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AGRICULTURAL BRANCH

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Ottawa, January 21, 1937, 4 p.m. - The Dominion Bureau of Statistics issues today the third estimate of the area, yield and value of field crops in Canada in 1936. In accordance with previous practice, the estimates of wheat, rye and flaxseed may be subjected to further revision when full marketing statistics for the Western provinces are available after the end of the crop year. The average prices used in crop valuation are based on monthly and special compilations up to the end of December, 1936, so these may also require revision due to price changes during the last seven months of the crop season.

SUMMARY

The estimates of the 1936 production of field crops contained in this release show only slight changes as compared with the second estimates of last November. The third estimate of Canadian wheat production for the 1936 season shows 229,218,000 bushels harvested from 25,289,000 acres. This is the smallest crop since 1919, when 193,260,000 bushels were produced on 19,126,000 acres. The 1935 crop was 281,935,000 bushels, the 1934 crop 275,849,000 bushels, and the 1933 crop 281,892,000 bushels. Thus 1936 is the fourth successive year when the wheat crop has been below 300 million bushels.

The reduction of 4,282,000 bushels in the third estimate of 1936 wheat production is chiefly accounted for by a downward revision of three million bushels in the crop harvested in Alberta. The third estimate for Saskatchewan remains the same, but for Manitoba there was a downward revision of one million bushels. The production of wheat in the Prairie Provinces is now placed at 212 million bushels compared with 264.1 million bushels in 1935 and 263.8 million bushels in 1934.

The estimated oat production for 1936 is 271,778,000 bushels. This is the lowest output of oats on record since 1910. The 1935 crop of oats totalled 394,348,000 bushels and the 1934 crop 321,120,000 bushels. Barley production is placed at 71,922,000 bushels compared with 83,975,000 bushels in 1935. The 1936 rye production of 4,281,000 bushels is less than half of the 1935 production of 9,606,000 bushels. Flaxseed production for 1936 is estimated at 1,795,300 bushels, 129,300 bushels less than in 1935.

Potatoes yielded an estimated crop of 39,034,000 cwt. compared with 38,670,000 cwt. in 1935. Hay and clover production is estimated at 13,803,000 tons, which is slightly less than the figure of 14,060,000 tons recorded for 1935. Sugar beet production is placed at 595,000 tons, the highest on record, compared with 465,800 tons last year.

The production of peas, beans, mixed grains and corn for husking all show decreases in 1936 as compared with 1935. Corn for husking is estimated at 6,083,000 bushels this year, a reduction of nearly 1.7 million bushels from the estimated 1935 crop. Increases in production in 1936 are shown for buckwheat, turnips, etc., and alfalfa. The 1936 crop of alfalfa of 1,966,000 tons is the largest since that of 1928.

The farm value of production of the 1936 crops is now estimated to be \$599,421,400. A rise in prices as the marketing season progressed necessitated an upward revision in the prices per unit assigned to grain crops. The farm value of production of field crops in 1935 was \$512,176,900, and in 1934, \$549,079,600. The value of the 1936 wheat crop is estimated at \$204,835,000, an increase of \$31,770,000 over 1935. The oat crop of 1936 is worth \$16,661,000 more, and the barley crop \$21,136,000 more than the 1935 valuations. Potatoes are valued at \$44,184,000 in 1936 as compared with \$30,854,000 in 1935.

The total area devoted to the principal field crops in 1936 was 57,662,550 acres, an increase of 646,090 acres over the 1935 area, but 870,900 acres less than that of 1933.

AGRICULTURAL SEASON OF 1936.

