DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
DOMINION EXPERIMENTAL FARMS

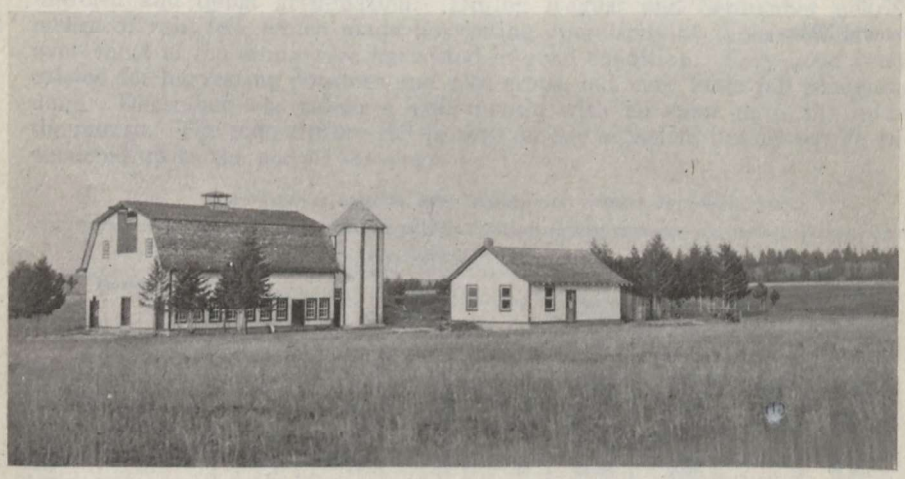
EXPERIMENTAL STATION

INVERMERE, B.C.

REPORT OF THE SUPERINTENDENT

R. G. NEWTON, B.S.A.

FOR THE YEAR 1925



Barn and dairy on the Windermere area.

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REPORT OF THE SUPERINTENDENT, R. G. NEWTON, B.S.A.

METEOROLOGICAL RECORDS

Since the farmer is more dependent on, and hence more interested in the weather than any other class of worker, a complete statement is given in this report of the precipitation, temperature, and sunshine records for the past twelve years. A detailed record is also given for the year 1925.

The highest annual precipitation recorded is 14.47 inches (1915), while the lowest is 9.17 inches (1922). The average rainfall for the six growing months, April-September, is 7.35 inches. Irrigation, therefore, in this district is a necessity.

The highest temperature recorded is 95 degrees, F, which occurred in August, 1914, and June, 1925; while the lowest is -38 degrees, December, 1922, and December, 1924. The greatest variation in temperatures occurs during the winter months. This was strikingly shown by the record of December, 1925, when the thermometer only reached zero on one occasion, and the mean for the month was almost twice the average mean of twelve years.

The average number of hours of sunshine (1985.3) is fairly uniform from year to year. The highest recorded is 2148.2 hours (1923), while the lowest is 1717.3 (1915), the year of greatest rainfall.

During the year 1925 the mean temperature has been above the average practically throughout the whole year. The weather during the first three months was very mild. The rainfall during April was the lowest on record, while the amount of sunshine was the highest. During May frequent frosts occurred, and although the spring appeared to be early, spring work did not begin until May 1. There was fair precipitation during May and June, but July was very dry, and irrigation of all crops was necessary. For root crops it was found advisable to irrigate the soil before planting in order to ensure uniform and quick germination. During August and September nearly four inches of rain fell, which made harvesting operations at times difficult. However, most of the crops were harvested in good condition. Very good conditions existed for harvesting potatoes and root crops, but very little fall ploughing was done. December was rather a dull month, with no snow until the middle of the month. The temperature fell to zero on one occasion, but no severe weather occurred up to the end of the year.

METEOROLOGICAL RECORDS, 1925, EXPERIMENTAL STATION, INVERMERE, B.C.

Month	Temperature F.					Precipitation			Total sunshine
	Highest	Date	Lowest	Date	Mean	Rainfall	Snowfall	Total Precipitation	
	°		°		°	inches	inches	inches	hours
January	45	23	−20	16	17·50	0·29	2·0	0·49	55·2
February	52	23	7	16	30·80	0·37	0·5	0·42	97·8
March	58	24	8	13	33·62	0·42	2·7	0·69	153·7
April	75	9	20	15 and 28	44·11	0·15	.....	0·15	235·6
May	80	20	27	3	52·25	1·19	.....	1·19	286·9
June	95	27	33	1	59·33	1·65	.....	1·65	249·0
July	93	17	39	19	64·06	0·30	.....	0·30	291·7
August	87	1	34	28-30	59·06	2·62	.....	2·62	238·8
September	79	3	30	20	50·24	1·27	.....	1·27	141·7
October	60	5	15	29	38·00	0·46	1·5	0·61	141·9
November	52	20	8	29	28·96	0·02	.....	0·02	86·4
December	49	1	16	19	28·73	0·14	3·6	0·50	26·1
Totals	.....	.....	.....	.....	.....	8·88	10·3	9·91	2,004·8

Precipitation for the six growing months, April to September, 1925, 7·18 inches.

MEAN TEMPERATURE RECORDS AT THE INVERMERE EXPERIMENTAL STATION

—	1914			1915			1916			1917			1918			1919		
	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean
	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.
January	30·2	14·8	22·5	22·5	3·8	13·1	4·8	−14·4	−9·6	21·8	2·9	12·4	22·8	6·7	14·7	28·3	11·2	19·8
February	35·8	7·6	21·7	36·0	15·5	25·7	28·4	6·6	17·5	25·6	3·0	14·3	23·9	3·1	13·5	26·8	7·1	17·0
March	42·4	20·1	31·2	48·7	23·6	36·2	42·9	22·9	32·9	35·7	9·1	22·4	42·0	19·0	30·5	40·1	16·1	28·1
April	55·5	32·2	43·8	61·8	32·2	47·0	55·1	29·5	42·3	49·1	26·8	37·9	56·5	27·2	41·9	57·0	28·8	42·9
May	65·8	38·1	52·0	63·3	40·8	52·1	57·9	35·2	46·5	63·5	37·0	50·3	60·9	34·7	47·8	62·4	36·2	49·3
June	68·3	45·5	56·9	68·4	44·0	56·2	68·6	43·3	56·0	66·6	41·0	53·8	74·0	43·1	58·6	72·2	40·3	56·3
July	81·3	47·7	64·5	71·8	48·8	60·3	73·1	47·3	60·2	81·5	47·4	64·5	77·8	47·9	62·9	76·3	44·9	60·6
August	78·3	43·1	60·7	81·9	48·3	68·1	75·0	43·9	59·5	76·4	44·3	60·4	71·2	56·1	58·4	76·2	44·9	60·6
September	61·9	37·7	49·8	62·6	36·4	49·5	63·8	35·6	49·7	65·0	38·2	51·6	71·4	39·2	55·3	65·6	35·7	50·7
October	49·9	33·7	41·8	53·8	34·0	43·9	50·5	27·9	39·2	53·2	27·8	40·5	52·2	34·2	43·2	45·7	24·8	35·2
November	37·5	23·9	30·7	32·0	16·7	24·3	31·7	12·4	22·0	36·7	27·4	32·0	36·4	21·3	28·8	31·1	13·5	22·3
December	19·7	3·7	11·7	29·6	12·7	21·1	14·0	−3·9	5·1	23·5	7·5	15·5	27·3	12·9	20·1	21·9	3·8	12·9

