	2,272,000	82	0.74	1,681,000
Hay and clover.....	1916	173,461	1.93	334,000	84	8.62	2,879,100
	1917	493,522	1.48	730,400	93	10.92	7,976,000
Fodder corn.....	1916	675	2.56	1,700	100	9.00	15,300
	1917	3,976	1.00	4,000	88	7.00	28,000
Alfalfa.....	1916	20,612	2.65	54,600	91	10.70	584,200
	1917	31,396	2.05	64,400	96	10.73	691,000
British Columbia—			bush.	bush.		per bu.	
Potatoes.....	1916	15,300	189.00	2,892,000	84	0.70	2,024,000
	1917	15,024	166.55	2,502,000	87	0.91	2,277,000
Turnips and other roots.	1916	3,700	500.00	1,850,000	89	0.50	925,000
	1917	4,590	344.58	1,582,000	94	0.64	1,012,000
Hay and clover.....	1916	175,000	2.67	467,000	87	17.75	8,289,000
	1917	129,254	1.85	239,000	97	21.55	5,150,000
Fodder corn.....	1916	450	10.00	4,500	86	7.00	32,000
	1917	2,239	7.00	15,700	75	15.00	235,500
Alfalfa.....	1916	12,600	2.88	36,000	94	15.00	540,000
	1917	8,681	2.58	22,400	96	22.92	513,400

II. Area estimated to be sown to Fall Wheat in 1917, compared with 1916, and Condition on October 31, 1915, 1916 and 1917.

NOTE.—For condition, 100 = Standard or full crop.

Provinces.	1916 area sown.	1917 area sown.	Increase (+) or decrease (—)		Condition on October 31,		
					1915.	1916.	1917.
	acres.	acres.	acres.	p.c.	p.c.	p.c.	p.c.
Canada.....	737,040	711,112	— 25,928	— 4.0	88	76	80
Ontario.....	656,500	630,240	— 26,260	— 4.0	88	75	80
Manitoba.....	4,488	4,129	— 359	— 8.0	69	77	90
Saskatchewan.....	11,765	11,883	+ 118	+ 1.0	93	80	83
Alberta.....	60,776	61,384	+ 608	+ 1.0	89	85	91
British Columbia.....	3,511	3,476	— 35	— 1.0	95	86	76

III. Progress of Fall Ploughing, 1914-1917.

NOTE.—100 = Area of land intended for next year's crop.

Provinces.	1914.	1915.	1916.	1917.	Provinces.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada—	71	53	51	53	Ontario.....	63	57	54	47
P. E. Island.....	72	80	83	76	Manitoba.....	92	36	47	40
Nova Scotia.....	51	62	50	57	Saskatchewan.....	77	27	28	37
New Brunswick.....	69	73	68	58	Alberta.....	56	34	21	38
Quebec.....	75	76	69	67	British Columbia...	60	61	50	51

IV. Percentage of Land under Summer Fallow, as compared with previous years, 1914-1916.

NOTE.—100 = Area under summer fallow in the previous year.

Provinces.	1914.	1915.	1916.	1917.	Provinces.	1914.	1915.	1916.	1917.
	p.c.	p.c.	p.c.	p.c.		p.c.	p.c.	p.c.	p.c.
Canada—	99	80	92	90	Ontario.....	96	81	80	86
P. E. Island.....	99	94	91	98	Manitoba.....	106	77	104	97
Nova Scotia.....	95	96	86	89	Saskatchewan.....	103	71	103	97
New Brunswick.....	86	90	82	80	Alberta.....	95	74	90	94
Quebec.....	92	89	84	81	British Columbia...	97	91	91	75

See Note on Summer Fallowing in the Census and Statistics Monthly of November, 1915 (Vol. 8, No. 87, p. 279).

CROP REPORTS FROM THE PROVINCES.

Prince Edward Island.—The potato crop in general is below the average, owing to late blight, rust, or early frosts. Turnips were also affected. Other root crops are fairly good.

Nova Scotia.—Wet weather and heavy winds caused considerable damage to all crops in most parts of the province. Farmers in general report the potato crop as poor, owing to blight, dry rot and white grub. Turnips sustained injury from Zebra caterpillars and club root. Frost early in September injured many fields of grain. The hay crop was average although affected by bad weather.

New Brunswick.—The harvest has been hampered by continuous rains, which have caused blight and rust. Potatoes are below average, and of only fair quality. Fall ploughing has been delayed by heavy rains, and in some districts frost has set in.

Quebec.—Throughout the whole province the potato crop has been generally a poor one; in many cases it is a total failure. The other root crops have also turned out to be below the average. Grain crops, with exceptions in some localities, have only given a fair yield, the general yield being less than that of last year. The hay crop was abundant, but owing to the frequent rains a considerable proportion was not harvested in good condition. Less than the average percentage of fall ploughing has been done, but this may be remedied before the close of the season.

Ontario.—Potatoes are a very uneven crop. Some are excellent, but others on low land have been spoiled by rain and are affected with rot. In places potatoes and turnips are still in the ground, and a few are frozen. Other roots are a good average crop. Turnips were injured slightly by Zebra caterpillar. Hay was harvested in good condition, except some late hay, which was damaged by wet weather. The short summer season was unfavourable for fodder corn. Fall wheat is of good quality, but backward. Fall ploughing is delayed on account of the late harvest and shortage of farm labour.

Manitoba.—While a few correspondents report a good crop of potatoes, the majority say that about 50 per cent are a total loss owing to the ground being frozen before they were dug. Early frosts and continued cold weather put a stop to fall ploughing. The hay crop is light, on account of dry weather. Threshing is not completed.

Saskatchewan.—In south Saskatchewan farmers report potatoes to be very poor this year, owing to drought and early frosts. All other root crops also suffered from frost, and very little fall ploughing was done, as on October 16 snow fell to almost ten inches. Labour was very scarce. Northern Saskatchewan suffered from a hot dry summer, which caused drought and deteriorated all root crops, the yield being below average. Potatoes, which in some districts were good, were not plentiful, yielding scarcely enough for home consumption. Fall ploughing was hindered by the severe frosts. Fall rye is reported to have been sown by many with good results.

Alberta.—The late rains helped growth of potatoes and the quality is generally good. Other vegetables are only grown for home use. Hay was harvested in good condition. Threshing was not completed. The ground is favourable for fall ploughing, which is progressing well.

British Columbia.—Crops vary according to the condition of moisture. On well irrigated land potatoes and other roots yielded well. Elsewhere the hot, dry summer injured all crops. Alfalfa and hay are of good quality. The ground is too hard and dry for fall ploughing, but this work is usually done in November.

CROP REPORTS FROM ONTARIO.

The Ontario Department of Agriculture has issued a weekly summary of crop reports made by district representatives. On October 29 it was reported that recent rains had helped the new fall wheat considerably and that the bulk of the crop was likely to enter the winter in good condition. The Durham representative reported that a carload of horses, each weighing from 1,250 to 1,400 lb., was shipped from the county that week. For the most part they were in good condition, but some were advanced in years. They ranged from \$175 to \$225 in price. Well broken young horses, however, were scarce. While Middlesex reported the shipment of a considerable number of fat cattle, the indications were that in most quarters more young stock would be kept over than in the last season. On November 5 it was reported that the cold weather had compelled the comparatively early stabling of dairy cattle and horses, which would mean more consumption of fodder supplies. The report of November 12 stated that roots were turning out well as a class, and storing was nearly completed. Turnips were described as being very uniform in size, and mangolds and sugar beets were also favourably regarded both as to yield and quality. On November 19 the Department reported that fall wheat in many quarters lacked the size and general appearance of braird that is desirable for entering the winter in the most promising condition, as much of the crop was planted late, and the raw weather of the mid-fall season checked growth considerably. It was claimed by some, however, that the vigour of the roots might carry the crop nicely through, should winter conditions be at all favourable. The report of November 26 states that a large acreage had been ploughed during the preceding two weeks, as very favourable weather was then prevailing, and most farmers were able to finish their allotted task in that line; but owing to the heavy freezing of the latter part of the week those who were behind with their ploughing had to quit, and might not be able to turn up any more land this season, although a few tractors were trying to do a little ploughing where the ground was not frozen too hard. The potato situation was getting much attention. The yield was large, both as to average per acre and total, and the general condition so far was satisfactory. Prices appeared to be strengthening. Buyers of hay, both Canadian and American, were beginning to get more active throughout the province. In most districts the market price per ton delivered ran from \$12 to \$14, and from \$7 to \$9 in the barn. Clover promised to winter well, but both fall wheat and rye would go under the snow with a smaller top than was desirable. The sudden cold weather which hit those young crops at the end of the week would also be trying to the fields.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The weather during October has been cool and wet, with much less sunshine than usual. The highest temperature recorded is 61.6° , the lowest 24.9° and the mean 42.4° , compared with 76.8° and 23.6° and a mean temperature of 45.78° a year ago. The rainfall, distributed over eighteen different days, totals 5.17 inches; while in the corresponding period of 1916 there was rain on fourteen days, amounting to 2.92 inches, and the average in October for the past 18 years is 2.64 inches. The bright sunshine averages only 2.95 hours a day,—the lowest since the recording instrument was installed in 1898; as against 5.36 hours daily in October, 1916, and an average of 4.34 hours for October during the past twenty years.

The field turnips and mangolds were harvested during the latter part of October, giving an average yield in each case of about twenty-five tons per acre, which is somewhat better than usual. Upwards of five hundred tons of mangold and turnip stecklings have been pitted for the winter, and from these it is hoped to get a heavy crop of root seed next summer.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—"Precipitation has been recorded on eighteen different days during October, the heaviest rain so far recorded at this Station occurring on October 22nd, when 3.27 inches fell in 24 hours. Notwithstanding frequent showers, farmers have been able to continue their autumn work with very few breaks. The potato crop turned out better than the earlier estimates, and the amount of dry rot was less than anticipated. Potato digging was about completed by the middle of the month. The turnip, mangold and corn crops were extra good. Corn and mangolds were all saved before the end of October, while many people also saved their turnips. On October 31st, the dahlias, sweet peas and many of the annual flowers were still in full bloom and uninjured by the frost. Tomatoes, cucumbers and green beans were gathered in the open and used right up to the end of the month. There have been purchased, for experimental work, 20 steers and 30 lambs. These are the most uniform and thrifty lot that has ever been secured for this Station."

Kentville, N.S.—W. S. Blair, Superintendent, reports:—"The first week of October was fine, giving ideal conditions for packing apples and harvesting potatoes. The second week was dark, with rain amounting to 1.12 inch. The third week was fine, giving a good opportunity for finishing potato digging and gathering fruit. On the 20th there were 2.15 inches of rain, followed by 3.52 inches more on the 22nd, which caused floods equal to the early spring freshets. The total precipitation from the 20th to the 25th was 6.77 inches. This unusual wet spell, with the ground already very moist from previous rains, made it impossible to get on any except sandy fields, and, as a result, it has not been possible to do much ploughing that otherwise would

have been done. The last week of the month, although cloudy, has been warm and satisfactory for apple harvesting, which is generally pretty well finished. There has been very little frost during the month, the temperature going below freezing only four times, the coldest being four degrees on the 15th and 27th. There was a severe gale on the night of the 30th, doing considerable damage by uprooting apple trees. The turnips planted late for seed purposes were harvested during the last week in the month. Much difficulty was experienced in getting them off the land owing to the ground being too soft in many places to carry a team."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"The weather conditions during the early days and the middle of October were fairly fine, but the remaining portion of the month has been very much unsettled with heavy precipitation, which, for the whole month, amounts to 8.05 inches. An exceptionally high run of tides has been experienced; that on the 1st, which was accompanied by high wind, broke the dykes in several places throughout this district and surrounding country, resulting in flooding the marshes. There was considerable loss not only from the breaking of the dykes themselves, but in connection with hay that had been put up in stacks, which were standing in two and three and sometimes five feet of water. The weather has been such that the late grain was harvested in poor condition and many farmers found it difficult to get it in the barn in any kind of shape at all. The market for all kinds of food stuffs is remaining high; but the demand for hay has only been limited. Grain crops from those fields that have been threshed have only given an average yield and some not quite that, much of it not coming up to the standard weight, especially in the case of oats. The price of beef, as well as of good beef steers, is high, and good feeders are scarce.

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"October gave nineteen days on which rain fell and only six days of bright sunshine, making it very unfavourable for harvest operations. Potato digging was much delayed and considerable areas at the end of the month are reported undug and the ground so badly flooded as to prevent digging. The precipitation amounts to 4.6 inches, against a 43-year average of 3.9 inches. The mean temperature is 44.1, while the average is 43. Frosts occurred at the Station on the 15th, 18th, 19th, 26th and 29th, but not severe enough to kill sweet peas, roses and any other blooms in the garden. Potatoes, dug on the 31st, had many stalks quite green. But few turnips were lifted during the month; at the Station farm there are fifty-nine acres to be harvested in November. Live stock is going into winter quarters in fairly good condition, and, while cattle, sheep and swine are in small supply, there is a growing tendency towards increasing breeding in all lines."

Ste. Anne de La Pocatière, Que.—Jos. Begin, Superintendent, reports:—"The weather during October has been decidedly unfavourable for autumn work, especially in the latter part of the month. The highest temperature recorded is 70.2°, the lowest 30.8°, and the mean 41.3°, compared with extremes of 73° and 22.4°, and a mean temperature of 39.4° for the corresponding period in 1916. The precipitation

totals 5.56 inches, rain falling on thirteen days, compared with 5.66 inches a year ago on fourteen days. There have been no snow flurries worth mentioning. The bright sunshine of the month averages only 2.72 hours a day, as against 4.04 hours a day in October, 1916. At the Experimental Station, a three-acre field of potatoes, dug late in October, gave about an average crop both as regards yield and quality. Turnips and mangolds were pulled the last days of the month, the turnips giving fully an average crop, and the mangolds about ten per cent more than usual."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—"October was warmer, wetter and duller than the corresponding month for the last five years, the figures being, respectively, mean temperature 50.1° and 45.2°, precipitation 6.78 and 4.14 inches, and hours of sunshine 45.9 and 100.8. In the district, ploughing has been delayed on the low and badly-drained lands, on account of the frequent rains which occurred, precipitation being recorded on seventeen different days. At this Station, pulling of swedes for seed was delayed from the excess of rainfall, and is not finished yet. On November 1st feeding experiments are to start with horses, cattle, sheep and poultry. The building of the calf barn has been continued, and the carpenter shop is ready to be put up."