The crop season of 1936 will be remembered as one of sharp regional contrasts and violent extremes of weather conditions. The spring outlook was promising but the picture was soon changed when summer heat and drought of an intensity seldom equalled, brought about a serious crop failure over large areas of western Canada. Reduced yields and lowered quality were common to substantial areas of Ontario while other eastern provinces and most of British Columbia enjoyed favourable conditions and experienced a highly satisfactory season. Forced to early maturity by the extremely hot dry weather of July, grain crops were short of straw and in many cases light of head, although the quality of the western wheat crop was high, owing largely to the absence of frost and rust damage. Hay and fall wheat escaped the worst of the damage and generally yielded well but potatoes and roots except in the eastern provinces and British Columbia, were disappointing. Excellent harvest weather prevailed and most crops were saved in good condition. Late summer and early fall rains restored pastures which had earlier been seared by the blistering weather, but came too late to save newly seeded meadows, large areas of which will have to be ploughed up. Acute feed shortages over much of the southern prairie area necessitated considerable liquidation of live stock and many cattle were moved to the north and east, where feed supplies were more abundant.

Reports at the end of April indicated a backward spring with seeding delayed but soil conditions satisfactory for germination and early growth. Winter killing of fall-sown grains, meadows and pastures was less than usual, while fruit trees came through the winter with little injury. During the latter part of May, sharp frosts were experienced throughout eastern Canada, causing damage to fruit buds, truck crops and early sowings of less hardy grains and forage crops. At the end of May the condition figures of practically all grain crops, except fall wheat, were below those of the previous year. Forage crops and pastures, on the other hand, showed distinctly better promise than in 1935. As the summer advanced, lack of rainfall coupled with intense heat rapidly depleted pastures and further lowered the prospects for the grain crop. Milk supplies fell off sharply and fruit and vegetable crops in the western part of Ontario were badly injured. Eastward from the Ontario-Quebec boundary, the effects of drought were progressively less in evidence, while the Maritime Provinces enjoyed ample moisture supplies. British Columbia also escaped with little damage. On the prairies where all-time high temperature records were established, hopes of a good crop soon vanished and many fields were cut for forage when it became apparent that there was insufficient moisture to produce a crop of grain. The crop of wheat was the smallest in many years while coarse grains suffered even greater proportionate reduction.

In the Maritime Provinces, meadow lands and apple orchards survived the winter with little or no damage and early prospects for fruit crops were excellent. Spring was rather late and severe frosts in the latter part of May damaged the apple bloom extensively. Throughout the remainder of the season weather conditions were satisfactory for normal growth. Hay was a heavy crop and pastures stood up well but apples suffered from pest injuries, winds and frosts and the crop harvested was smaller in quantity and of distinctly poorer quality than last year. Potatoes yielded well and other field crops were satisfactory.

In Quebec a late spring delayed seeding. While pastures started early, growth was slow until stimulated by warmer days in June. Hay was an average crop of good quality. Cereals, potatoes and roots turned out better than anticipated and in most cases yields were above the previous year. Berries and vegetable crops yielded abundantly but apples were the smallest crop in years.

Except for a few favoured counties, most of Ontario experienced serious drought damage with spring grains, fodder corn and vegetables suffering most. Fall wheat and hay crops escaped the scorching but pastures declined much earlier than usual and many farmers had to resort to stable feeding of cattle during the summer to sustain milk production. Fall rains improved the situation and left the ground in good shape for ploughing. Tree fruit crops were all smaller than they were a year ago, while berries and grapes were sharply reduced by the spring frosts and the extreme weather of July.

In the Prairie Provinces, the ravages of heat and drought took the greatest toll. Except for northern areas, rainfall was quite inadequate for normal crop growth and this condition accompanied by the intense heat, resulted in an extremely light harvest over the area as a whole. Fortunately such other hazards to crop production as hail, rust, frost and insect pests were relatively unimportant,

although in west-central Alberta hail caused considerable damage while elsewhere grasshoppers, wireworms and saw flies were active. The forced maturity of the grains permitted a very early harvest and crops were garnered in good condition. Feed grains and roughages of all kinds have been comparatively scarce but the movement of cattle from drought sections to areas of more abundant feed helped to alleviate the situation. The 1936 drought area was greater than that of 1933 and 1934, principally because it extended further north in western Saskatchewan and further west in southern Alberta.