—	1920			1921			1922			1923			1924			1925			Mean average 1914–1925
	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	Mean Maximum	Mean Minimum	Mean	
	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.	°F.
January	21·5	4·0	12·8	28·2	8·6	18·4	17·2	−4·9	6·2	26·4	7·7	17·0	18·6	−1·0	8·8	17·3	7·7	17·5	12·8
February	33·2	5·3	19·2	34·2	12·6	23·4	24·3	−2·9	10·7	26·1	−0·3	13·5	40·4	22·1	31·2	40·2	21·4	30·8	19·9
March	39·9	15·2	27·6	40·7	19·9	30·3	39·6	17·2	28·4	42·9	16·1	29·5	44·7	21·1	32·9	44·8	22·5	33·6	30·3
April	48·8	27·9	38·3	53·9	29·1	41·5	53·3	29·1	41·2	56·7	27·1	41·9	53·9	27·3	40·6	60·6	27·6	44·1	42·0
May	59·3	34·3	46·8	66·4	35·6	51·0	64·9	33·9	49·4	63·3	37·3	50·3	70·5	36·2	53·3	68·6	35·9	52·3	50·1
June	67·7	48·4	54·1	71·5	45·4	58·4	76·4	44·4	60·4	70·5	46·6	58·5	70·9	42·3	56·2	74·4	44·3	59·3	57·1
July	82·2	49·7	65·9	77·4	46·2	61·8	78·3	45·7	62·0	79·7	48·0	63·9	79·8	46·0	62·9	81·5	46·6	64·1	62·8
August	76·9	45·6	61·3	74·8	43·3	59·0	77·0	46·8	61·9	76·0	45·1	60·1	72·2	45·2	58·7	73·8	44·3	59·1	60·6
September	64·8	37·3	51·1	58·2	35·8	47·0	69·1	39·9	54·5	70·8	35·2	53·0	66·9	37·7	52·3	62·2	38·3	50·2	51·2
October	49·4	28·3	38·9	54·9	30·0	42·4	57·0	30·5	43·8	55·8	26·9	41·3	53·6	30·9	42·3	50·0	26·0	38·0	40·9
November	38·2	19·0	28·6	34·2	19·2	26·7	33·2	17·5	25·3	32·9	22·1	27·5	33·1	17·6	25·3	39·3	18·7	29·0	26·9
December	28·6	13·6	21·1	18·9	1·4	10·1	15·9	−1·1	7·4	28·0	11·9	19·9	13·8	−3·3	5·2	33·7	23·8	28·7	14·9

PRECIPITATION AT INVERMERE, B.C.

—	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	Twelve years' average
January	1·80	0·51	0·44	0·15	0·79	0·98	2·20	0·98	1·18	0·89	0·51	0·49	0·91
February	0·50	0·30	1·22	0·36	1·22	0·83	0·37	0·72	0·01	0·65	0·82	0·42	0·62
March	0·39	0·03	0·45	0·18	0·35	0·65	0·67	0·60	0·25	0·03	0·02	0·69	0·36
April	1·25	1·14	0·62	0·23	0·39	0·25	1·26	0·49	0·77	0·41	0·50	0·15	0·62
May	1·46	1·01	2·89	2·85	0·93	0·85	1·19	0·36	0·44	2·15	0·87	1·19	1·35
June	1·59	3·92	2·01	1·96	0·36	0·60	0·80	1·38	0·63	3·03	1·04	1·65	1·58
July	1·57	3·79	2·32	0·29	1·32	0·33	1·32	0·70	0·19	1·05	0·39	0·30	1·13
August	0·75	0·67	2·01	1·20	3·23	2·42	0·38	0·97	1·92	0·79	2·21	2·62	1·60
September	2·16	0·72	1·15	0·75	0·85	0·69	0·86	2·56	0·61	0·37	0·87	1·27	1·07
October	0·77	0·90	0·54	0·41	1·12	0·70	0·39	0·77	0·86	0·65	1·20	0·61	0·74
November	0·79	0·90	0·33	0·38	0·53	0·64	0·18	0·92	1·30	0·27	0·98	0·02	0·60
December	0·42	0·58	0·30	2·59	1·53	1·02	0·83	0·84	1·01	0·96	2·96	0·50	1·13
Totals	13·45	14·47	14·28	11·35	12·62	9·96	10·45	11·29	9·17	11·25	12·37	9·91	11·71
Precipitation for six growing months, April–September	8·78	11·23	11·00	7·28	7·08	5·14	5·81	6·46	4·56	7·80	5·88	7·18	7·35

SUNSHINE RECORD AT THE INVERMERE EXPERIMENTAL STATION

—	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	Twelve years' average
													hours
January	54·5	46·0	99·0	80·1	44·1	39·6	34·2	58·2	74·0	63·1	56·7	55·2	58·7
February	73·6	70·9	97·8	99·8	80·9	79·2	153·7	103·8	133·2	129·2	120·6	97·8	103·3
March	144·8	175·8	131·7	143·7	141·7	167·5	157·3	153·4	171·1	184·1	177·3	153·7	158·5
April	165·1	208·7	182·5	168·9	261·9	199·0	150·8	201·3	171·4	235·8	201·6	235·6	198·5
May	237·1	168·0	179·1	227·0	241·0	209·7	203·2	285·6	259·5	214·8	324·6	286·9	236·3
June	198·4	187·7	202·0	230·2	302·1	316·8	231·4	215·8	275·7	212·1	222·7	249·0	236·9
July	314·5	211·4	271·1	365·1	304·0	312·2	333·8	309·5	283·2	313·3	292·0	291·7	300·1
August	267·9	269·9	269·0	300·4	214·0	269·5	259·0	273·4	233·9	270·1	215·4	238·8	256·7
September	148·3	151·8	192·3	142·9	232·4	203·6	179·1	148·1	204·7	246·5	191·8	141·7	181·9
October	86·7	124·7	159·2	147·2	125·0	121·3	113·5	161·4	169·1	182·9	134·2	141·9	138·0
November	56·4	59·0	84·6	23·7	89·9	33·2	78·6	64·7	66·8	28·8	72·3	86·4	62·0
December	86·8	43·4	84·4	38·2	28·4	21·3	48·9	68·4	66·2	67·5	55·5	26·1	52·3
Totals	1,834·1	1,717·3	1,952·7	1,967·2	2,065·4	1,972·9	1,943·5	2,043·6	2,108·8	2,148·2	2,034·7	2,004·8	1,985·3

ANIMAL HUSBANDRY

The work with live stock at this Station is in a transitory state. As the buildings and equipment are prepared on the Windermere area the live stock will be moved over. The buildings and equipment that are being constructed are such as will meet our requirements for some time to come, and will be equipped to facilitate any experimental work that may be undertaken. At the end of the present fiscal year the dairy-barn, horse-barn and piggery will be completed and occupied. The dairy-barn is 36 feet by 50 feet and has standing room for seventeen head, and three box stalls, with loft and feed-room above. In connection with it there is a crib silo of 90 tons capacity, as well as a fair-sized root-cellar. In connection with the dairy-barn a dairy has been erected a short distance away. This contains cool chamber, ice-chamber, work-room and boiler-room. The horse-barn is a commodious building 32 feet by 68 feet. It has standing room for ten horses, and has three large box stalls, a harness-room and a feed-room with loft above. The piggery is a new design recently brought out by the Central Experimental Farm, Ottawa. It in reality consists of two parts; the first part a two-story structure, with feed-room and farrowing-room on main floor and store-room above. The balance consists of a single-story building with two pens. This single-story portion can be added to as the herd increases in numbers. Plans and specifications of these buildings can be obtained from the Station or from the Central Farm at Ottawa.

HORSES

There are 11 horses on the Station and on the Windermere area, made up as follows:—1 Clydesdale stallion, rising seven years old, 2 registered Clyde mares, 4 grade Clydes, 1 two-year-old filly, and 3 general-purpose work horses. The stallion is available for service throughout the immediate district. As yet no definite experimental work with horses has been undertaken.

CATTLE

The Ayrshire herd at the end of the year numbered 17 head, made up of 2 breeding bulls, 6 cows, 1 two-year-old heifer, 5 yearling heifers, 1 heifer calf and two bull calves. During the year a two-year-old heifer was lost through bloating, two bull calves were sold, and a calf died at birth. The cows gave a very good account of themselves during the year, and while not entered under R.O.P., gave creditable returns. The most promising individual, Lady Nancy's Skylark, produced 13,034.4 pounds of milk testing 4.6 per cent. In this connection it is interesting to note that this cow's dam is in the herd, and her best record as a mature individual in R.O.P. 305 days division is 9,502 pounds of milk testing 3.9 per cent. This young cow is sired by Willowmoor Robin Hood 18 F., 48026. The Robin Hood family is noted as being one of the highest testing families of the Ayrshire breed. This record is certainly a strong recommendation for the use of outstanding sires.

During the year two yearling heifers were purchased from the Shannon Herd, namely, Grandview Heathflower and Grandview Edith. These heifers were sired by Barboigh True Descent. It later transpired that he sired the Junior Champion and Reserve Grand Champion Female of the 1925 Royal. The two heifer calves sired by Shewalton Mains Supreme dropped during the year were also half sisters to the Junior Champion Male at the Royal.