Lennoxville, Que.—J. A. McClary, Superintendent, reports:—"October has been very wet, rainfall being recorded on seventeen days, amounting to 5.43 inches, compared with 2.59 inches last year and 3.45 inches two years ago. The highest temperature is 67°, compared with 78° last year, and the lowest 23°, against 22° in 1916, while the mean is 42.19° compared with 45.07° a year ago. The number of hours of sunshine recorded is 81.1, compared with 149.5 hours last year. Owing to the excessive amount of rain and the shortage of labour, there has not been so much ploughing done this fall as usual. The farmers in this locality have marketed most of their lambs through the co-operative Sheep Breeder's Association, realizing very satisfactory prices for the same. At this Station there is under construction at present a dairy building, 24 x 40 feet; also a poultry administration building and a poultry house."

Brandon, Man.—W. C. McKillican, Superintendent, reports:—"October has been unusually cold and wintry, and work on the land has been impossible since the 20th. Snow has been experienced on several occasions during the month, the total fall being eight inches. The mean temperature, 31.8°, is the lowest for many years. Threshing had been practically completed in Manitoba before the bad weather began, so not much inconvenience was caused in that regard; but it has greatly lessened the amount of fall ploughing that would otherwise have been done. Live stock have had to be fed earlier than usual, owing to the stubble land being covered with snow."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"October was fine and moderately warm up to the 15th. On the 16th there was a heavy fall of snow, and the weather has continued cold and stormy up to the 31st. In this district there is still some grain in the stook, but a few fine days in November should see threshing

completed. A great deal of grain has been delivered at this point, but owing to the shortage of cars the elevators are now full. The work on the Experimental Farm has included the taking up of potatoes and roots, the hauling and spreading of manure, the building of fences, the ploughing of stubble and the caring for the stock."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—"Throughout this district threshing has been completed in October, without any interference from bad weather excepting in the case of a few individuals who were holding off for cheaper labour. From the 25th to the 26th there were five inches of snow. The yield of wheat is approximately 18 to 35 bushels per acre, depending upon preparation of the soil. The yields of various crops at the Experimental Station are above the average. There have been purchased for experimental feeding purposes 60 feeding steers, one carload of three-year-olds and two carloads of two-year-olds."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports:—"Seasonable weather prevailed during the first part of October, but from the 20th to the 29th an unusually cold spell, accompanied by light flurries of snow, was experienced. Threshing was completed early in the month, but little fall-ploughing has been done. Many farmers consider the ground too dry for ploughing. An unusual amount of stubble land has been disced up for next season's crop. At the Station, all the rotation fields have been ploughed, packed, and harrowed. An experiment to determine the effect of manure on prairie pasture land has been started, and a considerable area of stubble land has also been covered with manure."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—"The weather during the first part of October was warm and bright, and allowed progress to be made with the threshing and harvesting of the root crops. Unfortunately, however, on the fourteenth it began to rain and later it snowed. This was followed by some rather cold weather, which froze the grain and caught a good number of farmers with their potatoes and other roots still unharvested. This early frost also hindered fall-ploughing, and it looks as though there would be quite a rush of spring work in 1918."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"The weather during October has been reasonably favourable for threshing operations, although there have been many windy days, a few showers and a snowstorm near the end of the month, when 3 inches of snow fell. About 95 p.c. of the threshing in southern Alberta has been completed, and the rest will be finished if the present good weather continues. There has been an increase in the acreage devoted to potatoes this season; so that, although the yield per acre will not be as high, still the total output will be about the same as last year. At the Station, the potatoes have been dug, but the lifting of the roots has been delayed by the snowstorm."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"Weather conditions during October have been favourable for the lifting and storing of the root crops, but a sharp drop in temperature

at the end of the month put a stop to fall ploughing for a few days. The potato yield in the district is reported to be light, but the tubers are of excellent quality. At the Experimental Station, all cereals have been threshed, the sample and yield from the irrigated plots being good, but from grain grown under dry-farming conditions the yield has been light and the sample poor. In the poultry department, the pullets were placed in winter quarters early in the month, and records are again being kept with a view to ascertaining the cost of egg production. The turkeys are maturing fast, and should make heavy birds by Christmas. The bees have also been put into winter quarters, experiments in different methods of wintering being continued. Owing to the dry summer, the feed on the ranges is not so abundant as usual; but, in spite of this fact, cattle and horses appear in good condition. The Experimental Farm exhibit sent out from the Invermere Station to fall fairs in the district created considerable interest, and has led to many inquiries."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"October opened quite mild with still no rain. Later on it turned colder, frost being recorded on the 18th, when the thermometer went down to 32. Fortunately the weather has been ideal for harvesting, as, on account of shortage of help and boxes, this work was greatly delayed. Potato yields in the valley are not as heavy as they promised to be; in many places big tops have resulted in poor tubers. In the southern end of the valley fall ploughing has been stopped on account of the dryness of the land. Carrot stecklings are being harvested and are proving to be a good crop. Mangolds and carrots have turned out well."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"October this year has been the driest since 1911. During the first three days of the month 1.59 inch of rain was recorded, but the next week was without precipitation. Most of the rainfall, totalling 6.84 inches, came during the latter part of the month. Frost occurred on the 17th and 27th. It is six years since the temperature went down to 31 in October. The first fresh snow of the season appeared on Mount Cheam on the 16th, and the first fell in the valley on the 27th. Getting an excellent crop of corn safely stored in the silos was the most important work on the Experimental Farm. A fair crop of roots and an average crop of potatoes were also harvested. The major portion of the live stock in the district appears to be in good condition. Prices for dairy and poultry products continue at a high level. Sheep and swine are also in demand at a good figure."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"Fine weather has prevailed during October, the rainfall being only 0.61 of an inch, the lowest temperature 35° and the highest 73°. Silo filling, potato harvesting and autumn wheat seeding have been the principal lines of activity in the district during the month. The corn crop has been good, the potato harvest light and the autumn-wheat seeding more extensive than usual. A number of dairymen in the district have disposed of their cattle and

are now establishing flocks of sheep. The high cost and scarcity of good labour and the high price of feed are the reasons for this change to simpler methods. A very good apple crop has been harvested and disposed of at satisfactory prices. The live stock of the district is in good condition. Poultry, where well managed, is giving good returns; but the number of birds being wintered in the district is probably ten per cent below the average."

Meteorological Record for October, 1917.

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of October are given in the following table:—

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.....	61.6	24.9	42.40	5.17	339	91.6
Charlottetown, P.E.I.....	69.0	32.0	48.76	7.02	339	136.9
Kentville, N.S.....	76.0	29.0	48.69	8.54	339	157.9
Nappan, N.S.....	69.0	29.0	48.05	8.05	339	147.00
Fredericton, N.B.....	65.0	28.0	44.10	4.60	338	125.3
Ste. Anne de la Pocatière, Que.....	70.2	30.8	41.30	5.56	336	84.5
Cup Rouge, Que.....	70.0	30.2	50.10	6.78	339	45.9
Lennoxville, Que.....	67.0	23.0	42.19	5.43	339	81.1
Brandon, Man.....	71.0	2.0	31.80	0.94	333	110.2
Indian Head, Sask.....	66.0	4.0	31.13	1.39	331	106.9
Rosthern, Sask.....	66.9	— 3.1	33.69	0.75	334	152.6
Scott, Sask.....	69.2	— 4.0	33.80	0.12	335	126.6
Lacombe, Alberta.....	72.8	8.4	36.10	1.36	328	123.6
Lethbridge, Alberta.....	70.0	6.0	41.50	0.72	331	137.4
Invermere, B.C.....	73.0	9.0	40.50	0.41	332	147.2
Summerland, B.C.....	81.0	27.0	50.02	0.08	333	170.8
Agassiz, B.C.....	71.0	31.0	48.59	6.84	334	100.8
Sidney, Vancouver I., B.C.....	73.0	35.0	49.05	0.61	335	154.6

Ottawa, November 16, 1917.

J. H. GRISDALE,
Director Experimental Farms.

TOBACCO CROP OF 1917.

On the whole, the tobacco season of 1917 was better than that of the previous year. During the growing period the weather was less rainy, especially at the time of transplanting, which caused the failures to be less than in 1916 and allowed of an increase in the areas planted. The recovery of the plants was, however, rather weak, and both in Ontario and Quebec the beds suffered considerably from cold and cloudy weather which prevailed during the greatest part of April and May.

In Ontario the tobacco crop caused anxiety until towards the end of July. From this time the weather became more favourable and the crops developed rapidly, resulting in an almost normal yield especially of the White Burleys. Desiccation was normal, although

the season was somewhat later than usual. As regards the crop of yellow tobacco, flue-cured, the colour was much better than that obtained during the two previous years. The production of yellow tobacco in Ontario in 1917 included in the round figures as given below amounted to about 800,000 lb. It was produced on an area of about 1,030 acres.

The areas devoted in Ontario to the growth of varieties other than the White Burley and the yellow tobaccos have considerably increased. They are estimated at 400 acres, with a product of about 445,000 lb. of tobacco, of which the greatest proportion is of the Seed-leaf type.

In Quebec province, although a large number of plantations suffered from excessive moisture, especially in the district south of Montreal, the crop was better than in 1916, especially in quantity. Hail caused some damage, both in the southern and northern sections; but the maturity especially was slightly insufficient, and towards mid September it was necessary to gather quickly a larger number of tobaccos which otherwise would have been exposed to frost.

The following is an estimate of the acreage and yield of tobacco in Quebec and Ontario for the season of 1917 as compared with 1915 and 1916:

Provinces.	1915.	1916.	1917.	1915.	1916.	1917.	1915.	1916.	1917.
	acres.	acres.	acres.	lb.	lb.	lb.	lb. per acre.	lb. per acre.	lb. per acre.
Quebec.....	4,500	2,933	5,000	4,050,000	3,000,000	5,000 000	900	1,023	1,000
Ontario.....	4,500	2,958	2,930	4,950,000	2,943,000	3,495,000	1,000	1,000	1,192
Total & averages	9,000	5,891	7,930	9,000,000	5,943,000	8,495,000	1,000	1,000	1,071

Desiccation was more difficult than usual, because of the exceptional coolness of the months of September and October.

VALUE OF CANADIAN FIELD CROPS, 1915-17.

In the accompanying table is presented a preliminary estimate by the Census and Statistics Office of the total value of the field crops of Canada for the year 1917, as compared with the finally revised estimates of 1916 and 1915.

The estimated values for 1917 represent the prices received by farmers, and are calculated from current market quotations; they are subject to revision after the compilation of returns from correspondents in December. According to the preliminary estimate the total value of all field crops for 1917 is \$1,089,687,000, as compared with \$886,494,900 in 1916 and \$825,370,600 in 1915. This is the first time that the estimated value of the field crops of Canada has reached one billion dollars, this large figure being due to the high prices now ruling.

The total of \$1,089,687,000 is made up of \$451,874,000 for wheat, as compared with \$344,096,400 in 1916, of \$236,142,000 for oats, as compared with \$210,957,500, of \$145,361,600 for hay, clover and alfalfa, as compared with \$171,613,900 and of \$81,355,000 for potatoes, as compared with \$50,982,300. The aggregate value of other grain crops is \$134,006,700, as compared with \$84,679,800 and of other root and fodder crops \$40,974,700, as compared with \$84,165,000. The final estimates of value for 1917 will be published as usual by provinces in January.

Preliminary Estimate of the Value of Canadian Field Crops for 1917, as compared with finally revised estimates for 1915 and 1916.

Field Crops.	1915.		1916.		1917.	
	per bush.	Total.	per bush.	Total.	per bush.	Total.
	\$ ct	\$	\$ c.	\$	\$ c.	\$
Wheat.....	0 91	356,816,900	1 31	344,096,400	1 95	451,874,000
Oats.....	0 36	171,009,100	0 51	210,957,500	0 60	236,142,000
Barley.....	0 52	27,985,800	0 82	35,024,000	1 00	51,684,000
Rye.....	0 77	1,921,900	1 11	3,196,000	1 50	6,359,700
Peas.....	1 65	5,724,100	2 22	4,919,000	3 00	10,117,800
Beans.....	3 05	2,206,800	5 40	2,228,000	7 00	9,727,900
Buckwheat.....	0 75	5,913,000	1 07	6,375,000	1 20	9,860,400
Flax.....	1 51	9,210,400	2 04	16,889,900	3 00	20,618,100
Mixed grains.....	0 57	10,062,300	0 88	9,300,900	1 00	16,461,400
Corn for husking.....	0 71	10,243,000	1 07	6,747,000	1 00	9,177,400
Potatoes.....	0 60	36,459,800	0 81	50,982,300	1 00	81,355,000
Turnips, etc.....	0 24	14,588,700	0 39	14,329,000	0 46	29,253,000
Hay and clover.....	per ton.		per ton.		per ton.	
Fodder corn.....	14 37	152,531,600	11 60	168,547,900	10 40	142,320,300
Sugar beets.....	4 91	16,612,600	4 92	9,396,000	5 18	10,900,900
Alfalfa.....	5 50	775,500	6 20	440,000	6 75	793,800
Totals.....	12 68	3,309,100	10 69	3,066,000	11 59	3,041,300
Totals.....		825,370,600		886,494,900		1,089,687,000

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reported (November 1) that grain was generally secured in fair condition, being considerably better in the eastern half of the country than in the west, where there was more rain throughout the harvesting period. In most parts wheat shows the best quality and oats the poorest. Over the greater portion of the country less threshing than usual has been done up to the present, owing, especially in the west, to the damp condition of the grain, while farmers generally have been anxious to push on with sowing. In the most important potato-growing districts in the east the bulk of the crop has been raised, but the bad weather in the west has hindered this work very much, and considerable quantities are still in the ground. The quality generally is satisfactory, and, except in the west and southwest, there is little mention of disease; while even in those areas it appears to be less than was feared two months ago. Lifting of mangolds,

turnips and swedes is backward generally, the wet weather in the west again hindering the work. Mangolds are everywhere of satisfactory quality, but turnips are poor, particularly in the eastern half of the country. Fair progress has been made with autumn cultivation in the chief grain-growing counties; in many parts October was fairly favourable, especially for light land, and a considerable breadth has been already sown with wheat and other autumn sown grain. Some is already showing above ground and looks well. In many other districts, however, much less has been done; while in the western half of the country autumn cultivation is, owing to the unfavourable weather, backward. Seeds are on the whole strong and vigorous. Some damage has been done by laid corn in the west. Labour is still scarce, especially the more skilled sorts, but the situation is certainly no worse, and probably rather better, than a year ago.

Ireland.—The Irish Department of Agriculture reported (September 27) that the yield of permanent meadow hay for 1917 in Ireland was 3,030,114 long tons from 1,540,471 acres, as compared with 3,496,777 tons from 1,535,981 acres in 1916, the yield per acre being 2 tons in 1917, as against 2·3 tons in 1916 and 2·2 tons, the average of the years 1907–16. The yield in 1917 of second and third years' hay was 696,783 tons from 443,519 acres, as compared with 751,075 tons from 374,080 acres in 1916.