In British Columbia, severe weather during the winter caused considerable injury to fruit trees and production of most fruits was less than that of the previous season. Pastures also suffered from the effects of winter. Field crops on Vancouver Island and the Lower Mainland were generally satisfactory. Hot, dry weather in the interior lowered the prospects somewhat but supplies of irrigation water were equal to the demand and little drought damage was experienced. Haying and harvesting were carried on under favourable conditions.

WHEAT PRODUCTION IN THE PRAIRIE PROVINCES, 1936.

The following table lists the three estimates of wheat production in the Prairie Provinces:

	September	November	January	Final, 1935
		1 9 3 6 (Bushels)		
Manitoba	30,800,000	29,000,000	28,000,000	23,250,000
Saskatchewan	117,000,000	117,000,000	117,000,000	142,198,000
Alberta	68,200,000	70,000,000	67,000,000	98,648,000
Prairie Provinces	216,000,000	216,000,000	212,000,000	264,096,000

The third estimate of wheat production in the Prairie Provinces shows a reduction of 4 million bushels from the November estimate. A total crop of 212,000,000 bushels of wheat is estimated for 1936 as compared with the final 1935 estimate of 264,096,000 bushels.

As harvesting neared completion the full effects of the drought became more apparent and downward revisions in average yields per acre were made in 26 out of the 41 crop districts of the Prairie Provinces. Most of these were the districts in the southern portions of the provinces.

PROGRESS OF MARKETINGS, 1936 WHEAT CROP

Owing to the small crop in 1936 the marketings for the 1936-37 season should be considerably below those of 1935-36. From records now available, it is estimated that approximately 175 million bushels will be marketed during the current crop year, compared with 214.1 million bushels in 1935-36. The poor crops in certain districts in the provinces of Saskatchewan and Alberta will necessitate the drawing of more than the usual amounts of seed grain from previous deliveries at country elevators. While there is a shortage of feed in the Prairie Provinces this year, the small size and the high quality of the wheat crop means that very little wheat will be fed this season.

In the period from August 1 to January 8, 1937 marketings in the three Prairie Provinces amounted to 138.5 million bushels, indicating that approximately 79 per cent of the marketable wheat of this season has already come forward. One year ago the percentage was 83, when 181.9 million bushels were marketed. On the basis of present estimates, only 36 million bushels will be marketed in the period from January 8 to July 31, 1937.

Deliveries of wheat reached the season's peak at the beginning of September this year which is a month earlier than the peak in the previous year. Up to January 8, 18.4 million bushels have been marketed in Manitoba, 77.3 millions in Saskatchewan and 42.7 million bushels in Alberta. For several weeks the marketings have been reduced to small amounts, and Alberta is the main source of the deliveries.

PRODUCTION OF OTHER GRAINS IN THE PRAIRIE PROVINCES, 1936

A slight upward revision for Manitoba and a decrease of 1,534,000 bushels in the estimate for Alberta as compared with the November estimates places the 1936 oat production of the Prairie Provinces at 135,862,000 bushels. The second

estimate was 137,135,000 bushels and the 1935 crop was 244,854,000 bushels.

Barley production is now estimated to be 52,617,000 bushels, a reduction of 480,000 bushels from the earlier estimate. The 1935 barley crop of the Prairie Provinces was 62,625,000 bushels. Rye production in these provinces shows a drastic reduction as compared with the 1935 crop. The 1936 figure is 3,201,000 bushels compared with 8,379,000 bushels in 1935. Flaxseed production for 1936 of 1,730,000 bushels is 91,400 bushels less than the crop of 1,821,400 bushels harvested in 1935.