SWINE

Yorkshire swine are kept at the Station, and at the close of the year numbered 5 brood sows and 2 hogs. No experimental feeding of pigs has been undertaken, as there has been a keen demand for young breeding stock.

FIELD HUSBANDRY

Four rotations are carried on, a three-year, a four-year and two six-year. Owing to the fact that this district is outstanding in its ability to produce seed potatoes and seed peas, these two crops are included in practically all four rotations.

To determine the most profitable crops and rotation of crops accurate records of cost of production are kept from year to year. The following values were used as a basis of calculation:—

COST VALUES

	$ c.
Rent of land and irrigation charges	9 75 per acre
Manure spread on land	2 00 per ton
Manual labour	0 33 per hour
Teamster	0 35 "
Single horse	0 15 "
Machinery	3 00 per acre
Twine	0 25 per pound
Seed	(At cost)
Threshing—Wheat and peas	0 15 per bushel
Threshing—Oats	0 10 "

RETURN VALUES

	$ c.
Hay	20 00 per ton
Wheat	1 50 per bushel
Wheat straw	2 00 per ton
Oats	0 75 per bushel
Oat straw	4 00 per ton
Peas	2 50 per bushel
Pea straw	4 00 per ton
Potatoes	25 00 "
Sunflowers	4 00 "

ROTATIONS

(Summaries of yields, value and profit or loss per acre.)

ROTATION A—FOUR-YEAR

Crop	Yield per acre		Value of crop, 1925	Cost of production, 1925	Profit or loss per acre	
	1925	Average three years			1925	Average three years
			$ cts.	$ cts.	$ cts.	$ cts.
Alfalfa	6·03 tons	4·65 tons	120 60	25 57	95 03	66 85
Hoed crop (potatoes)	18·25 "	17·21 "	456 25	251 66	204 59	232 45
Wheat, grain	29·5 bush.	27·1 bush.				
straw	1·5 tons	1·75 tons	47 25	43 71	3 54	1 82
Peas, grain	52·13 bush.	41·51 bush.				
straw	2·5 tons	2·53 tons	140 33	51 26	89 07	69 72
Average per acre			191 11	93 05	98 06	92 71

ROTATION B—SIX-YEAR

Crop	Yield per acre		Value of crop, 1925	Cost of production, 1925	Profit or loss per acre	
	1925	Average three years			1925	Average three years
			$ cts.	$ cts.	$ cts.	$ cts.
Wheat, grain	29·2 bush.	28·0 bush.	46 12	39 67	6 45	7 54
straw	1·16 tons	1·64 tons				
Peas, grain	25·7 bush.	38·1 bush.				
straw	2·5 tons	2·8 tons	74 25	41 53	32 72	63 79
Hoed crop (potatoes)	16·25 tons	14·34 tons	406 25	238 10	168 15	88 02[1]
Oats, grain	78·0 bush.	69·9 bush.				
straw	2·6 tons	2·2 tons	68 90	40 66	28 24	15 74
Clover and grasses	4·53 "	3·59 "	90 60	29 45	61 15	39 63
Clover and grasses	4·53 "	3·59 "	90 60	27 65	62 95	41 03
Average per acre			129 45	69 51	59 94	42 62

[1]Swedes grown in 1924 at a loss; hence low average profit.

ROTATION D—SIX-YEAR

Crop	Yield per acre		Value of crop, 1925	Cost of production, 1925	Profit or loss per acre	
	1925	Average three years			1925	Average three years
			$ cts.	$ cts.	$ cts.	$ cts.
Oats, grain	48·5 bush.	60·0 bush.				
straw	1·6 tons	1·99 tons	42 78	50 41	−7 63	−0 13
Sunflowers	18·25 "	24·36 "	73 00	65 49	7 51	39 30
Peas, grain	41·0 bush.	53·1 bush.				
straw	1·5 tons	3·0 tons	202 80	60 60	142 20[3]	116 71
Hoed crop (potatoes)	17·5 "	15·08 "	437 50	220 79	216 71	181 89
Alfalfa	4·71 "	4·06[1] "	94 20	23 86	70 34	34 79[2]
Alfalfa	4·71 "	4·06[1] "	94 20	23 86	70 34	34 79[2]
Average per acre			157 42	74 17	83 25	67 90

[1]Two years' average.
[2]No crop was taken in 1923 when the alfalfa was seeded down. Hence the comparatively low average profit over three years.
[3]The Lincoln, a garden pea, was grown this season and the return value (as a seed crop) was calculated at 8 cents per pound.

ROTATION J—THREE-YEAR

Crop	Yield per acre		Value of crop, 1925	Cost of production, 1925	Profit or loss per acre	
	1925	Average three years			1925	Average three years
			$ cts.	$ cts.	$ cts.	$ cts.
Hoed crop (potatoes)	17·7 tons	15·27 tons	442 50	241 88	200 62	191 74
Oats (seeded to clover), grain	78·5 bush.	74·8 bush.				
straw	2·0 tons	2·25 tons	66 88	58 33	8 55	4 47
[1]Peas (clover), grain	36·7 bush.	.....				
straw	2·5 tons	.....	101 75	51 32	50 43	29 23
Average per acre			203 71	117 18	86 53	75 14

[1]Clover winter killed.

In order to find out which crops are most profitable it is necessary to take into consideration several factors. Two of the most important of these are the total value of yield and the cost of production per acre. To secure a large total value per acre large yields of crops for which there is a good demand must be grown. Potatoes, peas and alfalfa are such crops for this district. The yields are particularly high and, normally, good prices are obtained on the market. The profitableness of such crops, however, is also dependent on economy of production. In this connection increased yields is the greatest single factor since there are several charges, such as rent of land, which are just the same whether the crop be large or small. The total cost per acre should also be considered. For instance, the outlay necessary to produce an acre of potatoes is $251.66,—the profit per acre is $204.59 (Rotation A.). With alfalfa the profit per acre is $95.03, but the outlay necessary to produce the crop is only $25.57 (Rotation A.).

In considering the following tables it should be borne in mind that all the potato and grain crops were of seed quality, and, as seed, would have sold for a much higher price than that used for calculation; e.g., potatoes were grown under certification, and the price set by the B.C. Certified Seed-potato Growers' Association was $80 per ton. The commercial price at the time of digging was $27 per ton. The price used for calculation is $25 per ton.

ROTATION A—RETURNS AND COST PER ACRE OF PRODUCING POTATOES. VARIETY "RURAL RUSSET"

Yield per acre, 18·25 tons		
Value per acre at $25 per ton		$456 25
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	16 00	
Commercial fertilizer	18 32	
Seed—2,625 pounds at $45 per ton	59 06	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	80 40	
Horse labour at 15 cents per hour	16 95	
Sacks at 13·2 cents each	48 18	
Total cost per acre		$251 66
Cost per ton—$13.79		
Profit per acre		$204 59

RETURNS AND COST PER ACRE OF PRODUCING ALFALFA. VARIETY "GRIMM" ROTATION A—

Yield per acre—6·03 tons		
Value per acre at $20 per ton		$120 60
Rent and irrigation charges	$ 9 75	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	9 91	
Horse labour at 15 cents per hour	2 91	
Total cost per acre		25 57
Cost per ton—$4.24		
Profit per acre		$95 03

ROTATION B—RETURNS AND COST PER ACRE OF PRODUCING CLOVER AND GRASSES

Yield per acre—4·53 tons		
Value per acre at $20 per ton		$90 60
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	1 20	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	10 40	
Horse labour at 15 cents per hour	3 30	
Total cost per acre		27 65
Cost per ton—$6.10		
Profit per acre		$62 95

ROTATION A—RETURNS AND COST PER ACRE OF PRODUCING FIELD PEAS "PRUSSIAN BLUE"

Yield per acre—Grain 52·13 bushels		
Straw 2·5 tons		
Value per acre—Grain at $2.50 per bushel		$130 33
Straw at $4 per ton		10 00
Total value per acre		$140 33
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	5 30	
Seed at $3 per bushel	6 75	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	13 84	
Horse labour at 15 cents per hour	4 80	
Threshing at 15 cents per bushel	7 82	
Total cost per acre		51 26
Cost per bushel—98 cents		
Profit per acre		$89 07

ROTATION B—RETURNS AND COST PER ACRE OF PRODUCING OATS "VICTORY"