New South Wales.—The Acting Government Statistician reports (October 9) that the area sown to wheat in New South Wales for the season of 1917–18 amounts to 3,812,500 acres, as compared with 4,510,192 acres in 1916–17 and with 5,122,245 acres, the record area of 1915–16. The decrease in 1917–18, as compared with 1916–17, is 697,692 acres, or about 15·5 per cent, and is attributed to the very dry autumn, when ploughing operations were hampered considerably. Of the area sown for 1917–18, 455,670 acres are estimated as yielding only hay, leaving the grain area at 3,356,830 acres.

France.—The French Department of Agriculture has published an approximate estimate of the yield of crops in France for 1917 as compared with 1916, the figures of acreage and yield being as follows:—

Crops.	1916.	1917.	1916.	1917.
	acres.	acres.	bush.	bush.
Wheat.....	12,430,000	10,439,000	204,909,000	144,151,000
Meslin.....	248,000	227,000	4,102,000	3,341,000
Rye.....	2,149,000	2,002,000	33,351,000	27,509,000
Barley.....	1,538,000	1,776,000	38,638,000	39,557,000
Oats.....	7,778,000	7,706,000	260,818,000	223,461,000

The yield of wheat in France before the war, in 1913, was 319,372,000 bushels, of meslin 5,909,000 bushels, of rye 48,746,000 bushels, of barley 47,939,000 bushels and of oats 336,049,000

bushels. These figures indicate how great is the present shortage of cereals in France, even after deducting the departments which remain in hostile occupation. For 1917 both the yield per acre and the quality of wheat are abnormally low, the yield per acre being only 13.89 bushels, the lowest since 1879, and the weight per bushel being 50.8 lb., the lowest since the bad year of 1910.

Russia.—The Trade and Industrial Gazette has published the following report on this year's harvest: "The crops are generally under average. Winter wheat is generally average. The crops of wheat are good in parts of the southwest, Little Russia, north Caucasasia, and in some districts of the central governments; they are unsatisfactory in the Middle Volga and partly so in the Don Territory. Rye is generally under average; it is partly good in the south, Little Russia, and in the northeast. Spring crops are unsatisfactory, and partly bad in the Middle Volga and Trans-Volga region, and in parts of central Russia; in parts of the south and southwest, and in the northwest the crops are good. Spring wheat and oats are unsatisfactory. Barley is under average. The quality of the crops is generally satisfactory. Siberian crops are quite satisfactory."

Argentina.—According to Broomhall's Corn Trade News of November 6, 1917, the wheat crop of Argentina is estimated at 240,000,000 bushels, which should leave a surplus for export of 176,000,000 bushels.

United States.—The Monthly Crop Report for November of the United States Department of Agriculture gives the following estimates of the production, quality, and prices of the field crops of 1917 as follows:

Crops.	Yield per acre.		Total Yield.			Quality ¹ .	Price.	
	1917 preliminary.	10 year average.	1916.	1917.	Average 1911-15.		1916.	1917.
	bush.	bush.	000 bush.	000 bush.	000 bush.	p.c.	cents.	cents.
Corn.....	26.4	26.0	2,583,241	3,191,083	2,754,164	-10.0	85.0	146.0
Wheat.....	14.1	14.7	639,886	659,797	806,361	+ 2.8	158.4	200.0
Oats.....	26.6	20.9	1,251,992	1,580,714	1,230,499	+ 9.3	49.0	61.7
Barley.....	24.1	25.2	180,927	201,659	197,211	+ 4.6	83.2	111.3
Rye.....	14.9	16.3	47,383	56,044	41,399	+ 0.2	115.3	168.8
Buckwheat.....	17.4	19.5	11,840	16,813	16,514	- 4.7	102.9	154.2
Potatoes.....	101.1	95.4	285,437	439,636	362,910	+ 3.0	135.7	127.8
Sweet potatoes.....	93.7	93.3	70,955	84,727	60,257	+ 1.8	80.6	111.2
Flaxseed.....	5.0	8.6	15,459	9,648	18,615	- 1.3	234.7	295.9
Rice.....	34.3	34.7	40,702	33,256	25,266	-	-	-
	lb.	lb.	lb.	lb.	lb.			
Tobacco.....	835.8	818.2	1,150,622	1,185,478	983,723	- 0.2	-	-
	tons.	tons.	tons.	tons.	tons.		\$	\$
Hay, tame.....	1.49	1.44	89,991	76,490	69,543	+ 0.9	9.99 ²	15.16 ²
Hay, wild.....	0.94	1.00	19,795	15,225	17,044	- 2.6	-	-
Sugar beets.....	10.4	10.6	6,228	7,621	5,839	-	-	-

¹ Percentage above or below average.² All hay.

The weight per measured bushel of wheat is 58.5 lb., against 57.1 lb. last year and 58.2 lb., the ten-year average; of oats it is 33.4 lb., against 31.2 lb. last year and 31.6 lb., the ten-year average; and of barley 46.6 lb., against 45.2 lb. last year and 46.4 lb., the seven-year average.

The United States apple crop is estimated at 177,733,000 bushels, as compared with 202,245,000 bushels last year and 215,572,000 bushels, the average for the five years 1911-15. The average price for 1917 is \$1.175 per bushel, as against 0.876 cents per bushel in 1916 and 0.695 cents per bushel, the five-year average.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

The October issue of the Bulletin of Agricultural and Commercial Statistics gives the latest returns of this year's production of wheat, rye, barley, oats, and potatoes in countries of the northern hemisphere; but the list of countries furnishing data is smaller than at this time last year, owing to the conditions created by the war. The following table is therefore given to show the total production for the two years 1916 and 1917 according to data available:

Crop.	No. of Countries.	1916.	1917.	P.c. of 1916.	P.c. of 1911-1915.
		bush.	bush.		
Wheat.....	13	1,792,103,000	1,744,529,000	99.0	85.2
Rye.....	9	154,345,000	146,323,000	94.8	92.5
Barley.....	12	518,768,000	517,131,000	99.7	95.4
Oats.....	11	2,070,542,000	2,407,738,000	116.3	114.0
Potatoes.....	5	501,554,000	698,840,000	139.3	114.6

For wheat the 13 countries included are Spain, France, Scotland, Ireland, Italy, Netherlands, Sweden, Switzerland, Canada, United States, India, Japan and Algeria. For potatoes the five countries are Italy, Netherlands, Sweden, Switzerland and the United States. The yields per acre for all the countries included are for wheat 13.53 bushels, compared with 13.23 bushels in 1916, for rye 15.61 bushels compared with 17.21 bushels, for barley 21.93 bushels compared with 23.23 bushels, for oats 33.51 bushels compared with 39.96 bushels and for potatoes 115.24 bushels compared with 96.21 bushels. The area under potatoes for the five countries is 16.4 p. c. above that of 1916 and 13.9 p.c. above the average of the five years 1911-15. The total yield for the same countries is 39.3 p.c. above 1916 and 14.6 p.c. above average.

FIELD CROPS OF ENGLAND AND WALES, 1917.

The preliminary estimate of the production of field crops in England and Wales, as issued by the English Board of Agriculture on November 6, 1917, shows that the total yield of wheat in England and Wales for 1917 is 57,317,000 bushels, of barley 44,316,000 bushels, of oats 86,934,000 bushels, of beans 3,490,500 bushels, of peas 2,215,000 bushels and of seeds and meadow hay 7,555,000 long tons. The wheat yield is 2,634,000 bushels more than last year, and the yield per acre, 29.88 bushels, is $1\frac{1}{4}$ bushel greater than in 1916, though $1\frac{1}{2}$ bushel below the average of the ten years 1907-16. Although the yield per acre of barley is three-fourths of a bushel smaller than in 1916, the total production, 44,316,000 bushels, is 2,869,000 bushels greater, owing to the increased area under this crop. The total production of oats, 86,934,000 bushels, is 3,646,000 bushels more than in 1916, and is the largest crop since 1907. This large crop is due to the increased area, as the yield per acre is $1\frac{1}{2}$ bushel less than a year ago, and about the same amount below average. Beans are a very poor crop, and are the smallest crop recorded since 1885, both in total production and yield per acre. Peas are rather more satisfactory, and the total production is slightly greater than last year, but still much below normal. The total production of hay from clover and rotation grasses is 2,405,468 tons, or nearly 500,000 tons less than the large crop of last year. The yield per acre, 28.60 cwt., is $4\frac{1}{4}$ cwt. lighter than in 1916, and nearly 1 cwt. below average. The total production of hay is 7,550,000 tons, which is 1,280,000 tons less than last year, but nearly 1,000,000 tons more than the total production in 1915.

THE WEATHER DURING OCTOBER.

The Dominion Meteorological Office reports that the mean temperature was below average in all parts of the Dominion, excepting the interior of British Columbia and eastern Nova Scotia. The negative departures were very large in Saskatchewan, Manitoba and Ontario, amounting to between 4° and 9°. Precipitation was excessive everywhere east of Lake Huron, the total in many districts being double the average amount. From the Great Lakes westward it became gradually less, and in the western provinces, where it was largely in the form of snow, average figures were reported. In British Columbia the departure was mostly in defect, but not to any marked extent.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range at the weekly Monday market; for Liverpool the

prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices of British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	Oct. 6.		Oct. 13.		Oct. 20.		Oct. 27.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	2 21	—	2 21	—	2 21	—	2 21	—
No. 2 Nor.....	2 18	—	2 18	—	2 18	—	2 18	—
No. 3 Nor.....	2 15	—	2 15	—	2 15	—	2 15	—
No. 4.....	2 07	—2 09	2 09	—2 09½	2 07	—2 09½	2 07	—
No. 5.....	1 94	—	1 94	—1 95	1 94	—1 95	1 94	—
No. 6.....	1 85	—	1 86	—	1 86	—1 87½	1 87	—
Feed.....	1 75	—	1 75	—1 77	1 80	—	1 80	—
Oats—								
No. 2 C.W.....	0 66½	—0 68½	0 66	—0 67½	0 65½	—0 67½	0 67½	—0 68½
No. 3 C.W.....	0 64	—0 65½	0 63	—0 64½	0 62½	—0 65	0 64½	—0 65½
No. 1 feed ex.....	0 64	—0 65½	0 63½	—0 64½	0 62	—0 65½	0 64½	—0 65½
No. 1 feed.....	0 63	—0 64½	0 62	—0 63½	0 62	—0 64½	0 62½	—0 63½
No. 2 feed.....	0 62½	—0 63½	0 61½	—0 62½	0 61½	—0 63½	0 61½	—0 62½
Barley—								
No. 3 C.W.....	1 21	—1 23	1 20	—1 21	1 20	—1 20½	1 20½	—1 22
No. 4 C.W.....	1 17	—1 19	1 15	—1 17	1 15	—1 15½	1 15½	—1 17
Rejected.....	1 10	—1 12	1 10	—1 10½	1 10	—1 10½	1 10	—1 11
Feed.....	1 10	—1 12	1 10	—1 10½	1 10	—1 10½	1 10	—1 11
Flax—								
No. 1 N.W.C.....	3 06½	—3 16	2 93½	—3 03	2 89	—2 89	2 97	—3 10½
No. 2 C.W.....	3 00½	—2 99	2 87½	—2 97	2 86	—2 93	2 94	—3 07½
No. 3 C.W.....	2 89½	—2 99	2 70½	—2 86	2 74	—2 82	2 83	—2 96½

II. Monthly Range of Prices per bushel of Grain at selected Markets in the United States, 1917.

Grade and Market.	July.		August.		September.		October.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.....	2 10	—2 73	2 14	—2 61	2 15	—2 27	2 15	—2 15
Chicago.....	2 11	—2 66	2 12	—2 60	2 17	—2 20	2 17	—2 17
New York (f.o.b. afloat).....	—	—	2 25	—2 60	2 28	—	2 25	—2 25
Corn, No. 2, mixed—								
St. Louis.....	1 77	—2 31	1 61	—2 33	1 90	—2 22	1 90	—2 02
New York (f.o.b. afloat).....	1 90	—2 40	1 85	—2 49	2 05	—2 32	2 03	—2 19
Corn, No. 2—								
Chicago.....	1 77½	—2 32	1 09	—2 36	1 95	—2 24	1 89	—2 15½
Oats, No. 2—								
St. Louis.....	0 71	—0 83½	0 52½	—0 77	0 56½	—0 63	57	— 60½
Chicago.....	0 68½	—0 85	0 51	—0 80	0 56½	—0 61½	58½	— 60½
Rye, No. 2—								
Chicago.....	2 10	—2 44	1 65	—2 15	1 79	—1 92	1 78	—1 90½

N.B.—Tables III and IV are held over until the December issue.

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PRODUCTION OF CEREALS AND POTATOES IN COUNTRIES OF THE NORTHERN HEMISPHERE, 1917.

In the table on pages 292-294 are given for countries in the northern hemisphere the areas and yields of the principal cereal crops (wheat, rye, barley, oats, corn and rice) and potatoes for the year 1917, as compared with 1916 and with the annual averages for the five years 1911 to 1915. The data are from the November, 1917, Bulletin of Agricultural and Commercial Statistics issued by the International Institute of Agriculture, but with the metric weights and measures converted into Canadian equivalents.

For wheat the countries in the table number 18, and include the United States, Canada and India, but do not include Russia, Germany, Austria-Hungary, Rumania, Bulgaria and other countries affected by the war. The area under wheat for the 18 countries in 1917 is 135,256,000 acres, which is 3.8 p.c. less than in 1916 and 3.5 p.c. less than the quinquennial average. The total production of wheat in 1917, viz., 1,868,352,000 bushels, is 1.2 p.c. less than in 1916 and 4.4 p.c. less than the average. The average yield per acre in 1917, viz., 13.83 bushels, is nearly half a bushel more than in 1916, but is $1\frac{3}{4}$ bushel less than the five-year average.

Of rye, the area in 1917 of the 11 countries given in the table is 9,468,000 acres, or 4.3 p.c. more than in 1916 and 4 p.c. above average, whilst the total production, viz., 147,246,000 bushels, is less by 5.4 p.c. than 1916 and by 7.8 p.c. than the average. The average yield per acre, viz., 15.61 bushels, is over $1\frac{1}{2}$ bushel less than 1916 and nearly 2 bushels less than the average.

Barley in 17 countries occupied an area in 1917 of 26,571,000 acres, being 4.8 p.c. more than in 1916 and 4.9 p.c. more than the average. The total production in 1917 was 586,620,000 bushels, or 0.7 p.c. more than in 1916, but 4 p.c. less than the average. The yield per acre was 22.12 bushels, about one bushel less than in 1916 and two bushels under average.

Oats sown to 75,015,000 acres in 1917 in 15 countries occupy an area larger than in 1916 by 8.3 p.c. and larger than the average by 10.8 p.c., the total production being 2,524,224,000 bushels, or 15.5 p.c. more than in 1916 and 13.9 p.c. above the average. The yield per acre is 33.59 bushels, 2 bushels more than in 1916 and $\frac{3}{4}$ bushel more than the average.