1935 CROP ESTIMATES

Minor changes have been made in the 1935 wheat crop estimates of the Prairie Provinces on the basis of the disposition data that is now complete. The final figures on marketings in the three Provinces were about two million bushels below the unrevised data, reducing the small error in the crop estimate cited in the August, 1936 Monthly Bulletin of Agricultural Statistics at page 277. Marketings are now given as 214,137,000 bushels out of an estimated crop of 264,096,000 bushels. Of the total seed supply, 4,040,000 bushels had to be withdrawn from country elevators. The Manitoba estimate is revised upward by 750,000 bushels to 23,250,000 bushels, the Saskatchewan figure upward by 7,198,000 bushels to 142,198,000 bushels and the Alberta estimate downward by 3,352,000 bushels to 98,648,000 bushels. The net change for the three provinces is an upward revision of 4,596,000 bushels.

The only other revision necessary is in Saskatchewan flaxseed where the acreage is raised from 167,500 to 260,000 and the production from 1,055,000 to 1,250,000 bushels.

QUALITY OF THE 1936 WHEAT CROP

While damage from drought reduced the size of the 1936 crop and consequently the volume of inspections, the dry and early maturity resulted in the production of a crop of unusually high quality, in contrast with the low quality of the rust-damaged crop in 1935. For the first five months of the cereal year, the grading of the crop has been the highest for any similar period since 1932, while the protein content has been the highest of any annual test yet made by the Grain Research Laboratory of the Board of Grain Commissioners.

After eliminating special grades such as Durum, White Springs and Winters, the percentages of inspections grading No. 3 Northern or higher by months in 1936 are shown as follows with comparative figures for 1935 within brackets: August 90 (83); September 96 (65); October 92 (41); November 88 (34); December 80 (46). During each month in the current cereal year, the inspections have graded well above those of the corresponding month in 1935. For the five-month period from August to December, 1936 the percentage of inspections grading No. 3 Northern or higher amounted to 92 per cent as compared with only 53 per cent for the same months in 1935.

In examining the inspections by grades for the August-December period, 1936 there is shown a much greater concentration in the higher grades than was the case in the same months of 1935. For the first five months of the current cereal year 73 per cent of the inspections have graded No. 1 Hard and Nos. 1 and 2 Northern, whereas in the corresponding months of the previous year only 34 per cent of the inspections were in these grades. For the same period this crop year only 2 per cent of inspections graded Nos. 4, 5 and 6 Northern and Feed, as compared with 37 per cent during the same months of 1935. "Tough" inspections amounted to 3 per cent of the total inspections in August-December, 1936 as compared with 5 per cent during the same period of the preceding crop year. Good harvesting weather in both years accounts for the low percentages of inspections grading tough in contrast with 12 per cent falling into this grade in 1934.

The quality of the 1936 Durum crop is likewise decidedly superior to that of 1935 as indicated by inspections to date. The percentage grading No. 1 and 2 during the five months ended December, 1936 was 84 per cent as compared with only 17 per cent in the same months of 1935. Only 12 per cent of the Durum wheat crop of 1936 has fallen into grades Nos. 3 and 4 Amber Durum, while the percentage in these grades was 55 in 1935.

The very high protein content of the 1936 crop is indicated by the report of tests made by the Grain Research Laboratory of the Board of Grain Commissioners. These tests show the average protein content of the 1936 wheat crop

of the Prairie Provinces as 14.9 per cent in comparison with 13.9 per cent for for the 1935 crop. The total number of samples tested was 9,810 of hard red spring wheat grading No. 1 Hard to No. 4 Northern, also No. 4 Special and Nos. 1 and 2 C. W. Garnet. In considering the results, it should be borne in mind that the computations are based on the number of samples tested without regard to the relative volumes of wheat produced in the various districts.

CHARTS SHOWING THE AVERAGE YIELDS PER ACRE OF WHEAT IN THE PRAIRIE PROVINCES
BY CROP DISTRICTS, 1935 AND 1936

Accompanying this report are two charts showing the average yields per acre of wheat by crop districts for the Prairie Provinces in 1935 and 1936. Drought was the most important factor affecting the yield of wheat in the 1936 season in contrast with the serious depreciation of yield caused by rust and frost in the 1935 season. Due to the absence of any material damage from frost and rust, the 1936 crop was of extremely high quality and high in protein.