Yield per acre—Grain 78 bushels		
Straw 2·6 tons		
Value per acre—Grain at 75 cents per bushel		$58 50
Straw at $4 per ton		10 40
Total value per acre		$68 90
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	4 20	
Seed	2 50	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	8 66	
Horse labour at 15 cents per hour	3 75	
Threshing at 10 cents per hour	7 80	
Twine	1 00	
Total cost per acre		40 66
Cost per bushel—52 cents		
Profit per acre		$28 24

ROTATION B—RETURNS AND COST PER ACRE OF PRODUCING WHEAT "MARQUIS"

Yield per acre—Grain 29·2 bushels		
Straw 1·16 tons		
Value per acre—Grain at $1.50 per bush		$43 80
Straw at $2 per ton		2 32
Total value per acre		$46 12
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	5 40	
Seed	3 50	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	8 84	
Horse labour at 15 cents per hour	4 05	
Threshing at 15 cents per bushel	4 38	
Twine	0 75	
Total cost per acre		39 67
Cost per bushel—$1.35		
Profit per acre		$6 45

ROTATION D—RETURNS AND COST PER ACRE OF PRODUCING SUNFLOWERS "MAMMOTH RUSSIAN"

Yield per acre, 18·25 tons		
Value per acre at $4 per ton		$73 00
Rent and irrigation charges	$ 9 75	
Manure at $2 per ton	9 60	
Seed	2 25	
Machinery	3 00	
Manual labour at 33 to 35 cents per hour	33 94	
Horse labour at 15 cents per hour	4 95	
Twine	2 00	
Total cost per acre		65 49
Cost per ton—$3.59		
Profit per acre		$ 7 51

HORTICULTURE

VEGETABLES—VARIETY TESTS

ASPARAGUS

This valuable vegetable succeeds admirably in this district, and should be much more widely grown. This year the first cutting was made on April 9, and subsequent cuttings until June 20. From this date no grass was gathered, the plants being allowed to build up for another year. Manuring is effected by working into the soil a dressing of decayed barnyard or poultry manure as soon as the frost is out of the ground in the spring. Summer treatment consists of weeding and irrigating as needed. Palmetto is the variety grown, and the yield 275 pounds per 1,000 lineal feet. The distance of planting is: Rows 4 feet apart; plants 2 feet apart in the rows.

BEANS

Twenty-four varieties and strains of beans were grown this season, including dwarf, runner, and broad or Windsor. Our season is too short for the ripening of these on a commercial scale, but as green vegetables they are eminently successful, heavy crops being assured. Seeds are sown on June 1 to escape possible late frosts. The dwarf varieties are sown in rows 2 feet 6 inches apart; the runners 5 or 6 feet apart. The following table summarizes the results obtained:—

BEANS—VARIETY TEST

Variety	Source of seed	Ready for use	Yield per 30-ft. row
			lb.
Davis White Wax	Ottawa C.E.F.-6903	Aug. 4	41
Davis White Wax	McDonald	" 4	40½
Henderson Bountiful	Henderson	8	38½
Hodson Long Pod	C.E.F.-6904	Sept. 3	36
Bountiful	Wills	Aug. 8	35
Masterpiece	Vaughan	" 9	33½
Wardwell Kidney Wax	C.E.F.K6897	" 2	30½
Round Pod Kidney Wax	McDonald	" 4	30
Interloper Champion Wax	C.E.F.-6876	July 30	29½
Round Pod Kidney Wax	C.E.F.-6875	Aug. 4	28½
Giant Stringless Green Pod	Burpee	" 8	27
Henderson Bountiful	D. & F	" 8	26½
Hodson Wax	Harris	" 29	26
Yellow Eye	C.E.F.-6950	" 14	21½
Hodson Long Pod	Rennie	Sept. 3	20
Plentiful	Sutton	Aug. 9	20
Canadian Wonder	Dunn	" 9	19
Stringless Green Pod	C.E.F.-6877	" 7	18½
Cham. Dwf. Black Wax	Ferry	July 30	16
Stringless Green Pod	Graham	Aug. 7	14½
Scarlet Runner	Sutton	" 22	32½
No. 1 White Pole	C.E.F.-3209	" 15	34½
Broad Beans			
Aguadulce	Sharpe	Aug. 10	Failure
Green Windsor	"	" 10	20½

BEET

Three varieties were sown on May 19, and were ready for use July 20. Detroit Dark Red from two sources—C.E.F., Ottawa and McDonald—was the best in colour and quality. Extra Early and Crosby Egyptian were very variable both in colour and quality. For this district a good strain of Detroit will meet every requirement.

CABBAGE

Eighteen varieties and strains of Cabbage were grown this season. They were sown in the open ground on May 13, in rows 2 feet 6 inches apart. All germinated quickly and well and were thinned, in the case of large varieties to 18 inches, and small varieties to 12 inches or 14 inches in the rows. A very severe attack of the larvae of the small cabbage moth during June and part of July gave the plants a heavy set-back, and fears for their recovery were entertained. However, by the end of July all were again in active growth, and cutting of early varieties commenced on August 4. Good early cabbages for private use are Golden Acre and Little Gem, these averaging about 3½ pounds per head trimmed. Copenhagen Market is the most popular for early market purposes, and always reliable. Danish Ballhead is the best of the late varieties for winter storage, but the season is not always quite long enough for its full development. In this respect Danish Roundhead of certain strains is better, maturing as it does about ten days earlier. Red Dutch and Blood Red are two good varieties for pickling.

CABBAGE—CHINESE

Wong Bok and Pe Tsai sown on May 13 were ready for use on July 1, keeping in condition for nearly three weeks, and were welcome at this time when green vegetables are scarce.

CAULIFLOWER

Snowball, Extra Early Dwarf Erfurt and Autumn Giant were sown at the same time as, and given similar treatment to that accorded cabbage. The two former varieties were ready for use on August 17, the trimmed heads averaging 4¼ pounds each. Autumn Giant, with heads 5¼ pounds each was not ready before September twelve, and about 40 per cent of this variety failed to head, the season being too short.

CARROTS

The varieties were all sown on May 19 in drills 3 inches broad and 2 feet 6 inches apart. Our soil is well adapted to the culture of carrots, as indicated by the weight of crop. The quality also is excellent, and the weight of culls barely exceeds one per cent of the crop.

CARROT VARIETY TEST

Variety	Source of seed	Yield per 30-ft. row	Tonnage per acre	
		lb.	tons	lb.
Early Scarlet Horn	Dupuy & Ferguson	113	32	1,653
Select Chantenay	McDonald	173	50	513
Chantenay, 6049	C.E.F., Ottawa	123	35	1,463
Chantenay, 3423	" "	146	42	826
Guerande	Steele Briggs	132	38	692
Golden Ball	Dupuy & Ferguson	117	33	1,977
Garden Gem	McKenzie	148	42	1,988

CELERY

This was sown in the greenhouse on April 1, pricked off into flats on May 5, and transplanted into the open ground in shallow trenches five weeks later. Celery grown here is very attractive in appearance and of fine quality.

CELERY VARIETY TEST

Variety	Source	Ready for use	Weight per dozen heads trimmed
			lb.
Garrahan Easy Blanching	Garrahan	Oct. 1	20
Easy Blanching	Graham	" 1	18
Easy Blanching	McDonald	" 1	22
White Plume	Graham	Sept. 1	16
Paris Golden Yellow	D. & F.	" 1	17
Golden Self Blanching	C.E.F., Ottawa	" 1	17
Golden Self Blanching	McDonald	" 1	16
Giant Pascal	Graham	Oct. 1	20
Evans Triumph	D. & F.	" 1	17

CORN

The season here is too uncertain for varieties requiring a long season of growth, but the early varieties do very well. Pickaninny and Banting varieties bred at C.E.F., Ottawa, gave excellent results this year, being ready for use in mid August. Early Malcolm and Malakoff were only fair, and Golden Bantam a failure.

ENDIVE

Fine Green Curled from McDonald sown May 13, and covered with boards when large enough was well blanched early in August.

LETTUCE

Ten varieties and strains were tried out, all being sown on May 13. Germination was good, but the plants received a set-back in their early stages by small caterpillars. The strains of Grand Rapids continue to be constant, there being little if anything to choose between them.