Corn in five countries had an acreage in 1917 of 126,202,000, being 13.5 p.c. and 13.7 p.c. respectively over the area of 1916 and the five year average. The total production in 1917, viz., 3,311,659,000 bushels, is 22.7 p.c. above the yield of 1916 and 14.1 p.c. above the average. The yield per acre in 1917, viz., 26.29 bushels, is two bushels above that of 1916, but only slightly above the average.

Area and Production of Cereals and Potatoes in Countries of the Northern Hemisphere, 1917, as compared with 1916 and with the annual averages of the five years 1911-15.

Countries.	1916.	1917.	Five years' average 1911to1915	P.c. of 1916.	P.c. of average.	1916.	1917.	Five years' average 1911to1915	P.c. of 1916.	P.c. of average.	1916.	1917.	Five years' average 1911to1915
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre.	bush. per acre.	bush. per acre.
Wheat—													
Spain.....	10,149	10,224	9,739	100.7	105.0	152,329	141,089	125,214	92.6	112.7	15.02	13.83	12.79
France.....	12,430	10,439	14,625	84.0	71.4	204,909	144,150	271,606	70.3	53.1	16.51	13.83	18.59
England and Wales...	1,912	1,918	1,877	100.3	102.2	54,681	57,317	58,541	104.8	87.9	28.55	20.89	31.23
Scotland.....	63	61	64	96.7	96.0	2,265	2,400	2,576	106.0	93.2	35.84	39.40	40.50
Ireland.....	76	124	49	162.3	250.8	2,827	4,107	1,834	145.3	224.0	37.03	33.16	37.03
Italy.....	11,679	10,557	11,900	90.4	88.7	176,531	140,001	182,576	79.3	76.7	15.17	13.23	15.32
Luxemburg.....	27	22	27	79.6	80.0	433	388	599	89.6	64.7	15.91	17.84	22.01
Norway.....	14	14	12	100.1	110.2	316	241	296	76.4	81.7	23.20	17.69	23.79
Netherlands.....	134	122	148	91.4	83.0	4,710	3,452	5,737	73.3	60.2	35.09	28.25	38.96
Sweden.....	307	329	272	107.0	120.7	8,979	7,496	8,610	83.5	87.1	29.29	22.75	31.67
Switzerland.....	124	139	106	—	—	3,821	4,556	3,497	—	—	30.93	32.86	33.01
Canada.....	12,879	14,758	11,616	114.6	127.0	220,371	231,732	254,968	105.2	90.9	17.10	15.76	22.01
United States (a).....	34,829	27,653	32,950	79.4	83.9	481,752	417,354	542,612	86.6	76.9	13.83	15.02	16.51
United States (b).....	17,956	19,039	18,961	106.0	100.4	158,145	242,453	263,749	153.3	91.9	8.77	12.79	13.98
British India.....	30,480	32,940	30,537	108.1	107.7	318,005	379,306	360,550	119.3	105.2	10.41	11.45	11.75
Japan.....	1,302	1,269	1,205	97.5	105.3	28,307	26,532	24,669	93.7	107.6	21.71	20.97	20.52
Algeria.....	3,272	3,222	3,413	98.4	94.4	29,152	28,080	34,513	99.4	84.0	8.92	8.92	10.11
Egypt.....	1,447	1,116	1,373	77.1	81.3	36,543	29,835	35,180	81.6	84.8	25.28	26.77	25.58
Tunis.....	1,482	1,310	1,338	88.3	97.9	7,165	6,963	6,224	97.2	111.9	4.91	5.35	4.61
Totals and Averages	140,562	135,256	140,212	96.2	96.5	1,891,241	1,868,352	2,183,551	98.8	85.6	13.38	13.83	15.61
Rye—													
Spain.....	1,846	1,800	1,911	97.5	94.2	28,782	24,366	25,147	84.7	96.9	15.61	13.54	13.22
France.....	2,149	2,002	2,617	93.2	76.5	33,351	27,509	41,530	82.6	66.2	15.45	13.70	15.93
Ireland.....	7	8	8	115.6	99.3	192	222	228	115.6	97.3	29.00	29.00	29.63
Italy.....	285	279	302	97.8	92.4	5,342	4,460	5,159	83.5	86.5	18.64	15.93	17.05
Luxemburg.....	23	17	25	71.2	65.9	436	292	610	67.1	47.9	18.64	17.52	24.06
Norway.....	49	48	37	99.4	129.7	942	656	967	69.7	67.8	14.98	13.54	25.97
Netherlands.....	494	463	559	93.7	82.8	11,471	11,958	15,501	104.2	77.1	23.26	25.81	27.72
Sweden.....	913	813	967	89.0	84.1	22,929	15,747	24,220	68.7	65.0	25.17	19.44	25.01

Switzerland.....	71	55	62	-	-	2,000	1,752	1,817	-	-	28.04	31.70	29.47
Canada.....	145	211	120	145.4	175.5	2,896	4,240	2,326	146.4	182.3	19.91	20.07	19.28
United States.....	3,096	3,772	2,494	121.8	151.2	47,382	56,044	42,186	118.3	132.8	15.29	14.82	16.89
Totals and Averages	9,078	9,468	9,102	104.3	104.0	155,723	147,246	159,691	94.6	92.2	17.21	15.61	17.52
Barley—													
Spain.....	3,886	4,086	3,585	105.2	114.0	86,853	76,747	73,119	88.4	103.5	22.30	18.77	20.63
France.....	1,538	1,776	1,742	115.4	101.9	38,268	39,557	42,758	103.4	92.5	24.91	22.30	24.54
England and Wales..	1,332	1,460	1,435	109.6	101.7	43,174	46,162	46,924	106.9	98.4	32.34	31.60	32.71
Scotland.....	170	159	181	93.7	87.7	5,393	6,208	6,867	115.1	90.4	31.78	39.03	37.92
Ireland.....	150	177	162	118.0	109.3	6,537	7,836	7,264	119.9	107.9	43.49	44.24	44.80
Italy.....	596	470	611	78.8	76.9	10,109	7,422	9,610	73.4	77.2	16.91	15.80	15.80
Luxemburg.....	5	7	3	137.9	201.4	125	154	95	123.1	162.0	24.91	22.30	27.69
Norway.....	98	97	89	99.0	109.4	3,592	3,000	2,942	83.5	102.0	36.62	30.85	33.09
Netherlands.....	60	52	66	86.2	77.8	2,372	2,573	3,257	108.5	79.0	39.59	50.00	49.07
Sweden.....	421	437	438	103.8	99.8	14,621	12,263	14,492	83.9	84.6	34.76	28.07	33.09
Switzerland.....	18	19	14	-	-	620	712	490	-	-	35.32	37.55	35.50
Canada.....	1,636	2,392	1,584	144.9	151.0	41,306	51,682	47,805	125.1	108.1	25.09	21.56	30.11
United States.....	7,674	8,379	7,474	109.2	112.1	180,821	201,655	197,197	111.5	102.3	23.61	23.98	26.39
Japan.....	3,078	2,738	3,213	88.9	85.2	95,903	76,505	99,174	79.8	77.1	31.23	27.88	30.85
Algeria.....	3,009	2,839	3,167	94.3	89.6	35,970	32,289	39,050	89.8	82.7	11.90	11.34	12.27
Egypt.....	439	445	401	101.4	110.9	11,987	13,588	11,865	103.1	113.4	30.11	30.48	29.93
Tunis.....	1,233	1,038	1,171	84.2	88.7	4,914	8,267	7,000	168.2	118.4	3.90	7.99	5.95
Totals and Averages	25,343	26,571	25,336	104.8	104.9	582,565	586,620	610,909	100.7	96.0	23.05	22.12	24.16
Oats—													
Spain.....	1,398	1,425	1,321	101.9	107.9	30,272	31,104	28,311	102.7	109.9	21.78	21.78	21.52
France.....	7,778	7,706	8,732	99.1	88.3	260,818	223,461	280,752	85.7	79.6	33.59	29.13	32.28
England and Wales..	2,085	2,259	2,022	108.4	111.7	95,534	99,717	88,655	104.4	112.5	45.92	44.08	43.82
Scotland.....	991	1,040	952	105.0	109.2	41,547	46,617	42,313	112.2	110.2	41.99	44.87	44.35
Ireland.....	1,072	1,464	1,050	136.6	139.3	58,685	87,754	61,001	149.5	143.9	54.84	59.83	57.99
Italy.....	1,103	1,107	1,239	100.4	89.3	24,543	31,896	32,192	130.0	99.1	22.30	28.86	25.98
Luxemburg.....	69	56	76	80.3	73.2	2,560	1,897	2,938	74.1	64.6	37.00	34.11	38.57
Norway.....	297	307	265	103.4	115.5	14,809	11,111	11,023	75.0	100.8	49.86	36.21	41.46
Netherlands.....	343	372	347	108.2	107.0	18,841	17,500	19,552	92.9	89.5	54.84	47.23	56.42
Sweden.....	1,954	1,927	1,957	98.6	98.5	87,612	66,592	72,535	76.0	91.8	44.87	34.64	37.00
Switzerland.....	103	70	84	-	-	6,348	4,331	4,678	-	-	61.40	61.40	55.89
Canada.....	9,835	13,314	10,303	135.4	129.2	351,171	393,566	399,644	112.1	98.5	35.69	29.65	38.84
United States.....	41,540	43,162	38,704	103.9	111.5	1,178,338	1,487,734	1,158,109	126.3	128.5	28.34	34.38	29.91
Algeria.....	536	682	516	127.3	132.1	12,367	17,183	12,028	138.9	142.9	23.09	25.19	23.35
Tunis.....	154	124	131	80.4	94.3	1,362	3,761	2,847	276.2	132.1	8.92	30.44	21.78
Totals and Averages	69,258	75,015	67,699	108.3	110.8	2,184,867	2,524,224	2,216,578	115.5	113.9	31.49	33.59	32.86

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Area and Production of Cereals and Potatoes in Countries of the Northern Hemisphere, 1917, as compared with 1916 and with the annual averages for the five years 1911-15—con.

Countries.	1916.	1917.	Five years' average 1911 to 1915	P.c. of 1916.	P.c. of average.	1916.	1917.	Five years' average 1911 to 1915	P.c. of 1916.	P.c. of average.	1916.	1917.	Five years' average 1911 to 1915
	000 acres.	000 acres.	000 acres.	p.c.	p.c.	000 bush.	000 bush.	000 bush.	p.c.	p.c.	bush. per acre.	bush. per acre.	bush. per acre.
Corn—													
Spain.....	1,154	1,102	1,138	99.7	101.2	28,642	27,558	27,672	96.2	99.6	23.90	24.85	24.37
Italy.....	3,918	3,875	3,933	98.9	98.5	81,546	86,610	105,427	106.2	82.2	20.87	22.30	26.76
Switzerland.....	4	5	3	—	—	152	252	118	—	—	40.94	51.78	39.99
Canada.....	173	174	281	100.6	61.8	6,282	6,193	16,240	98.6	38.1	36.32	35.53	57.67
United States.....	105,955	121,046	105,671	114.2	114.5	2,583,219	3,191,046	2,754,131	123.5	115.9	24.37	26.29	26.13
Totals and Averages	111,201	126,202	111,026	113.5	113.7	2,699,841	3,311,659	2,903,538	122.7	114.1	24.22	26.29	26.13
Rice—													
Spain.....	100	103	96	102.4	106.7	11,842	11,371	9,936	96.0	114.4	91.53	85.83	79.99
Italy.....	353	346	359	98.2	96.5	25,490	25,093	25,154	98.4	99.8	56.15	56.15	54.30
United States.....	866	969	749	111.9	129.4	40,703	53,257	25,266	81.7	131.6	36.46	26.61	26.15
Totals and Averages	1,319	1,418	1,204	107.5	117.8	78,035	69,721	60,356	89.3	115.5	45.84	38.15	38.92
Potatoes—													
Italy.....	729	791	719	108.4	109.9	54,278	55,116	60,414	101.5	91.2	74.50	69.74	84.01
Luxemburg.....	34	27	37	77.5	72.7	2,971	5,925	6,544	199.4	93.5	86.69	223.05	179.03
Norway.....	114	114	103	100.0	111.2	29,190	27,733	23,700	95.0	117.0	255.91	243.12	231.08
Netherlands.....	425	419	424	98.7	98.9	88,490	89,859	97,989	101.5	91.7	208.47	214.41	231.22
Sweden.....	373	366	378	98.1	96.9	54,971	64,559	63,645	117.4	101.8	147.36	176.35	167.73
Switzerland.....	135	140	116	—	—	18,372	36,376	24,912	—	—	136.36	259.33	214.56
United States.....	3,550	4,348	3,689	122.5	117.9	285,442	439,693	362,916	154.0	121.2	80.45	101.11	98.44
Totals and Averages	5,360	6,205	5,466	115.8	113.5	533,714	719,361	640,129	134.8	112.4	99.63	115.98	117.02

[Continued from p. 291.]

Rice in three countries, with a total area in 1917 of 1,418,000 acres, exceeds 1916 by 7.5 p.c. and the five year average by 17.8 p.c.; the total production of 69,721,000 bushels is 10.7 p.c. below 1916, but 15.5 p.c. above the average. The yield per acre, 38.15 bushels, is over $7\frac{1}{2}$ bushels less than in 1916, but is only $\frac{3}{4}$ of a bushel below the average.

Finally, for potatoes, the area planted in seven countries is 6,205,000 acres, or 15.8 p.c. above 1916 and 13.5 p.c. above the average, the total yield being 719,261,000 bushels, or 34.8 p.c. more than in 1916 and 12.4 p.c. above average. The yield per acre, viz., 116 bushels, is about 16 bushels above that of 1916 and one bushel below the average.

To sum up briefly the results of the chief cereal and potato harvests of 1917 in the countries of the northern hemisphere named in the table, it appears that wheat and rye show a production considerably less than in 1916 and less than the five year average; barley is about equal to 1916, but is less than the average; and rice, whilst considerably less than in 1916, is well over the average. On the other hand, the production of oats, corn and potatoes is substantially above that of both 1916 and of the quinquennial average. Nearly the whole of the world's corn crop is grown in the United States, where the corn production of 1917 constituted a record.

Census and Statistics Office,
Ottawa, January 12, 1918.