Of the twenty-three crop districts in the Prairie Provinces having a yield of 12 bushels or less per acre in 1935, thirteen of these had less than 12 bushels per acre again in 1936. Two crop districts experienced average yields of 4 bushels or less per acre. The distribution of crop districts according to yields per acre for 1935 and 1936 was as follows:

Average Yield Per Acre	Number of Districts	
	1935	1936
0 - 4.0	0	2
4.1 - 8.0	9	11
8.1 - 12.0	14	8
12.1 - 16.0	12	9
16.1 - 20.0	5	7
20.1 - 28.0	1	4
Total	41	41

Manitoba:--Drought in Manitoba seriously affected crop yields in crop districts 1, 2, 6, 7 and 8. Nine of the fourteen crop districts in this province had an average yield in 1936 of over 12 bushels per acre as compared with only two districts in 1935.

Saskatchewan:--Very low yields in Saskatchewan were reported for districts 1, 3A, 3B, 4 and 7. Only two out of ten crop districts recorded average yields of more than 12 bushels per acre as compared with four in 1935. Crop district No. 4 shows an average yield for 1936 of 1.3 bushels per acre.

Alberta:--In Alberta, crop districts 1, 2, 4, 5, 6 and 7 experienced average yields of less than 8 bushels per acre. Nine of the seventeen Alberta crop districts had average yields per acre in 1936 exceeding 12 bushels. In 1935, twelve districts reported average yields greater than 12 bushels per acre.

AREAS AND YIELDS OF GRAIN CROPS.

For all Canada, the wheat production in 1936 is now estimated at 229,218,000 bushels from 25,289,000 acres, a yield per acre of 9.1 bushels, as compared with 281,935,000 bushels from 24,115,700 acres or 11.7 bushels per acre in 1935. Oats yielded 271,778,000 bushels from 13,118,400 acres, as compared with 394,348,000 bushels from 14,096,200 acres in 1935, yields per acre of 20.7 bushels and 28 bushels respectively. The yield of barley is estimated at 71,922,000 bushels from 4,432,500 acres or 16.2 bushels per acre, as compared with 83,975,000 bushels from 3,886,800 acres or 21.6 bushels per acre in 1935. Rye is estimated to have yielded 4,281,000 bushels from 635,000 acres, as compared with 9,606,000 bushels from 719,500 acres in 1935, yields per acre of 6.7 bushels and 13.4 bushels. The production of flaxseed is estimated at 1,795,300 bushels from 467,750 acres or 3.8 bushels per acre, as compared with 1,924,600 bushels from 306,900 acres or 6.3 bushels per acre in 1935. The yields of other grain crops, in bushels, are as follows, with the 1935 figures within brackets: Peas 1,229,300 (1,616,000); beans 876,000 (1,161,400); buckwheat 8,601,000 (7,948,600); mixed grains 33,639,000 (39,534,900); corn for husking 6,083,000 (7,765,000).

1. The first part of the report is a general statement of the purpose and scope of the study. It is followed by a brief review of the literature on the subject.

2. The second part of the report is a description of the methods used in the study.

The methods used in the study are described in detail. This includes a description of the subjects, the instruments used, and the procedures followed.

The results of the study are presented in this section. They are organized into a series of tables and figures.

Table 1	Table 2	Table 3	Table 4	Table 5
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GRAIN YIELDS OF THE PRAIRIE PROVINCES

Grain yields in the three Prairie Provinces are now estimated as follows, with the 1935 figures in brackets: Wheat 212,000,000 bushels from 24,522,000 acres (264,096,000 bushels from 23,293,000 acres); oats 135,862,000 bushels from 8,505,000 acres (244,854,000 bushels from 9,478,000 acres); barley 52,617,000 bushels from 3,719,000 acres (62,625,000 bushels from 3,187,000 acres); rye 3,201,000 bushels from 571,500 acres (8,379,000 bushels from 649,300 acres); flaxseed 1,730,000 bushels from 459,300 acres (1,821,400 bushels from 296,700 acres).