LETTUCE VARIETY TEST

Variety	Source	Ready for use
Grand Rapids, 3412	C.E.F., Ottawa	July 20
" " 3496	" "	" 20
" "	Burpee	" 20
" "	McKenzie	" 20
Earliest Wayahead	Dupuy & Ferguson	" 23
Iceberg	Ewing	" 27
New York Market	Graham	" 27
Giant Crystal Head	Vaughan	" 27
Hanson	Ewing	" 27
Wheeler Tom Thumb	Burpee	" 20

ONION

White Barletta, Japanese, Yellow Globe Danvers, and three strains of Large Red Wethersfield were sown on May 13, but all succumbed to the onion maggot, no crop being obtained.

PARSLEY

Champion Moss Curled from Ewing, sown May 13, gave a very heavy crop of finely curled leaves.

PARSNIP

Thirty feet each of the following varieties were sown on May 13. Short Round French should not be kept for winter use, as it soon gets woody in texture. Hollow Crown, O-6048, and Cooper Champion gave the best quality roots.

PARSNIP VARIETY TEST

Variety	Source	Weight per 30 ft. row
		lb.
Hollow Crown	McKenzie	65½
Hollow Crown 6048	C.E.F., Ottawa	62
Short Round French	Burpee	51½
Cooper Champion	Dupuy & Ferguson	72
Elcome Hollow Crown	Graham	72

PEPPER

Harris Earliest sown in greenhouse on March 15, and planted in the open June 15, gave a nice lot of ripe fruit before frost killed the plants.

PEAS

Considerable work is done here with peas, but in the past we have been handicapped by having to procure the seed from different sources, thus making it difficult to arrive at any definite conclusion regarding the relative merits of the varieties. To overcome this we now grow our own seed, and in the accompanying table, unless stated to the contrary, all varieties were grown from seed produced here. Seeding took place on May 12, and a good germination was obtained in all cases. It will be noticed that the two seedling peas formerly known as Invermere No. 1 and Invermere No. 2 have been named Bruce and Director, respectively.

PEAS, VARIETY TEST

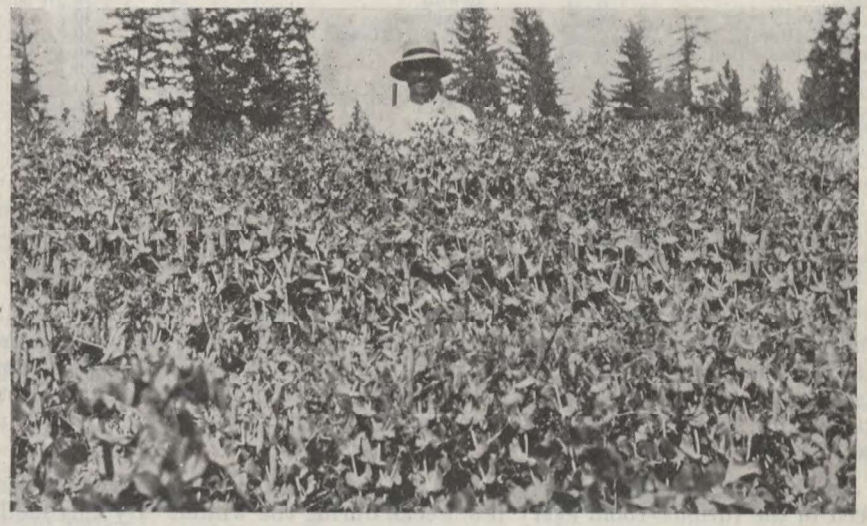
Variety	Source	Ready for use	Height	Weight green peas in pod	Shelled peas per 1 lb. of pods
			inches	lb.	oz.
Bruce (Invermere No. 1)	Invermere	July 27	56	41	9½
Invermere No. 3	"	" 20	60	39	9
Director (Invermere No. 2)	"	" 18	46	35	9
The Lincoln	"	" 24	30	30	8½
Invermere No. 6	"	" 20	60	29	9½
Quite Content	"	" 27	50	25	8
Telephone	"	" 21	56	22	.....
Market Gardener	"	" 22	30	21	7
British Wonder	"	" 20	20	21	.....
Advancer	"	" 20	36	21	8½
Danby Stratagem	C.E.F., Ottawa	" 30	30	21	.....
Stratagem	Invermere	" 30	24	20	.....
V. C.	"	" 27	56	17	6½
English Wonder	"	" 15	18	17	9
English Wonder	C.E.F., Ottawa	" 15	22	16	9
Pioneer	Invermere	" 15	30	16	8½
King Edward	"	" 27	34	15	7½
Gradus	C.E.F., Ottawa	" 15	45	14	8
Thos. Laxton	Invermere	" 9	45	13	8
Eldorado	"	" 12	20	13	8
Gregory Surprise	"	" 8	50	12	9
Early Morn	"	" 11	50	12	8½
Peter Pan	"	" 11	20	12	7½
Prosperity	"	" 11	40	12	8½
Sutton Excelsior	"	" 14	20	11	7½
Blue Bantam	"	" 11	20	11	7½
Little Marvel	"	" 12	20	11	8½
Laxton Progress	"	" 12	18	11	8
Laxtonian	"	" 12	24	10	8½
Manifold	"	" 10	24	10	8½
First and Best	"	" 6	40	9	8½
Market Surprise	"	" 9	54	9	9

RADISH

Scarlet Turnip White Tip, Twenty Day, XXX Scarlet Oval, French Breakfast and Early Scarlet were sown on May 13, and ready for use on June 12. XXX Scarlet Oval (Rennie) and Twenty Day (Vaughan) are two good radishes.

SPINACH

Victoria and Broad Leaf Flanders sown May 13, were ready for use on June 16, and gave a good crop of leaves. A good substitute for these two varieties during summer is New Zealand Spinach. This sown on same day is ready a month later, and its thick fleshy leaves are produced in abundance until killed by frost.



The Bruce Pea, formerly called Invermere No. 1.

SWISS CHARD

The variety Lucullus sown May 13 was ready for use on July 7, continuing all season.

TURNIPS

These are very satisfactory from early sowing—May 18. Sown later they become attacked by root maggot and are useless for storing. Good results were obtained with Early Purple Top Milan, Early White Milan, Red Top Strap Leaf, Early Snowball and Golden Ball. Our choice of varieties to give a succession, if sown on the same date, is Early White Milan, Early Snowball and Golden Ball.

TOMATOES

While our short season does not allow of our recommending these as a strictly commercial crop, good results may be obtained for home use and local marketing if a certain amount of care is exercised. The varieties tabulated were sown in the greenhouse on April 1, and received two transplantings before being finally planted in the open ground on June 15. The distance allowed between the plants in the open is one foot, and the distance between the rows thirty inches. The plants are tied to short stakes and stopped at the second

truss of fruit, all laterals being removed. They are never allowed to suffer from drought, irrigation being applied as needed. By following these methods a crop of ripe fruit is practically assured.

TOMATO VARIETY TEST

Variety	Source	Ready for use	No. of plants	Weight of ripe fruit
				lb.
Chalk Early Jewel	Carter	Aug. 28	10	22½
Chalk Early Jewel	Steele Briggs	" 26	10	22¾
Earliana First Picking	Moore	" 24	10	34½
Earliana	Ewing	" 22	10	29¾
Avon Early	Vaughan	" 24	10	34½
Alacrity X Hipper	C.E.F., Ottawa	" 22	10	26¾
Alacrity X Early Bell	" "	" 22	10	24½
Alacrity	" "	" 20	10	29½
Burbank	Bruce	" 26	10	30
Bonny Best (Selected strain)	Stokes	Sept. 1	10	26½
Danish Export	Wibbolt	Aug. 26	10	19¾
Pink, L	C.E.F., Ottawa	Sept. 1	10	28¾
Abbotsford Argo		Aug. 24	10	18
Devon Surprise	Invermere	Sept. 1	10	25

RHUBARB

This is a very successful crop here both as regards yield and quality. Hundreds of seedlings are raised every year and only those showing promise of desired qualities retained. Propagation is effected by division of the crowns, thus ensuring trueness of variety. The variety Ruby originated at the Central Experimental Farm, Ottawa. It has medium-sized stalks of rich colour and good flavour.

In the autumn a quantity of roots is lifted, packed in moss in boxes, and placed in the furnace-room every few weeks during the winter. By this method a constant supply of rhubarb is easily maintained throughout the winter months.