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Editor.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

A cablegram received from the International Institute of Agriculture on December 27, 1917, stated that the total production in 1917 of wheat in Denmark, Spain, France, Great Britain, Ireland, Italy, Luxemburg, Norway, Holland, Sweden, Switzerland, Canada, United States, India, Japan, Algeria, Egypt and Tunis is 1,864,124,000 bushels, or 96.1 p.c. of the production of the same countries in 1916 and 85.1 p.c. of their average production during the five years 1911-15. The production of rye in Denmark, Spain, France, Ireland, Italy, Luxemburg, Norway, Holland, Sweden, Switzerland, Canada and the United States is 160,306,000 bushels, or 96.2 p.c. of last year and 91.7 p.c. of the five years' average. The production of barley in the same countries as for rye plus Great Britain, Japan, Algeria, Egypt and Tunis is 610,699,000 bushels or 100.1 p.c. of last year and 95.9 p.c. of the five years' average. The production of oats in the same countries as for barley minus Japan and Egypt is 2,570,939,000 bushels or 112.1 p.c. of last year and 113.4 p.c. of the five years' average. The production of corn in Spain, Italy, Switzerland, Canada, United States and Japan is 3,283,818,000 bushels or 121.4 p.c. of last year and 113 p.c. of the five years' average. The production of rice in Spain, Italy, United States, Japan and Egypt is 10,659,320 tons, or 80.3 p.c. of last year and 83.7 p.c. of the five years' average. The production of flaxseed in Italy, Holland,

Canada, United States and India is 36,664,000 bushels, or 86.6 p.c. of last year and 67.6 p.c. of the five years' average. The production of potatoes in England and Wales, Ireland, Italy, Luxemburg, Norway, Holland, Sweden, Switzerland, Canada, United States and Japan is 1,118,669,000 bushels, or 136.4 p.c. of last year and 114.8 p.c. of the five years' average. The production of sugar beets in Holland, Sweden, Switzerland, Canada and the United States is 8,992,000 tons or 92.7 p.c. of last year and 103.1 p.c. of the five years' average. The production of tobacco in Switzerland, United States and Japan is 1,289,000,000 lb., or 105.5 p.c. of last year and 118.7 p.c. of the five years' average. The production of wine in Spain, Luxemburg and Algeria is 643,384,000 imperial gallons, or 90.8 p.c. of last year and 130.5 p.c. of the five years' average.

CROP REPORTS FROM ONTARIO.

The Weekly Crop Report of December 3, stated that where not already completed, threshing was being pushed along vigorously. A considerable quantity of grain still remained to be separated on some farms. The Peterborough representative estimated that only about 70 p.c. of the desired area had been turned under in that county. Live stock, generally speaking, have been stabled earlier than for years. Happily there is a good supply of grain, straw and most of the other fodders on hand, and the prospects for comfortable wintering of live stock are most assuring. Shipments of all classes of live stock have been light during the week. Prices have stood around: stockers, 8 cents per lb.; beef cattle, 8 to 9 cents per lb.; hogs, \$16.75 per cwt. Breeding sows are in very strong demand owing to the campaign for greater hog production. Many old sows are being sold to be replaced by younger ones. The scarcity of suitable female pigs is more particularly noticeable in the dairy sections. On December 10 it was reported that the cold weather prevailing so early in the season took many farmers by surprise, and shut out much of the fall ploughing that is so frequently done in the latter part of November and even into December. Nothing more in this line can very well be expected now. There has consequently been less demand for labour, although tardy threshing will keep a number of men busy on the farm for a few weeks yet. Potatoes generally appear to be keeping well, although some reports of rot come from Lanark. Farmers are already inquiring for good seed for planting next spring. There is a fair supply of roots, well harvested, on most farms. Some representatives have expressed anxiety as to the strength of the fall wheat just entering the winter. The keen open weather of the last week of November and the first week of December was very trying to the young plants, many of which were browning on account of the short top. Other reports, however, are quite hopeful as to the prospects of the crop. Clover also had to endure little or no protection from the trying early winter weather.

A good demand exists for all classes of live stock except horses. Some breeding stock is changing hands, chiefly sows and ewes, which

are increasing in favour. Cattle did not go into the stable in good flesh this fall, although generally healthy. However, there is a fair quantity of provender on hand, except ensilage; but concentrates are high in price, shorts costing \$48, and bran \$40 a ton, and very hard to get at that. Good cows are still in request, grade Holsteins and Durhams bringing \$225 and higher in Lincoln. Milk in Middlesex for manufacturing is now going chiefly to the powder factories, where they get 60c. per 100 lb. more than at the cheese factories, missing, however, the whey for feeding to the hogs. Some representatives state that the milk flow is drying off; others report that the cows are freshening, and that an increased supply is therefore at hand. This is largely a matter of individual control. The report of December 17 stated that the heavy snowfalls of the past week or more have given good protection to clover fields, and to the newly sown wheat and rye, which latter crops have rather too small a top for hard wintering. There is an increased demand for hay and coarse grains owing to the comparative scarcity of ensilage. The large yield of straw is coming in nicely for bulking the ration for live stock. There is an increased demand for brood sows, especially for pedigreed animals.

DOMINION EXPERIMENTAL FARMS AND STATIONS.

Central Farm, Ottawa.—The temperatures recorded during November have ranged much lower than for some years, the highest being 50, the lowest -8, and the mean 28.07, compared with extremes of 62.4 and -2 and a mean temperature of 31.12 last year. There has been no really mild spell, but the weather was fine until the 17th, since when there has been little sunshine and a good deal of snow for so early in the winter. The precipitation, made up of 10.5 inches of snow and 0.35 of an inch of rain, totals 1.4 inch, distributed over seven different days; while last year it totalled 1.78 inch, consisting of 1.46 inch of rain and 3.25 inches of snow, distributed over thirteen days. The bright sunshine aggregates 121.1 hours, or an average of 4.03 hours a day, but most of it was recorded during the first half of the month. In November, 1916, the sunshine averaged 3.7 hours a day.

Fall ploughing was finished early in the month, and, before its close, some under-draining had been completed.

Charlottetown, P.E.I.—J. A. Clark, Superintendent, reports:—"November came in fine and mild and, during the first ten days, the balance of the turnip crop was saved in excellent condition. A few flurries of snow fell after the 10th. On the 28th the ground froze up so as to prevent ploughing; but the autumn work throughout the province was well advanced before this occurred. Very large quantities of potatoes have been shipped, and, under the improved transportation facilities, promise to continue to be shipped by the farmers. The crop has been an excellent one, and, in order to get away the surplus, the farmers have postponed threshing and other work, so that it is very difficult at the present time to secure grain

for feed. The dealers report that less than one hundred bushels of oats came into the city the last week in November. The twenty acres of mangold stecklings, harvested in October, were pitted in the Charlottetown Exhibition buildings, and are keeping satisfactorily. Live stock went into winter quarters in good condition, and the steers and lambs at the Station have made substantial gains."

Kentville, N.S.—W. S. Blair, Superintendent, reports:—"The temperature during November has been continuously low, without severe frosts, however, until the last week of the month,—the thermometer dropping to 10 on the 30th. The mean temperature is 33.01, as compared with 37.5 for 1916, 39.15 for 1915 and 38.4 for 1914. Ploughing was possible up to the 26th, except on an occasional day. The month has been very dark, thirteen days being without any bright sun. The sunshine totals only 78.1 hours, as compared with 108.7 hours in 1916, 65.5 in 1915, 109.7 in 1914, and 111.5 hours in November, 1913. There was little rainfall until the 23rd and 24th, when 2.03 inches fell. At this time the ground was getting dried out, so that ploughing could be done on poorly-drained areas flooded by the excessive rains in October; but this rain made it impossible to plough such lands. The total precipitation for the month is 2.65 inches. There was a fall of snow of 2.5 inches on the 9th, which, with several lighter ones, aggregates 4.25 inches for the month. The total precipitation for the eight months, April to November, inclusive, is 33.68 inches, as compared with 21.93 in 1916, 19.53 in 1915, 20.76 in 1914 and 28.23 inches in 1913, for this period."

Nappan, N.S.—W. W. Baird, Superintendent, reports:—"The weather during November has been decidedly unsettled. Rain has been recorded on seven different days. Frequent snow flurries have been experienced during the month, and 2 inches fell on the 27th. This made the harvesting of fall crops, such as turnips, a most difficult operation, as the ground has been frozen most of the time, with only an odd day when it was fit for the pulling of roots. Likewise, very little fall ploughing has been accomplished. In this district, there is not 25 per cent of the ploughing done that there was at the same time last year. All late-sown grain has been harvested in very poor condition and, in the case of cereals threshed up to date, especially oats, a very light yield is reported, the grain weighing below standard, oats ranging from 25 to 35 lb. per bushel. There still remain some turnips in the ground. Taking the season as a whole, it has been a very difficult one for the farmers in this section of the country. The prices of all farm produce are high, and their quality is fair and the demand brisk. Good beef cattle are scarce and high, ranging from \$7.50 to \$8.50 per cwt. The work at the Experimental Farm has included harvesting roots and late grain. The excessive amount of moisture in October has made the latter operations very difficult, as the ground was so soft the teams would almost mire. Consequently, the land was too wet for ploughing after that date. Stone, gravel, cement and lumber have been hauled for the new piggery

during the month and the foundation for the same has been laid. A new steer shed, 20 x 40 ft., has been erected, and forty-two steers purchased, dehorned and placed in sheds for winter feeding."

Fredericton, N.B.—W. W. Hubbard, Superintendent, reports:—"The weather during November has been cold and windy. The ground froze on the 5th and, although frost came out, the 6th was the only day on which work could be done on the land, as rain, snow and sleet came on the 7th, followed by almost continuous frost, the ground never again thawing during the month. Compared with the average weather for November, the mean temperature was 28·4, against a forty-three-year average of 33. The precipitation totals 1·74 inch, against an average of 4 inches, and the sunshine aggregates 101 hours, compared with an average of 95 hours. For operations in the woods, the weather has been favourable, but all work on the land stopped. However, fall-ploughing had been well advanced in October, and live stock, which was generally housed by the 7th of November, came in in pretty good condition. There has been a decided effort among farmers in central New Brunswick to put in more cattle and sheep for winter feeding and breeding, than for some time. The country is full of hay, as much of the 1916 crop is yet on the farmers' hands and they will try to dispose of some with stock feeding. Unfortunately, roots and grain were very short and stock will suffer somewhat on this account."

Ste. Anne de la Pocatière, Que.—Jos. Begin, Superintendent, reports:—"The temperatures during November range lower than the average for the past five years, the highest recorded being 43·2, the lowest 1, and the mean 27, compared with extremes of 55·5 and -1·1 and a mean temperature of 25·5 for November, 1916. The precipitation amounts to 1·38 inch, made up of 0·08 of an inch of rain and 13 inches of snow; while last year it totalled 2·43 inches, consisting of 1·93 inch of rain and 5 inches of snow. The bright sunshine averages 3·65 hours a day as against 2·14 hours a day in the previous November. The first week of the month was wet, with a little frost, and on clay soil the hauling of roots was almost impossible. Fortunately, a fine spell followed, from the 8th to the 17th, which permitted the hauling and pitting of the roots grown at the Station for stecklings. The work was rushed with all the farm force and available help from the neighbourhood. The total crop, from twenty-six acres, of good roots for stecklings was pitted and sheltered by the 17th. In this district some grain, left over on account of the constant rains during October, was put in in very poor condition, about the 15th. The winter set in on the 18th, when the ground was frozen to a depth of about two inches."

Cap Rouge, Que.—G. A. Langelier, Superintendent, reports:—"November was colder, drier and brighter than the average of the corresponding period of the past five years, the figures being 25·78 for the mean temperature, 1·28 inch for the precipitation, and 83·8 for the hours of sunshine in 1916, as against average figures of 30·07 mean temperature, 3·57 inches precipitation, and 55·9 hours of sun-

shine during the period from 1912 to 1916. The weather has been very cold during the last week of the month, compared with the corresponding time for the last five years. The first snow fell on the 3rd, protecting the meadows and pastures from frost. At the Station, the main work has been the building of a calf barn; another matter claiming attention, in addition to the care of live stock and poultry, has been the cleaning and grading of seeds, including cereals, forage crops and vegetables."

Lennoxville, Que.—J. A. McClary, Superintendent, reports: "The temperatures recorded during November have ranged much lower than last year, the highest being 49, the lowest -13, and the mean 25.12; compared with extremes of 65 and 0, and a mean temperature of 30.49, in November, 1916. The precipitation totals 1.05 inch, while the rainfall for this time last year amounted to 2.67 inches. The sunshine aggregates 95.6 hours, as against 74.8 a year ago. There is not the amount of ploughing done in this district that there usually is in the fall of the year, on account of the scarcity of labour and the early frost, which prevented ploughing being done after the 10th. The weather since has been quite cold, with snow on the 18th, which covered the ground sufficiently to give good protection for tender plants. Since the 23rd, there has been good sleighing, which has given farmers an opportunity to do considerable teaming. The usual amount of live stock is being fed this winter, especially sheep, which seem to be gaining in numbers and popularity among the farmers on account of the high prices for which mutton and wool are selling, and the limited amount of labour and economical winter protection that can be used for same. Much benefit has been derived in this district from the co-operative selling of wool and lambs through the different sheep breeders' organizations, which are patronized by practically every breeder."

Brandon, Man.—W. C. McKillican, Superintendent, reports:—"All through November it has been remarkably fine and mild, the mean temperature being 33.4, the highest since 1912. These weather conditions must have been worth millions to the farmers of the West, in the saving of feed and in the opportunity for getting work finished. Ploughing has continued until the last week of the month."

Indian Head, Sask.—W. H. Gibson, Superintendent, reports:—"November has been clear and mild, with slight flurries of snow on the 24th and 30th. The roads have been good, and a large percentage of the crop has been delivered to the elevators. All fall work has been completed, and summerfallows are in good shape. Never before has so much fall ploughing been done in this district. The work on the Experimental Farm has included ploughing, spreading manure, building fences, cleaning grain and caring for the stock."

Rosthern, Sask.—Wm. A. Munro, Superintendent, reports:—"The weather during November has been mild, and the roads have been in good condition, which has facilitated the hauling of most of the wheat to the elevators. More fall ploughing has been done this season than for a number of years. At the Station there has

been erected a granary 30 x 60 feet, with 10 foot walls, divided into four bins 10 x 20, and four 10 x 10, with a driveway down the centre. It is anticipated that this will afford accommodation for all the grain. There has also been built a root cellar, wholly under ground, 16 x 30, with one entrance into the sheep barn and one leading outside, and there are stored in it, for feeding purposes, about forty tons of turnips."

Scott, Sask.—M. J. Tinline, Acting Superintendent, reports: "The mean temperature for November is 36.7°, which is above the average; while more hours of sunshine have been recorded than during any previous November since records were started. The weather was exceptionally fine during the first twenty days. The last of the month has been cooler, with light showers on the 26th and 27th. The ground was frozen too hard for ploughing by the middle of the month. The live stock have all thrived well on the stubble fields. At the Station, the work engaging attention has consisted principally in grading roads, spreading manure and hauling feed."