ROOT AND FODDER CROPS

The acreages, yields per acre and total production of root and fodder crops are as follows, with the 1935 figures in brackets: Potatoes 496,400 acres, 79 cwt., 39,034,000 cwt. (506,800 acres, 76 cwt., 38,670,000 cwt.); turnips etc. 181,800 acres, 210 cwt., 38,208,000 cwt. (185,200 acres, 190 cwt., 35,110,000 cwt.); hay and clover 8,786,300 acres, 1.57 tons, 13,803,000 tons (8,697,600 acres, 1.62 tons, 14,060,000 tons); alfalfa 853,600 acres, 2.30 tons, 1,966,000 tons (762,300 acres, 2.57 tons, 1,958,700 tons); fodder corn 408,500 acres, 7.66 tons, 3,128,400 tons (480,700 acres, 8.48 tons, 4,078,000 tons); grain hay 1,045,000 acres, 0.97 tons, 1,010,000 tons (1,346,700 acres, 1.43 tons, 1,927,000 tons); sugar beets 56,100 acres, 10.61 tons, 595,000 tons (52,600 acres, 8.86 tons, 465,800 tons).

VALUE OF FIELD CROPS

The average prices, up to December 31, received by growers at the point of production for the 1936 crops are estimated as follows, with the revised prices for 1935 crops within brackets: Cents per bushel - Wheat 89 (61); oats 40 (24); barley 63 (29); rye 60 (27); peas 162 (109); beans 204 (146); buckwheat 69 (51); mixed grains 54 (36); flaxseed 141 (119); corn for husking 68 (45). Cents per cwt. - Potatoes 113 (80); turnips, etc. 35 (32). Dollars per ton - Hay and clover 7.66 (7.62); alfalfa 9.17 (8.04); fodder corn 3.40 (3.32); grain hay 6.41 (5.24); sugar beets 5.64 (5.44).

The total values of field crops in 1936 are estimated as follows, with the revised figures for 1935 within brackets: Wheat \$204,835,000 (\$173,065,000); oats \$110,070,000 (\$93,409,000); barley \$45,601,000 (\$24,465,000); rye \$2,590,000 (\$2,634,000); peas \$1,991,000 (\$1,767,200); beans \$1,790,400 (\$1,693,400); buckwheat \$5,932,000 (\$4,017,000); mixed grains \$18,148,000 (\$14,238,000); flaxseed \$2,538,000 (\$2,295,300); corn for husking \$4,136,000 (\$3,494,000); potatoes \$44,184,000 (\$30,854,000); turnips, etc. \$13,410,000 (\$11,205,000); hay and clover \$105,713,000 (\$107,133,000); alfalfa \$18,023,000 (\$15,743,000); fodder corn \$10,632,000 (\$13,539,000); grain hay \$6,473,000 (\$10,090,000); sugar beets \$3,355,000 (\$2,535,000).

By provinces the total values are, in order of magnitude, as follows, with the revised values for 1935 crops within brackets: Ontario \$162,332,000 (\$132,086,000); Saskatchewan \$138,725,400 (\$119,947,600); Alberta \$98,914,000 (\$93,687,000); Quebec \$91,288,000 (\$83,616,000); Manitoba \$50,660,000 (\$34,944,000); New Brunswick \$17,784,000 (\$14,542,000); British Columbia \$15,891,000 (\$13,045,300); Nova Scotia \$13,516,000 (\$11,748,000); Prince Edward Island \$10,311,000 (\$8,561,000).

The aggregate value of all field crops in Canada in 1936 is now estimated at \$599,421,400 as compared with \$512,176,900, the revised value for 1935.

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