POTATOES

This crop is a very important one with us as our district is admirably adapted for the production of high-class tubers, either for seed or culinary purposes. Evidence of this is to be seen in the fact that our local growers have been successful in winning the challenge cup for the best district display of seed potatoes at the B.C. Provincial Potato Show twice out of the four times for which it has been competed. On the remaining two occasions they have stood second to the winners by a very small margin of points. The Murray Shield, Champion Trophy for the best individual seed exhibit, has been won twice out of three times by local exhibitors, who as well have taken first and special prizes too numerous to specify here. Special attention is paid to the variety tests, to cultural methods, roguing for disease, etc., and to breeding work. Seed potatoes distributed from this Station, and those sold by the local growers to outside points almost invariably show wonderful vigour and cropping qualities. Seed from various sources is constantly under trial from points across the Dominion. It is seldom, though, that we get seed equalling that of our own growing.

POTATO VARIETY TESTS

Variety	Source	Yield per acre
		tons
Green Mountain Group—		
Ashcroft	Invermere	32½
Bella Coola Nugget	Jacobsen	32½
Idaho Rural	Spokane	31¾
Green Mountain	P. E. I.	31½
Gold Coin	Telkwa	30½
Green Mountain	Harrop	29½
Carman No. 1	Spokane	28¾
Gold Coin	Lethbridge, 1922	28½
Green Mountain	Stonehouse	28½
Gold Coin	Lethbridge, 1924	28
Gold Coin	U. B. C. 1923	26½
Wee Macgregor	Invermere	26
Wee Macgregor	C. B. C.	26
Gold Coin	Lethbridge, 1923	25
Gold Coin	Lethbridge, 1921	24½
Gold Coin	U. B. C., 1924	24½
Carman No. 1	Invermere	24¼
Gold Coin	U. B. C., 1925	24
Delaware	Invermere	23½
Gold Coin	Lethbridge, 1920	22¾
Idaho Rural	Sandpoint	19¼
Late Long—		
Sutton Reliance	Invermere	34¾
Long White	C. B. C.	29
Bishop	Victoria	27½
Camb. Russet S.S. 2	Invermere	26½
Netted Gem	Lethbridge, 1924	26½
Burbank	Guinet	26½
Cambridge Russet	Invermere	26
Camb. Russet S.S. 1	Invermere	25¾
Netted Gem	Spokane	25¼
Burbank	Blackburn	25
Late Puritan	Invermere	24½
Netted Gem	Clarke	22¾
Burbank	Alberry, 1924	22¾
Netted Gem	Humphries	22
Netted Gem	Cordwood	21½
Royal Russet	Lethbridge	20½
Burbank	Alberry, 1925	20½
Agassiz Special	Invermere	19
Pride of Multonomah	Spokane	18¼
Up-to-Date Group—		
Up-to-Date	U. B. C., 1924	31½
Up-to-Date	U. B. C., 1923	30½
Queensbro'		30
Up-to-Date	J. S. Johnston	27¾
Toogood Tremendous		27¾
Bernardottes	Bernard	27½
Million Dollar	Invermere	27¼
Jones White	Invermere	26
U.B.C.	U. B. C.	25
Eureka	U. B. C., 1924	24¼
Eureka		23½
Up-to-Date	U. B. C., 1925	20
Eureka	U. B. C., 1925	19¼
Rural Group—		
Rural Russet	Penn	25
Sir W. Raleigh	Penn	23¼
Sir W. Raleigh	U.B.C., 1923	21¾
Sir W. Raleigh	U.B.C., 1925	21½
Sir W. Raleigh	Invermere	20
Sir W. Raleigh	Gillespie	19¼
Sir W. Raleigh	U.B.C.	18¾
Irish Cobbler—		
Irish Cobbler	Invermere	35
Irish Cobbler	Smithers	27½
Irish Cobbler	Lethbridge, 1923	26½
Irish Cobbler	Lethbridge, 1924	26
Irish Cobbler	Lethbridge, 1922	25½
Irish Cobbler	Lethbridge, 1920	24¼
Irish Cobbler	Morrison	24¼
Rose, Hebron and Ohio Groups—		
Houlton Rose	Invermere	32¼
Beauty of Hebron	Spokane	30½
Early Six Weeks	Invermere	29½

POTATO VARIETY TESTS—*Con.*

Variety	Source	Yield per acre
Rose, Hebron and Ohio Groups—Con.		tons
Manistee	Invermere	29
Early Norther	Invermere	28½
Early Rose	Invermere	26½
Bovee	Invermere	25½
Rose	C.B.C.	24
Early Ohio	Invermere	23
White Ohio	Spokane	20¾
Blues—		
Blue Snyder	Invermere	31¼
S. American Blue	Victoria	27¾
Salad	Spokane	15
Various Earlies—		
Bliss Triumph	Spokane	38½
Early White Prize	Invermere	33
Earliest-of-All	Portland	32½
Gold Nugget	Pennoyer	32
Sharpe Express	Victoria	31½
Cowichan Leader	Cowichan	30¾
Epicure	U.B.C., 1923	30½
Precocity	Shotbolt	30¼
Carter Early	Portland	27½
Jersey Royal	Unsworth	27½
Early S. George	Perry	27
Jersey Royal	U.B.C., 1925	26½
Jersey Royal	Summerland	23½
Jersey Royal	U.B.C., 1923	23¼
Bermuda Early	Invermere	20½
Various Main Crop and Late—		
Kerr Pink		31¾
King Edward		31
Baines Bonanza	Baines	26
Roderic Dhu	Bates	25¾
Pearl	Cherrington	23¾
Richardson Seedling	Richardson	22

VEGETABLE, CULTURAL EXPERIMENTS

POTATOES

DATE OF PLANTING FOR SEED.—The following table gives the results of the above experiment as carried on here. While nothing definite is arrived at relative to the merits of late planting, it must be remembered that our short season always gives us a potato of ideal seed qualities no matter what the date of planting maybe, that is, within reason. In districts with hotter and longer seasons of growth much benefit is gained by planting late for the production of immature seed.

DATE OF PLANTING POTATOES FOR SEED

Variety	Dates of planting for seed	Date of planting 1925	Yield per acre, 1925
			tons
Wee Macgregor	1-V-24	15-V-25	22
Wee Macgregor	15-V-24	15-V-25	29
Wee Macgregor	29-V-24	15-V-25	27½
Wee Macgregor	13-VI-24	15-V-25	28¼
Early Rose	1-V-24	15-V-25	25¾
Early Rose	15-V-24	15-V-25	25
Early Rose	29-V-24	15-V-25	27½
Early Rose	13-VI-24	15-V-25	22½

SIZE OF SETS.—To determine the best size of sets to plant, with rows 3 feet apart, and sets 12 inches apart in the rows, four tests were made with sets one, two, three and four ounces in weight. Unfortunately the ground available for this work this season was not uniform enough for the obtaining of reliable data. In the past the results have favoured the planting of large sets when seed is cheap. When, however, seed is dear, it is more economical to plant sets two ounces in weight or even smaller.

DISTANCES OF PLANTING.—To determine the best distances apart in the row, with rows three feet apart, six tests were made, namely, 12 inches, 14 inches, 16 inches, 18 inches, 20 inches and 22 inches, with sets two ounces in weight. For seed purposes the 12-inch spacing gave the best results. For baking potatoes 16-inch and 18-inch spacings were found advisable. Spacings of 20 inches and 22 inches resulted in too large potatoes for commercial purposes, and should be avoided. These findings are made in land reasonably rich in plant food. Modification is therefore necessary to suit existing soil conditions.