Lacombe, Alberta.—G. H. Hutton, Superintendent, reports:—"The weather during November has been ideal. In many parts of the central section of the province, ploughing has been possible right up to the last week of the month, though in this immediate section frost has interfered with ploughing operations during the greater part of November. The fine spell and prevailing high prices have facilitated the rapid marketing of grain, and, since threshing was completed much earlier than last year, the bulk of the grain intended for market from this district will have gone forward before the close of the present year. A comparatively light crop of hay in the southern parts of Saskatchewan and Alberta, and in Montana, has resulted in quite an increase in the demand for this class of fodder. The hay crop in this section during the past season was above normal, both as to yield and quality, and consequently a large tonnage is being offered, which is going out at high prices. An unfortunate boycott of hogs was put in force on the Calgary market the last week in November, and for some days no bids were made for the three thousand to four thousand hogs which were being held in the yards at that time. It is feared that this action, the effects of which one can scarcely believe were fully considered by the buyers, will greatly retard production next year."

Lethbridge, Alberta.—W. H. Fairfield, Superintendent, reports:—"The weather during November has been very mild, and, consequently particularly acceptable to the farmers, who have been able to accomplish more in the way of preparation of the soil for the coming crop than has been the case for several seasons. In the district, ploughing has been continued till the very last day of the month. Alfalfa hay is in greater demand and at a higher price than has ever been the case since this crop has been produced in the province. This situation is no doubt due to the increased attention being paid by farmers to live stock, particularly sheep. At the Station, all the work that it was desirable to do on the land has been completed. Winter

feeding tests have been begun with two single deck carloads of wether lambs, while two carloads of steers will also be put on feed shortly."

Invermere, B.C.—G. E. Parham, Superintendent, reports:—"The weather conditions during November have been marked by an unusually low sunshine record, only 23.7 hours being recorded against an average for the previous three years of 65 hours, but the open season, experienced in the district, has resulted in a considerable saving in winter feed, which threatens, this year, to be short, and the range cattle are still in the open, and doing well. At the Experimental Station, it has, for the same reason, been possible to complete the fall ploughing and the planting of bulbs, and to continue the general gardening work throughout the month. Clearing has been commenced on another section of the land added to the Station in the spring. In the poultry department, about 60 p.c. of the White Leghorn pullets have commenced to lay, but the Barred Rocks have proved more backward, only 30 p.c. of the trap-nested birds having started egg production. There is a good local demand for well-fattened cockerels."

Summerland, B.C.—R. H. Helmer, Superintendent, reports:—"November has been very fine, and it has been mild most of the month, a few degrees of frost being registered only on two nights. The mild weather greatly assisted the harvest throughout the district. Fall ploughing has not been very general, the land being too dry. Apple crops have been very good. Hay is very scarce and the price has gone up. Grain generally, especially oats, has threshed out lighter than usual. The dry year and scarcity of water reduced the clover, alfalfa and grain crops very much. The last of November saw winter coming in with a light fall of snow and a drop in temperature."

Agassiz, B.C.—W. H. Hicks, in charge, reports:—"The precipitation during November totals 8.71 inches. This is the third wettest month of the year, rain falling on eighteen days out of the thirty. The lowest temperature reached was 30°, on the 26th. Most of the 53.8 hours of sunshine occurred from the 14th to the 18th. All crops are now safely stored for the winter. Some thirty cars of potatoes, averaging about 28 tons per car, have been shipped from this point. The prevailing price has been \$20 to \$21 per ton. The bulk of the stock sold here has been purchased by the evaporators. Generally speaking, live stock is going into winter quarters in good condition. Markets for all classes of farm produce have been very satisfactory, especially for those from the poultry yard and dairy."

Sidney, Vancouver Island, B.C.—Lionel Stevenson, Superintendent, reports:—"The weather conditions during the first two weeks of November were very favourable for all outdoor work. Considerable land has been ploughed during the month. Part of this has been seeded to wheat, and part left ready for spring crops. No killing frosts have been experienced during the month. The root harvest has been completed, good yields have been obtained

from bottom or irrigated lands, while the upland soils have given a very light crop. The quantity of field roots is much below the average of the past two years. The amount of corn ensilage prepared in the district is twenty-five per cent greater than in any previous year. The apple crop of the district was harvested and disposed of at satisfactory prices; the canneries paid higher prices than ever before, two cents per pound for entire orchard crop being general. Some dairy stock has gone to the butchers, owing to the high cost of feed and labour. Swine and sheep have shown an increase in numbers and in popularity with the land-owners. The live stock of the district is in good condition, and the work on the farms is well advanced."

Meteorological Record for November, 1917.

The records of temperature, precipitation and sunshine at the several Experimental Farms and Stations for the month of November are given in the following table:—

Experimental Farm or Station at—	Degrees of Temperature, F.			Precipitation in inches.	Hours of Sunshine.	
	High-est.	Low-est.	Mean.		Possible.	Actual.
Ottawa, Ont.....	50.0	— 8.0	28.07	1.40	285	121.1
Charlottetown, P.E.I.....	56.0	13.0	33.25	4.06	281	73.5
Kentville, N.S.....	55.0	10.0	33.01	2.65	287	78.1
Nappan, N.S.....	58.0	3.0	31.70	3.71	285	90.9
Fredericton, N.B.....	49.0	— 1.0	28.40	1.74	284	101.0
Ste. Anne de la Pocatière, Que.....	43.2	1.0	27.00	1.38	280	109.5
Cap Rouge, Que.....	42.0	— 3.0	25.78	1.28	280	83.8
Lennoxville, Que.....	49.0	—13.0	25.12	1.05	286	95.6
Brandon, Man.....	61.3	15.0	33.40	0.15	272	123.2
Indian Head, Sask.....	60.0	8.0	34.27	0.50	270	112.8
Rosthern, Sask.....	58.0	8.7	34.24	0.13	258	170.9
Scott, Sask.....	64.8	1.2	36.70	0.25	261	151.1
Lacombe, Alta.....	69.6	11.4	39.00	0.00	263	162.9
Lethbridge, Alta.....	70.0	16.0	44.60	0.00	273	177.6
Invermere, B.C.....	50.0	16.0	32.50	0.38	270	23.7
Summerland, B.C.....	52.0	26.0	41.26	0.10	272	41.8
Agassiz, B.C.....	61.0	30.0	45.06	8.71	274	53.8
Sidney, Vancouver I., B.C.....	59.0	33.0	46.03	1.85	276	57.7

Ottawa, December 14, 1917.

J. H. GRISDALE,
Director Experimental Farms.

CROP REPORTS FROM OTHER COUNTRIES.

England and Wales.—The Board of Agriculture reports (December 1) that, except in Wales and the northwest, the weather during the past month has been favourable for autumn cultivation and the sowing of crops, especially on the eastern side of the country. Sowing in the important grain-growing counties has consequently been pushed on rapidly, and is more forward than last year, and, in the northeast more particularly, is often more advanced than usual. In the west, where the season has been much later, work is not so well advanced,

but progress was made during the latter part of the month. About 70 p.c. of the area intended for wheat has already been sown; and, as compared with December 1 last year, the area actually seeded appears to be from 10 to 15 p.c. greater, this percentage being exceeded in the northeast. Generally speaking, most of the work was done under favourable conditions, and where the crop is up, it is everywhere a healthy and satisfactory plant. In some parts of the west and Wales, however, much of the land was still too wet to be worked. Other autumn-sown crops also appear quite satisfactory. Of winter barley and beans rather less is reported to have been sown and of oats and rye about the same, as at this time last year; but, as with wheat, slightly more has been got in in the east than in the west.

Scotland.—The Scottish Board of Agriculture reports (December 1) that good progress has been made with ploughing, and wheat sowing and turnip storing were carried out under most favourable conditions. The estimated natural weight of the grain crops are all considerably higher than those recorded last year. The potato crop is 41,440,000 bushels, against 19,824,000 bushels last year. Turnips and swedes 300,605,000 bushels, against 220,155,000 bushels; mangolds 1,938,000 bushels, against 1,643,000 bushels.

Ireland.—The Irish Department of Agriculture reports (December 6) that the production of wheat in 1917 is 4,573,000 bushels from 124,082 acres, as compared with 2,827,000 bushels from 76,438 acres in 1916. Of oats the yield in 1917 is 89,094,000 bushels from 1,463,737 acres as against 58,686,000 bushels from 1,071,593 acres in 1916. Barley yielded 7,508,000 bushels from 177,135 acres as compared with 6,537,000 bushels from 150,063 acres in 1916. The yields in bushels per acre in 1917 were as follows, the yields of 1916 being given in brackets for comparison: Wheat 36·77 (36·96); oats 60·94 (54·68); barley 44·33 (43·63). The yield of potatoes is reported as 155,035,000 bushels from 709,263 acres, as compared with 90,718,000 bushels from 586,308 acres in 1916.

New Zealand.—The Government Statistician reports (November 1) that the area estimated to be sown to wheat for the season of 1917-18 is 293,945 acres, as compared with 224,291 acres in 1916-17. For oats the area sown for 1917-18 is estimated to be 484,237 acres, as compared with 564,726 acres in 1916-17.

Argentina.—Broomhall's Corn Trade News of December 4 states that in spite of some losses through bad weather it is confirmed that the crops are generally good, and are far superior to the partial failure of last year. The wheat surplus can still be reckoned at 132,000,000 bushels, which is a splendid contribution to the international supply.

United States.—The Crop Reporting Board of the United States Department of Agriculture reports (December 19) that the area sown to winter wheat this fall is 42,170,000 acres, which is 4 p.c. more than the revised estimated area sown in the fall of 1916, viz., 40,534,000 acres. The condition on December 1 was 79·3 against 85·7 and 87·7 on December 1, 1916, and 1915 respectively and a ten year average of 89·3. The area sown this fall to rye is 6,119,000 acres, which is 36·6

p.c. more than the revised estimated area sown in the fall of 1916, viz., 4,480,000 acres. The condition on December 1 was 84.1 against 88.8 and 91.5 on December 1, 1916, and 1915 respectively, and a ten year average of 92.2.

ROOT CROPS OF ENGLAND AND WALES, 1917.

The total production of potatoes in England and Wales in 1917 is estimated at 124,278,000 bushels, or 31,173,000 bushels (33 p.c.) more than in 1916, and is the largest crop recorded since returns of the production of crops were first collected in 1885. The yield per acre, 245.28 bushels, is 28 bushels heavier than last year, 15 bushels above the average of the last ten years, and has only been exceeded four times in the last thirty years. The yield per acre of turnips and swedes is estimated at 468.53 bushels, or 25 bushels below average, and 52 bushels less than in 1916, the decline being due to the unfavourable weather of the early summer in the northwestern counties. The total production, 454,109,000 bushels, is 30,613,000 bushels smaller than last year, but 13,067,000 bushels heavier than in 1915. Mangolds, on the other hand, are a very satisfactory crop; the total production, 316,645,000 bushels, is 42,560,000 bushels greater than in 1916, and the yield per acre, 817.22 bushels, is about 93 bushels heavier than last year and than the ten-year average. Taking both kinds of roots together, there is a larger quantity available this year than in 1916.

FIELD CROPS OF THE UNITED STATES, 1917.

The Crop Reporting Bureau of the United States Department of Agriculture issued (December 19, 1917) the following estimates of the acreage, production and value of the principal farm crops in the United States for the years 1916 and 1917, as compared with the annual average for the five years 1911-1915:—

Field Crops.		Area.	Production.		Farm Value, December 1.	
			Per acre.	Total.	Per bush.	Total.
		000 acres.	bush.	000 bush.	cents.	000 \$
Corn.....	1916	105,296	24.4	2,560,927	88.9	2,280,729
	1917	119,755	26.4	3,159,494	128.3	4,053,672
Average, 1911-15.....		105,672	26.1	2,754,164	59.7	1,644,511
Winter wheat.....	1916	34,709	13.8	480,553	162.7	781,906
	1917	27,430	15.2	418,070	202.9	848,372
Average, 1911-15.....		32,950	16.5	542,615	90.3	490,098
Spring wheat.....	1916	17,607	8.8	155,765	152.8	238,062
	1917	18,511	12.6	232,758	197.2	459,046
Average, 1911-15.....		18,961	13.9	263,746	81.8	215,792

Field Crops.	Area.	Production.		Farm Value, December 1.		
		Per acre.	Total.	Per bush.	Total.	
		000 bush.	bush.	000 cents.	000 \$	
All wheat.....	1916	52,316	12.2	636,318	160.3	1,019,908
	1917	45,941	14.2	650,828	200.9	1,307,418
Average, 1911-15.....		51,911	15.5	806,361	87.5	705,890
Oats.....	1916	41,527	30.1	1,251,837	52.4	655,928
	1917	43,572	36.4	1,587,286	66.9	1,061,427
Average, 1911-15.....		38,703	31.8	1,230,499	38.5	473,133
Barley.....	1916	7,757	23.5	182,309	88.1	160,646
	1917	8,835	23.7	208,975	113.7	237,539
Average, 1911-15.....		7,474	26.4	197,211	58.0	114,389
Rye.....	1916	3,213	15.2	48,862	122.1	59,676
	1917	4,102	14.7	60,145	166.3	100,025
Average, 1911-15.....		2,494	16.6	41,399	77.1	31,903
Buckwheat.....	1916	828	14.1	11,662	112.7	13,147
	1917	1,006	17.4	17,460	160.1	27,954
Average, 1911-15.....		808	20.4	16,514	73.4	12,127
Flaxseed.....	1916	1,474	9.7	14,296	\$2.49	35,541
	1917	1,809	4.7	8,473	\$2.97	25,148
Average, 1911-15.....		2,186	8.5	18,615	\$1.40	26,120
Rice.....	1916	869	47.6	41,325	88.7	36,673
	1917	964	37.6	36,278	189.4	68,717
Average, 1911-15.....		748	33.8	25,266	88.5	22,370
Potatoes.....	1916	3,565	80.5	286,953	146.1	419,333
	1917	4,390	100.8	442,536	122.9	543,865
Average, 1911-15.....		3,689	98.4	362,910	60.4	219,137
Sweet potatoes.....	1916	774	91.7	70,955	84.8	60,141
	1917	953	91.4	87,141	110.3	96,121
Average, 1911-15.....		629	95.8	60,257	70.6	42,525
Hay.....	1916	55,721	1.64	91,192	\$11.22	1,022,930
	1917	53,516	1.49	79,528	\$17.09	1,359,491
Average, 1911-15.....		49,395	1.41	69,543	\$11.88	826,282
Sugar beets.....	1916	665	9.36	6,228	\$6.12	38,115
	1917	675	9.23	6,237	\$7.34	45,780
Average, 1911-15.....		541	10.80	5,839	\$5.63	32,864
Tobacco.....	1916	1,413	816.0	lb.	per lb.	
	1917	1,447	827.1	1,153,278	14.7	169,672
				1,196,451	24.9	297,442

The values in the above table are based on the prices paid to farmers on December 1, 1917.

INTERNATIONAL YEAR BOOK OF AGRICULTURAL STATISTICS, 1915-16.