SPROUTING EXPERIMENT.—Tests with the two varieties, Early Northern and Wee Macgregor were made to determine the value of sprouted and retarded seed as regards earliness and yield. Sprouting was effected by placing the tubers in a warm building in subdued light three weeks prior to planting. Strong sturdy shoots about half-an-inch long were the result. Two- to three-ounce sets of these were planted in rows 3 feet apart and 12 inches apart in the rows on May 15, and also dormant tubers of like size on the same date. It was found that sprouting forwarded the crop by about seven days, as shown below:—

Sprouted seed of Early Norther planted May 15, ready Aug. 3
Retarded seed of Early Norther planted May 15, ready Aug 10
Sprouted seed of Wee Macgregor planted May 15, ready Aug. 8
Retarded seed of Wee Macgregor planted May 15, ready Aug. 15

YIELDS OF SEED, SPROUTED AND NON-SPROUTED

Early Norther sprouted	22½	tons per acre
" " retarded	20½	"
Wee Macgregor sprouted	27½	"
" " retarded	28½	"

DATES OF PLANTING.—This experiment has a double object in view. First, to find out the best dates of planting for crop; and second, the quality of seed produced from various plantings. The second part of the experiment is of course carried out the following year:—

POTATOES—DATES OF PLANTING

Variety	Source	Dates of planting	Yield per acre	
			tons	lb.
Wee Macgregor	Invermere	May 1	23	480
"	"	" 15	27	33
"	"	June 6	24	804
"	"	" 15	24	1,966
"	"	July 8	7	525
Early Rose	"	May 1	23	1,061
"	"	" 15	26	1,452
"	"	June 1	24	1,385
"	"	" 15	20	670
"	"	July 8	9	592

BEANS

The results tabulated were obtained by sowing at various distances. Rows in all cases were 2 feet 6 inches apart:—

SOWING BEANS AT VARYING DISTANCES

Variety	Source	Distance apart in rows	Date of sowing	Ready for use	Weight green beans per 30-ft. row
		Inches			lb.
Stringless Green Pod	Graham	2	June 1	Aug. 7	38
" "	"	4	" 1	" 7	29
" "	"	6	" 1	" 7	20½
Round Pod, Kidney Wax	McDonald	2	" 1	" 4	24½
" "	"	4	" 1	" 4	21
" "	"	6	" 1	" 4	14½

PEAS

Tests similar to those carried out with beans were made with peas. Thos. Laxton, English Wonder and Stratagem were the varieties used, and the distances planted apart were one, two and three inches.

SOWING PEAS AT VARYING DISTANCES

Variety	Source	Distance apart in rows	Date of sowing	Ready for use	Weight green pods per 30-ft. row
		inches			lb.
Thos. Laxton	Invermere	1	May 12	July 10	22
"	"	2	" 12	" 10	21
"	"	3	" 12	" 10	16
English Wonder	C.E.F., Ottawa	1	" 12	" 16	27
"	"	2	" 12	" 16	26
"	"	3	" 12	" 16	23
Stratagem	Invermere	1	" 12	" 30	25
"	"	2	" 12	" 30	22
"	"	3	" 12	" 30	17

BEET

Three sowings of beets were made to determine the best time of sowing for winter storage. The dates of seeding were May 19, June 1 and June 15. The first date gave oversized roots, but the two latter were ideal. The variety used was Detroit Dark Red.

Three sowings were also made on the same dates to determine the quantity of bunches of green beet that could be obtained from various dates of seeding. From 15-foot rows the respective yields were 44, 30 and 16 bunches containing five beets per bunch.

CARROTS

Three sowings of carrots at different dates were made, with the following results:—

DATES FOR SOWING CARROTS

Variety	Source of seed	Date of sowing	Length of rows	Number of bunches (five to bunch)	Weight harvested in addition to bunches
			feet		lb.
Chantenay	McDonald	May 19	15	146	85½
"	"	June 1	15	78	45
"	"	" 15	15	80	20

PARSNIP

Three sowings of Hollow Crown (Elcombe) were made on May 19, June 1 and June 15, and the yields were 72 pounds, 46½ pounds and 30½ pounds per 30-foot row. This vegetable in this district should be sown as early as possible to get maximum yields.

CELERY

Five methods of growing celery were practised again this year, as follows:—

1. In beds on the level six feet wide, the plants standing six inches apart each way.

Result.—Twelve heads weighed 4 pounds poorly blanched, quality poor.

2. Planted on level and blanched with paper wrapping.

Result.—Twelve heads weighed 9 pounds. Clean and well blanched, but lacking in crispness.

3. Planted on level and blanched with boards.

Result.—Loose but clean. Fairly well blanched. Twelve heads weighed 10 pounds.

4. Planted on level and blanched by earthing up.

Result.—Weight of twelve heads 17 pounds. Rather loose; not well blanched at top.

5. Planted in trenches and blanched by earthing up.

Result.—Weight of twelve heads 16 pounds. Compact and well blanched. Quality crisp and good. The best.

TOMATOES

The following methods of pruning tomatoes were again followed in the endeavour to find the best mode to ripen tomatoes in short-season districts. All were sown on April 1, except those stopped in hotbed, which were sown two weeks earlier. The seedlings received two transplantings before being finally planted in the open on June 13. The plants were tied to stakes and irrigated as needed. Distance between plants 12 inches. Distance between rows 30 inches:—

PRUNING TOMATOES

—	Date ripe	Weight ripe fruit from 10 plants
		lb.
Alacrity—		
Stopped in hotbed, three shoots taken on and stopped at first truss on each	Aug. 22	30
Stopped at first truss	" 22	9
" two trusses	" 22	35
" three trusses	" 22	50½
Unstopped	" 22	47½
Danish Export—		
Stopped in hotbed, three shoots taken on and stopped at first truss on each	Aug. 26	18¾
Stopped at first truss	" 26	9½
" two trusses	" 26	22¾
" three trusses	" 26	24½
Unstopped	" 26	22½
Bonny Best—		
Stopped in hotbed, three shoots taken on and stopped at first truss on each	Aug. 24	33
Stopped at first truss	" 26	13½
" two trusses	" 28	27½
" three trusses	" 28	29½
Unstopped	" 28	35½

FRUITS

APPLES

For nearly fourteen years apples have been grown at the Station. Results obtained justify the growing of the hardier varieties for home use and local sale, but strictly commercial orchards are not advisable. Yellow Transparent; Duchess; Okabena; Rupert; Dudley; Charlamoff; Pinto and Wealthy are recommended.

Of crabs, Transcendant and Hyslop yield heavy crops of fruit, the quality of which cannot be excelled.

CURRANTS—BLACK

These succeed very well here, yielding heavy crops. Of the twelve or more varieties tested for fourteen years preference is given to Topsy, Collins Prolific, Naples, Climax, Black Eagle and Victoria. Up to the present we have not been troubled with borer.

CURRANTS—RED AND WHITE

These also succeed admirably, heavy crops being the rule. Fifteen varieties have been tried out, and of these in reds Fay Prolific, Perfection, Wilder and Rankin; and in whites White Grape, Large White and White Cherry are to be preferred.

GOOSEBERRIES

Due to the ravages of gooseberry mildew Oregon Champion is the only variety with which any success has been attained. Two new varieties are under trial, but it is too early to give any definite information regarding these.

RASPBERRIES

Several varieties have been experimented with in the past. Cuthbert winterkills badly in some seasons and is not recommended. King and Herbert are hardier and yield well. St. Regis, an ever-bearing variety, is also recommended, for though it may be top-killed during the winter and any chance of an early crop destroyed, the new growth from the base will produce a yield of fine berries up to the time of frost.

ORNAMENTAL

For decorative purposes all the local coniferous and deciduous trees are used. Good results are also obtained from the use of Russian Poplar, Ash, Manitoba Maple, and the willow species.

HEDGES

Various trees and shrubs are used in this work to demonstrate their adaptability for the purpose. The best evergreens are Douglas fir, spruce and juniper. In the deciduous section Laurel-Leaved willow, Caragana, lilacs and dogwood are very satisfactory.

FLOWERING SHRUBS

These, though somewhat limited in variety when compared with the number that can be grown in more favoured climes, give highly satisfactory results when plantings are confined to the more hardy kinds. Lilacs of all varieties, Spireas, Philadelphus (Mock Orange), Tartarian honeysuckle, and the hardier of the roses may all be depended on to lend charm and colour in their seasons.

PERENNIAL FLOWERS

A list of the sorts which we have found to be most satisfactory here is aster, aquilegia, *Campanula glomerata,* Delphinium, *Iris germanica,* Gypsophila, Iceland poppy, paeony, *Phlox decussata,* pinks, pansies, Rudbeckia and Shasta daisy.

ANNUALS, AND FLOWERS TREATED AS SUCH

These play a great part in decorative and cut-flower work. During the last two years asters have deteriorated somewhat, on account of virus disease. In consequence greater attention has been given to antirrhinums. These in the intermediate and Tom Thumb sections give very fine results and are always a source of pleasure to our visitors. Clarkia, cosmea, *Datura Wrightii,* lobelia, marigold, nasturtium, petunia, *Phlox Drummondii,* poppy, portulaca, salpiglossis, ten-week stock, tagetes and sweet peas may all be depended upon to make the garden gay during the summer and autumn months. These for the most part are raised under glass in the spring and planted out when danger of frost is past.