The fourth issue of the International Year Book of Agricultural Statistics has just been issued from Rome by the International Agricultural Institute. It includes data for the ten years ended 1916, in continuation of the previous issue of two years ago, which

covered the ten years ended 1914. The present edition has been considerably expanded, and occupies 949 8vo. pages, as compared with 782 pages of the previous volume. It gives the data available for all the countries of the world and is not limited to the countries adhering to the Institute, as was the case with the first issue for the year 1910. The subjects dealt with comprise (1) area and population; (2) distribution of area; (3) area and yield of different crops; (4) live stock; (5) international trade by calendar years; (6) international trade by commercial seasons; (7) consumption; (8) prices; (9) maritime freights; (10) course of exchange and (11) artificial manures. The work represents an extraordinary amount of patient labour, and is without doubt the most complete compendium of the world's agricultural statistics in existence. It enables us to obtain for each of the ten years ended 1916 not only the principal agricultural statistics for any particular country, but also the world's totals, compiled carefully from data reduced to a comparative basis.

In the following tables are reproduced in Canadian equivalents of metric denominations the world's area and yield of the principal food crops for 1915 and 1916 as compared with quinquennial and decennial averages.

Area and Yield of the World's Principal Food Crops, 1915 and 1916, compared with quinquennial and decennial averages.

Crops.	No. of Coun- tries.	1914 1914-15	1915 1915-16	1916 1916-17	Average 1907-1911 1907-08 1911-12	Average 1912-1916 1912-13 1916-17	Average 1907-1916 1907-08 1916-17
		000 acres.	000 acres.	000 acres.	000 acres.	000 acres.	000 acres.
Wheat.....	35	274,713	294,061	269,324	152,984	276,412	264,703
Rye.....	26	103,096	100,831	97,036	107,430	104,207	105,819
Barley.....	33	80,181	78,639	77,106	78,037	80,028	79,032
Oats.....	30	139,067	139,401	137,591	134,591	140,175	137,383
Corn.....	25	158,153	160,081	156,892	162,271	158,950	160,610
Rice.....	14	98,990	101,642	102,571	79,339	99,311	89,325
Potatoes.....	28	34,828	37,085	36,434	35,689	36,630	36,162
Sugar beets.....	18	5,732	5,473	5,844	5,205	5,884	5,545

		000 bush.	000 bush.	000 bush.	000 bush.	000 bush.	000 bush.
Wheat.....	35	3,546,862	4,492,379	3,656,818	3,374,761	3,907,674	3,641,198
Rye.....	26	1,578,000	1,657,939	1,670,631	1,618,587	1,732,066	1,675,376
Barley.....	33	1,374,058	1,556,130	1,482,905	1,410,900	1,526,715	1,468,504
Oats.....	30	3,838,210	4,535,683	4,167,998	3,797,708	4,304,047	4,050,887
Corn.....	25	3,838,751	4,018,313	3,699,811	3,643,480	3,862,367	3,752,919
Rice.....	14	3,172,546	3,550,710	3,648,370	2,837,592	3,366,984	3,102,298
Potatoes.....	28	5,002,606	5,004,991	5,010,776	5,052,155	5,278,026	5,164,338
		000 tons.	000 tons.	000 tons.	000 tons.	000 tons.	000 tons.
Sugar beets.....	18	61,646	55,423	60,646	52,620	62,590	57,605

For certain of the countries, especially in recent years for those affected by the war, data are not available. In these cases the Institute has used the figures of the quinquennial or decennial average for the purpose of supplying the omissions. For countries in the northern hemisphere the year is the year of harvest 1914 to 1916; but for countries of the southern hemisphere, where the season extends over two years, the year included is that which immediately follows the year of the northern hemisphere. Thus the totals in the first three columns of the table include the figures of the northern hemisphere for 1914, 1915 and 1916 and of the southern hemisphere for the years 1914-15, 1915-16 and 1916-17. The same rule applies to the quinquennial and decennial averages.

POTATO-GROWING CONTESTS FOR BOYS.

For the sixth year in succession potato-growing contests for boys between the ages of 12 and 18 in the counties of Carleton and Russell were held in competition for prizes given by Mr. R. B. Whyte of Ottawa. The arrangements were again in charge of a Committee under Mr. Whyte's chairmanship with Mr. L. H. Newman, Secretary of the Canadian Seed Growers' Association, as secretary for the competition.

The following is a statement of the results obtained by the first three prize winners in each county for 1917 as compared with 1916:

CARLETON COUNTY.

No.	Prize winner.	Age of competitor.	Cost of production per acre.	Yield obtained by competitors per acre.	Average yield per acre in Ontario.	Value of crop per acre.	Net profit per acre.
1916.			\$ c.	bush.	bush.	\$ c.	\$ c.
1	D. P. Brownlee.....	14	66 00	393	61 00	231 00	165 00
2	Harry S. Wright.....	16	74 00	190		110 70	36 70
3	Frank L. Perry.....	16	71 50	215		126 20	54 70
1917.							
1	John A. Plunkett.....	15	70 00	290	133 60	170 50	100 50
2	W. H. Seabrook.....	14	84 50	355		199 50	115 00
3	F. C. McBride.....	16	60 60	260		151 60	91 00

RUSSELL COUNTY.

1916.							
1	W. C. Hamilton.....	17	73 00	420	61 00	247 00	174 00
2	J. R. Thompson.....	16	106 50	350		206 20	99 70
3	Willard Presley.....	12	67 00	295		165 30	98 30
1917.							
1	J. R. Thompson.....	17	88 00	490	133 60	287 00	199 00
2	Percy L. Jackson.....	13	81 40	302		157 40	76 00
3	Francis H. Cotton.....	14	95 00	280		162 00	67 00

The average yield of the prize winners in Carleton county in 1917 was 313.7 bushels as compared with 268.2 bushels in 1916, 403.9 bushels, in 1915, 353.3 bushels in 1914 and 320.6 bushels in 1913. In Russell county the first six prize winners in 1917 averaged 320.4 bushels per acre, compared with 319.1 bushels in 1916, 433.7 bushels in 1915, 402.9 bushels, in 1914, and 289 bushels in 1913. In 1917 the average yield obtained by the prize winners in the two counties was 317 bushels, which is approximately 2.3 times the average yield of potatoes in the province this year, this being 133.67 bushels per acre according to the report of the Census and Statistics Office. The average net profit per acre for all competitors in the two counties in 1917 was \$75.37, as compared with \$79.27 in 1916. The average cost of producing one bushel in 1917 was 31.87 cents, as compared with 42.8 cents in 1916, 21.3 cents in 1915, 22 cents in 1914 and 34.8 cents in 1913. The average net profit per acre of the prize winners in the two counties in 1917 was \$101.82, as compared with \$90.05 in 1916, \$154.89 in 1915, \$149.77 in 1914 and \$82.33 in 1913.

The prizes were presented at a meeting held in the Ottawa City Hall on December 1, 1917, when addresses were delivered by Mr. J. S. Ewart, Mr. W. D. Jackson, Mr. E. D. Eddy, Sir James Grant, M.D. and Mr. W. J. Black.¹

THE WEATHER DURING NOVEMBER.

The Dominion Meteorological Office reports that the temperature was above the average throughout British Columbia, the western provinces and as far as the eastern shores of Lake Superior; elsewhere in the Dominion it was below the average. The positive departures were very remarkable in the western provinces, ranging from 13° to 19° in Alberta and Saskatchewan, and from 8° to 15° in Manitoba. Conditions were also pronounced in British Columbia, with from 4° to 7° in excess of the average. Temperature distribution was also remarkable in Ontario, varying as it did from 5° above the average at Port Arthur to from 3° to 5° below the average from Lake Huron eastward. Quebec and the Maritime provinces gave marked negative departures of from 3° to 4° and 2° to 6° respectively. The precipitation exceeded the average amount in the northern portion of British Columbia and in Cape Breton, otherwise it was deficient throughout the Dominion and nearly everywhere to a marked extent. In British Columbia, on Vancouver Island and in many portions of the Lower Mainland, the negative departure varied between four and five inches. In the western provinces the total amount was exceedingly light, and in many parts of southern Alberta and Saskatchewan there was none. In Ontario and Quebec the fall was from one to nearly two inches below, and over the greater portion

¹For particulars of previous competitions, see Census and Statistics Monthly of December, 1916 (Vol. 9, No. 100, pp. 323-325). The full report of the competition of 1917 as well as of the third annual Girl's Gardening and Canning Competition for prizes also provided by Mr. Whyte may be obtained from the Secretary of the Canadian Seed Growers' Association, Canadian Building, Ottawa.

of the Maritime provinces from one to over three inches less than average. On the other hand the fall of 21.7 at Prince Rupert, B.C., and of 7.2 inches at Sydney, N.S., were both excessive. With the exception of a considerable snowfall in eastern Ontario and in Quebec on the 22nd, little snow was recorded, and at the close of the month the ground was still bare over a large portion of the Dominion.

Journal of the Royal Statistical Society.—The Council of the Royal Statistical Society of London, England, have recently presented to the Census and Statistics Office a valuable set of the back numbers of the Journal of the Society from the commencement in 1838. The set is complete with the exception of the following parts which are out of print: Vol. II, 1839, the parts other than Feb., Apr. and Oct.; Vol. V, 1842, Pt. IV; Vol. XXVI, 1863, Pt. III; Vol. XIX, 1866, Pt. IV; Vol. XXXII, 1869, Pt. I; Vol. XXXIII, 1870, Pts. I and IV; Vol. XXXIV, 1871; Vol. XXXV, 1872, Pts. II, III and IV; Vol. XXXVI, 1873, Pt. II; Vol. LXIV, 1901, Pt. II; Vol. LXVI, 1903, Pt. III; Vol. LXX, 1907, Pt. I; Vol. LXXIV, 1911, Pt. VI. It is hoped eventually to complete the set by acquisition of the missing numbers. The Journal contains many important contributions on a great variety of subjects by eminent statisticians amongst whom may be mentioned Porter, Farr, Guy, Jevons, Booth and Giffen.

PRICES OF AGRICULTURAL PRODUCE, 1917.

EXPLANATORY NOTES.—(1) The weekly range of prices of Canadian grain at Winnipeg and Fort William (Table I) is furnished by the Board of Grain Commissioners for Canada and covers the weeks ended Saturday. (2) The monthly range of prices of grain at selected markets in the United States (Table II) is taken from the Monthly Crop Report of the U.S. Department of Agriculture. (3) The prices of imported grain and flour at British markets (Table III) are taken from the Market Supplements of the "Mark Lane Express" for London, and represent the range of the weekly Monday Market; for Liverpool the prices are taken from "Broomhall's Corn Trade News," and represent the range for cash on Tuesday of each week. (4) The average prices for British-grown grain (Table IV) are computed from returns received under the Corn Returns Act, 1882, and are as published in the "London Gazette." (5) The rate employed for conversion from English to Canadian currency is \$4.86½ to the £ sterling. For grain the British measures have been converted to Canadian measures of the legal weights per bushel, viz., 60 lb. wheat, 48 lb. barley, 34 lb. oats, and for other produce from long cwt. of 112 lb. to short cwt. of 100 lb.

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1917.

Grain and Grade.	Nov. 3.		Nov. 10.		Nov. 17.		Nov. 24.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat—								
No. 1 Nor.....	2 21	-	2 21	-	2 21	-	2 21	-
No. 2 Nor.....	2 18	-	2 18	-	2 18	-	2 18	-
No. 3 Nor.....	2 15	-	2 15	-	2 15	-	2 15	-
No. 4.....	2 07	-2 08	2 08	-	2 08	-	2 08	-
No. 5.....	1 92	-1 96	1 96	-	1 96	-	1 96	-
No. 6.....	1 87	-	1 87	-	1 87	-	1 87	-
Feed.....	1 80	-	1 78	-1 80	1 75	-1 76	1 65	-1 71

I. Weekly Range of Prices per bushel of Canadian Grain at Winnipeg and Fort William, 1917—con.

Grain and Grade.	Nov. 3.		Nov. 10.		Nov. 17.		Nov. 24.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Oats—								
No. 2 C.W.	0 66½	—0 68½	0 68½	—0 71½	0 72½	—0 76½	0 74½	—0 76½
No. 3 C.W.	0 64½	—0 65½	0 65½	—0 68½	0 69½	—0 73½	0 71½	—0 73½
No. 1 Feed ex.	0 63½	—0 65½	0 65½	—0 68½	0 69½	—0 73	0 71½	—0 73½
No. 1 Feed.	0 62½	—0 63½	0 63½	—0 67½	0 68½	—0 71½	0 69	—0 70½
No. 2 Feed.	0 60½	—0 61½	0 61½	—0 65	0 65½	—0 69	0 66½	—
Barley—								
No. 3 C.W.	1 20	—1 21	1 19½	—1 21	1 20½	—1 23	1 22½	—1 24
No. 4 C.W.	1 15	—1 16	1 14	—1 14½	1 14½	—1 17	1 16½	—1 17½
Rejected.	1 07	—1 10	1 05	—1 07	1 07	—1 08½	1 07	—1 08
Feed.	1 07	—1 10	1 05	—1 07	1 07	—1 08½	1 07	—1 08
Flax—								
No. 1 N.W.C.	2 95	—3 10½	3 11½	—3 20½	3 16½	—3 34½	3 06½	—3 15½
No. 2 C.W.	2 92	—3 03½	3 04½	—3 13½	3 13½	—3 29½	3 03½	—3 12½
No. 3 C.W.	2 81	—2 92½	2 93½	—3 02½	3 02½	—3 18½	2 92½	—3 01½

II. Monthly Range of Prices per bushel of Grain at Selected Markets in the United States, 1917.

Grade and Market.	August.		September.		October.		November.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat, Red Winter, No. 2—								
St. Louis.	2 14	—1 61	2 15	—2 27	2 15	—	2 15	—
Chicago.	2 12	—2 60	2 17	—2 20	2 17	—	2 17	—
New York (f.o.b. afloat).	2 25	—2 60	2 28	—	2 25	—	2 25	—
Corn, No. 2 mixed—								
St. Louis.	1 61	—2 33	1 90	—2 22	1 90	—2 02	1 95	—1 97
New York (f.o.b. afloat).	1 85	—2 49	2 05	—2 32	2 03	—2 19	2 16	—
Corn No. 2—								
Chicago.	1 69	—2 36	1 95	—2 24	1 89	—2 15½	2 16	—2 22
Oats No. 2—								
St. Louis.	0 52½	—0 77	0 56½	—0 63	0 57	—0 60½	0 58½	—0 59½
Chicago.	0 51	—0 80	0 56½	—0 61½	0 58½	—0 60½	0 58½	—0 60½
Rye, No. 2—								
Chicago.	1 65	—2 15	1 79	—1 92	1 78	—1 90½	1 76	—1 77½

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

MARK LANE, LONDON, E.C.

Description.	October 1.		October 8.		October 15.		October 22.		October 29.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Canadian No. 1.....	—	—	2 35½	—	2 35½	—	2 35½	—	2 35½	—
“ No. 2.....	—	—	2 32½	—	2 32½	—	2 32½	—	2 32½	—
“ No. 3.....	2 25	—	2 26½	—	2 26½	—	2 26½	—	2 26½	—
“ No. 4.....	2 17½	—	2 17½	—	2 17½	—	2 17½	—	2 17½	—
“ No. 5.....	2 07½	—	2 07½	—	2 07½	—	2 07½	—	2 07½	—
“ No. 6.....	1 98½	—	1 98½	—	1 98½	—	1 98½	—	1 98½	—
Ontario.....	2 35½	—	2 35½	—	2 35½	—	2 35½	—	2 35½	—
American:										
Montana.....	2 35½	—	2 32½	—	2 32½	—	2 32½—2 35½	2 32½—2 35½	2 32½—2 35½	—
Spring.....	2 26½	—	2 26½	—	2 26½	—	2 26½—2 32½	2 26½—2 32½	2 26½—2 32½	—
Hard winter.....	2 29½—2 33½	—	2 29½—2 33½	—	2 29½—2 33½	—	2 29½—2 33½	2 26½—2 32½	2 26½—2 32½	—
Red winter.....	2 22½—2 26½	—	2 25½—2 26½	—	2 25½—2 26½	—	2 20½—2 26½	2 20½—2 26½	2 20½—2 26½	—
Australian.....	2 41½	—	2 41½	—	2 41½	—	2 38½—2 41½	2 38½—2 41½	2 38½—2 41½	—
Indian.....	2 41½	—	2 41½	—	2 38½	—	2 35½—2 41½	2 35½—2 41½	2 35½—2 41½	—
Argentine.....	2 32½—2 35½	—	2 32½—2 35½	—	2 32½—2 35½	—	2 32½—2 35½	2 32½—2 35½	2 32½—2 35½	—
Fine Oregon.....	—	—	—	—	2 32½—2 35½	—	2 32½—2 35½	2 32½—2 35½	2 32½—2 35½	—
Blue Stem.....	2 32½—2 35½	—	2 32½—2 35½	—	2 29½—2 32½	—	2 29½—2 32½	2 29½—2 32½	2 29½—2 32½	—
Walla-Walla.....	2 29½—2 32½	—	2 29½—2 32½	—	2 26½—2 29½	—	2 26½—2 29½	2 26½—2 29½	2 26½—2 29½	—
Oats (per bush.)—										
Canadian.....	1 62½—1 65½	—	1 62½—1 65½	—	1 62½—1 65½	—	1 62½—1 65½	1 62½—1 65½	1 62½—1 65½	—
American.....	1 57½—1 60½	—	1 57½—1 60½	—	1 57½—1 60½	—	1 57½—1 60½	1 57½—1 60½	1 57½—1 60½	—
Chilian.....	1 65½—1 75½	—	1 65½—1 75½	—	1 65½—1 75½	—	1 65½—1 75½	1 65½—1 75½	1 65½—1 75½	—
Flour (per 280 lb.)—										
Canadian export patent..	13 02	—	13 02	—	13 02	—	13 02	—	13 02	—
“ second clears..	15 09—15 33	—	15 09—15 33	—	—	—	—	—	—	—
Australian.....	19 71—19 95	—	19 47—19 59	—	19 47—19 59	—	19 47—19 59	19 71—19 95	19 71—19 95	—
Japanese.....	18 49—18 74	—	18 49—18 61	—	18 49—18 61	—	18 49—18 61	18 49—18 61	18 49—18 61	—

LIVERPOOL.

Description.	Oct. 2.		Oct. 9.		Oct. 16.		Oct. 23.		Oct. 30.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—										
Nor. Man. No. 1.....	—	—	2 30½—	—	2 32½	—	2 32½	—	2 32½	—
“ “ No. 2.....	—	—	2 28	—	2 28	—	2 28	—	2 28	—
Nor. Duluth No. 1.....	2 26½	—	—	—	—	—	—	—	—	—
“ “ No. 2.....	2 22	—	—	—	—	—	—	—	—	—
Blue stem.....	—	—	—	—	2 36	—	2 36	—	2 36	—
Oats (per bush.)—										
Canadian.....	1 59½—1 60½	—	1 58½—1 59½	—	1 59½	—	1 62½	—	1 62½—1 64	—
Chilian white.....	1 65½	—	1 67	—	—	—	—	—	—	—
“ tawny.....	1 54½—1 56½	—	1 54—1 55½	—	1 54—1 55½	—	1 56½—1 57	—	1 59½	—
Flour (per 280 lb.)—										
Manitoba.....	12 59	—	12 59	—	12 59	—	12 59	—	12 59	—

III. Range of Prices of Imported Grain and Flour at British Markets, 1917.

LIVERPOOL.

Description.	Nov. 6.		Nov. 13.		Nov. 20.		Nov. 27.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Nor. Man. No. 1.....	2 32½	—	—	—	—	—	2 32½	—
“ “ No. 2.....	2 28½	—	—	—	—	—	—	—
No. 2 Hard Winter.....	—	—	2 30½	—	—	—	—	—
Blue Stem.....	2 36	—	—	—	—	—	—	—
Oats (per bush.)—								
Chilian white.....	1 68½	—	1 68½	—	1 68½	—	1 67	—
“ tawny.....	1 59½—1 60½	—	1 60½	—	1 60½	—	1 59½—1 62½	—
Irish black, new.....	1 21	—	1 23½	—	1 23½—1 24	—	1 22½—1 25½	—
“ white.....	—	—	—	—	—	—	1 27—1 30½	—
Amer. clipped white.....	1 57½—1 59½	—	1 57½—1 59½	—	1 57½—1 59½	—	1 57½—1 59½	—
Can. Western No. 2.....	1 64	—	1 64	—	1 64	—	1 64—1 65½	—

MARK LANE, LONDON, E.C.

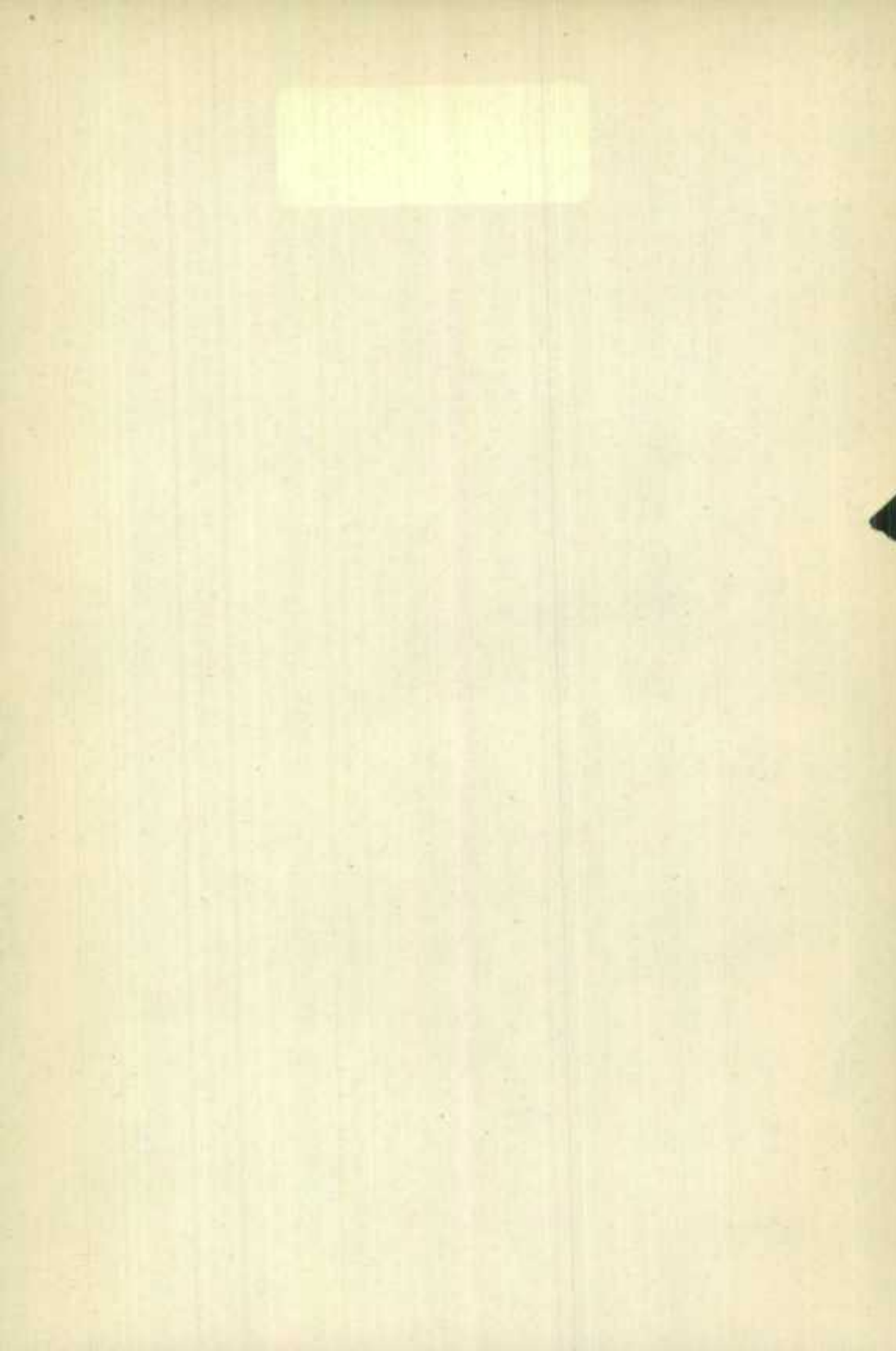
Description.	Nov. 5.		Nov. 12.		Nov. 19.		Nov. 26.	
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wheat (per bush.)—								
Canadian No. 1.....	2 35½	—	2 35½	—	2 35½	—	2 34½	—
“ No. 2.....	2 32½	—	2 32½	—	2 32½	—	2 30½	—
“ No. 3.....	2 26½	—	2 26½	—	2 26½	—	2 25	—
“ No. 4.....	2 17½	—	2 14½	—	2 14½	—	2 14½	—
“ No. 5.....	2 10½	—	2 06½	—	2 06½	—	—	—
“ No. 6.....	1 93½	—	1 97½	—	1 97½	—	—	—
Manitoba tough.....	2 26½	—	2 26½	—	—	—	—	—
American:								
Montana.....	2 32½—2 35½	—	2 32½—2 35½	—	2 32½—2 35½	—	—	—
Spring.....	2 26½—2 32½	—	2 26½—2 32½	—	2 29½—2 32½	—	2 29½—2 32½	—
Hard Winter.....	2 26½—2 32½	—	2 26½—2 32½	—	2 29½—2 32½	—	2 29½—2 32½	—
Red Winter.....	2 20½—2 26½	—	2 20½—2 26½	—	2 20½—2 26½	—	2 20½—2 26½	—
Australian.....	2 41½—2 44½	—	2 41½—2 44½	—	2 41½—2 44½	—	2 39½—2 41½	—
Indian—								
White.....	2 38½—2 41½	—	2 38½—2 41½	—	2 38½—2 41½	—	2 42½—2 44½	—
Red.....	2 35½—2 38½	—	2 35½—2 38½	—	2 35½—2 38½	—	2 39—2 39½	—
Californian.....	—	—	—	—	—	—	2 29½—2 32½	—
Argentine.....	2 32½—2 35½	—	2 32½—2 35½	—	2 32½—2 35½	—	—	—
Fine Oregon.....	2 32½—2 35½	—	2 32½—2 35½	—	2 32½—2 35½	—	—	—
Blue Stem.....	2 29½—2 32½	—	2 29½—2 32½	—	2 29½—2 32½	—	—	—
Walla Walla.....	2 26½—2 29½	—	2 26½—2 29½	—	2 26½—2 29½	—	—	—
Oats (per bush.).								
Canadian.....	1 65½—1 68	—	1 65½—1 68	—	1 68—1 70½	—	1 68—1 70½	—
American.....	1 57½—1 60½	—	1 57½—1 60½	—	1 57½—1 60½	—	1 57½—1 60½	—
Chilian.....	1 68—1 78½	—	1 68—1 78½	—	1 70½—1 81	—	1 70½—1 81	—
Flour (per 280 lb.).								
Canadian patent.....	13 02	—	12 41—12 90	—	12 41—12 90	—	12 41—12 65	—
American spring common.....	12 27	—	12 41—12 90	—	12 41—12 90	—	12 41—12 65	—
Australian.....	19 95—20 07	—	19 95—20 07	—	19 95—20 07	—	19 95—20 07	—
Japanese.....	18 49—18 61	—	18 49—18 61	—	18 49—18 61	—	18 49—18 61	—

IV. Average Prices of British-grown Grain, 1917.

Week ended—	Wheat.		Barley.		Oats.	
	per quarter.	per bushel.	per quarter.	per bushel.	per quarter.	per bushel.
	s. d.	\$	s. d.	\$	s. d.	\$
October 6.....	70 8	2.150	57 9	1.686	44 9	1.168
“ 13.....	71 0	2.160	58 5	1.706	44 5	1.176
“ 20.....	70 8	2.150	59 3	1.730	44 1	1.169
“ 27.....	70 10	2.155	60 1	1.754	43 0	1.139
Average.....	70 10	2.154	58 11	1.719	44 1	1.163
November 3.....	70 4	2.139	60 1	1.827	43 0	1.308
“ 10.....	70 3	2.136	60 2	1.829	42 11	1.305
“ 17.....	70 3	2.136	60 2	1.829	43 0	1.308
“ 24.....	70 2	2.134	59 9	1.817	43 1	1.310
Average.....	70 3	2.136	60 0	1.825	43 0	1.308

THE CANADA YEAR BOOK, 1916-17.

The Canada Year Book of 1916-17, just issued by the Census and Statistics Office, is a volume of 720 pages. It opens with an illustrated article on the Natural Resources of the Dominion of Canada by Mr. WATSON GRIFFIN of the Department of Trade and Commerce, and includes also an article on Economic Geology of Canada in 1916 by Mr. WYATT MALCOLM of the Geological Survey. Amongst other new features are tables showing the principal results of the Census of Manitoba, Saskatchewan and Alberta, as taken in 1916. The Section on Education, revised and brought up to date with the assistance of the provincial deputy ministers and superintendents of education, includes a comprehensive description of the public educational system of Canada from the elementary schools to the universities and statistical tables dating from the beginning of the century. A description of the Dominion and Provincial Agricultural Experiment Stations has been revised and brought up to date. A digest of the provincial laws relating to motor vehicles, with recent statistics of registration, is included for the first time, and a description is given of the new Honorary Advisory Council of Scientific and Industrial Research. The Year Book includes in all departments the latest information available up to the time of printing, and the tables include, wherever possible, the figures of 1917 as well as those of 1916.



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