A collection of geraniums (Zonal Pelargoniums) of varieties originated at the Central Experimental Farm, Ottawa, is grown in the small greenhouse for autumn and winter blooming. These are very fine and are much admired.

In an endeavour to popularize the tuberous-rooted begonias, a collection of singles and doubles is being gradually built up. These never fail to attract attention, supplying, as they do, colours and forms of bloom to satisfy the most critical.

PLANT BREEDING AND SELECTION

PEAS

This branch of the work is receiving increased attention, especially as regards garden peas and potatoes. With regard to peas we are pleased to be able to state that Invermere No. 1, Invermere No. 2 and Invermere No. 3 have given highly satisfactory results wherever tried out against standard varieties. This has occurred at practically all the Experimental Farms and Stations. Not only do they excel in weight of crop, but the cooking qualities rank very high. At the Station this season No. 1 again led in yield in our variety tests where over one hundred varieties and strains were in competition. These seedlings are being increased for distribution, and in the near future we hope to see them listed in the seedsmen's catalogues. We have had pleasure in naming two this year. In future therefore No. 1 will be known as "Bruce" and No. 2 as "Director". Invermere No. 3 is also a very fine pea, and will eventually be named, but at present we are doing a little more selection work on it. Not only is it a high-producing variety of fine table qualities, but its appearance and size of pod is so good that it will be eagerly sought after for exhibition purposes.

Another seedling of which we have great hopes is the result of a cross between the Lincoln and Arthur. This seedling has the fasciated character of Arthur with the wrinkled seed of the Lincoln. It is very dwarf in habit, growing only 12 or 14 inches high, and much branched. These characters are fixed and should the culinary properties be satisfactory it will be a valuable addition for the home garden where a tall pea is not desired.

Attention is also being paid to the breeding of peas for commercial canning. In view of the preference for small peas for this work high-producing varieties with these qualities, also of good colour, are being bred, and we have at present three of which we are increasing stock, in order to get them tried out in acreage by the canning companies.

Neither have field peas been neglected. By crossing Arthur with itself we have fixed a very fine strain of this variety, and succeeded in retaining fasciation to the full. Two early field peas have also been secured, which will enable field peas to be ripened where the season is too short for such varieties as Prussian Blue.

Several crosses were again made this year. Amongst the varieties used were Lincoln, Stratagem, V.C., First and Best and some of our own selected seedlings.

POTATOES

Several thousands of seedling potatoes have been raised during the last five years from both hand-fertilized and naturally fertilized seed. These are rigorously tested, and any not reaching a high standard in disease resistance, heavy cropping, or other desirable attribute, are immediately discarded. This year some fifty-six seedlings were carried into the variety tests under conditions exactly similar to those accorded commercial varieties. Twenty-five of these reached a high standard of merit, and were retained for further trials. The rest were discarded.

An exhibit was made this year at the Provincial Potato Fair at New Westminster of our seedlings, some fifteen varieties being staged. These attracted much attention and were commented on most favourably, both by the general public and potato experts.

RHUBARB

Two varieties of rhubarb raised here are well worthy of notice. At present these are known as D. 1 and D. 2. They are both highly coloured, often carrying the pigment right through the stalk, and of very fine flavour.

A batch of seedlings is raised from seed supplied by the Central Experimental Farm at Ottawa, and the best of these put under trial. Some very promising seedlings are apparent amongst them.

FLOWERS

Pansies.—A strain of fancy pansies is being built up. The pansies are greatly admired by visitors. In order to guard against deterioration no other representatives of the genus *Viola tricolor* are grown, thus reducing chances of cross-pollination to a minimum. The flowers of our strain embrace all the colours found in this favourite plant, and are sometimes huge in size, attaining a diameter of 4 inches.

Tuberous Begonias.—Attention is also being paid to these, and the small greenhouse filled with them is a source of enjoyment to visitors. The blooms of some of the seedling singles will measure up to nine inches in diameter, while the doubles will equal a medium-sized paeony in size.

Lilacs.—We have about a thousand seedlings of this favourite flowering shrub in their second season of development. These were raised from seed saved from all the best named varieties in our collection, and hopes are entertained of some new and desirable varieties appearing amongst them.

CEREALS

The yield of cereals on the whole was satisfactory. Each year, however, it is repeatedly proved that the small grains are not a particularly profitable crop, and their use in this district should be limited; confined chiefly to nurse-crops for alfalfa and clover. On the other hand field peas, especially as a seed crop, is one of our most profitable crops.

Variety tests with wheat, oats, barley and peas were continued this year. The rod-row method of testing was used. This consists in planting varieties in

rows each a rod in length in quadruplicate in different parts of the field. Variations in soil conditions are thereby minimized. An equal number of germinable seeds are planted in each rod row, which insures that the test will be fair for all varieties. Owing to the small area taken up by this system it permits a large number of varieties to be tested.

SPRING WHEAT

Twelve varieties were sown on May 12. Huron is still the outstanding yielder.

OATS

Fifteen varieties of oats were sown on May 14. Victory and Banner are the standard varieties. Alaska is one of the best early-ripening oats.

BARLEY

Fifteen varieties of barley were tested. A large variation in date of ripening was noticed among the different varieties, namely, August 14 to September 5. The dependable varieties here are O.A.C. 21, Gold and Himalayan.

FIELD PEAS

All varieties of peas tested this year produced favourable yields. The following summarizes the results:—

VARIETY TEST OF FIELD PEAS

Variety	Yield per acre
	lb.
Prussian Blue	4,120
Bluebell	3,920
Mackay	3,560
Chancellor	3,320
Solo	3,320
Maple	3,280
Arthur	3,040
Invermere 15	2,920
Invermere 14	2,840
Invermere 11	2,800
Golden Vine	2,400

FORAGE CROPS

The hay crop as usual was very satisfactory, alfalfa yielding about 5 tons, and red clover about 4½ tons per acre. Alfalfa is preferable to red clover since it is consistently a heavier yielder and is seldom winter-killed.

ENSILAGE CROPS

Owing to the shortness of the season and the danger of early frosts, corn is a very uncertain crop. Consequently it is possible that sunflowers in this district might be preferable for ensilage. During the past season about 8 acres of sunflowers were grown with very good results.

Sunflowers were sown on May 5 and harvested for silage on August 4; while the dates for corn were May 28 and September 25.

SUNFLOWERS—TEST OF VARIETIES

Variety	Source	Height	Yield per acre	Dry matter	Dry matter per acre
		inches	tons lb.	p.c.	tons lb
Russian Giant	Dak. Imp. Seed Co	90	16 1,106	13·28	2 396
Mammoth Russian	McDonald	96	18 590	11·03	2 36
Mixed	C.P.R. No. 5	78	15 782	11·13	1 1,426
Ottawa No. 76	C.E.F., Ottawa	80	15 1,944	10·25	1 1,274
Manchurian	McKenzie	76	15 782	10·55	1 1,248
Black	C.P.R. No. 3	66	10 1,232	12·21	1 837
Mennonite	Rosthern	64	13 1,878	9·47	1 640
Mammoth Russian	C.P.R. No. 2	80	13 1,878	9·08	1 531
Manchurian	C.P.R. No. 4	76	12 394	9·57	1 334
Manteca	C.P.R. No. 1	60	10 382	10·74	1 189

CORN—TEST OF VARIETIES

Variety	Source	Height	Yield per acre	Dry matter	Dry matter per acre
		inches	tons lb.	p.c.	tons lb.
Wisconsin No. 7	J. O. Duke	75	33 1,114	11·62	3 1,798
Longfellow	"	68	28 1,500	12·69	3 1,296
Golden Glow	"	72	30 1,307	11·43	3 1,007
Leaming	"	68	31 436	10·64	3 643
Disco Longfellow	Dak. Imp. Seed Co	66	36 600	8·98	3 519
N. W. Dent	Brandon E. F	72	21 1,560	13·67	2 1,954
North Dakota	Steele Briggs	66	29 80	9·47	2 1,500
Comptons Early	J. O. Duke	66	27 1,176	9·96	2 1,495
Disco 90 Day White	Dak. Imp. Seed Co	48	30 496	8·79	2 1,317
N. W. Dent	" "	72	23 1,626	10·55	2 1,024
Quebec 28	Macdonald College	72	23 754	10·35	2 839
N. W. Dent (N. Dak. grown	McKenzie	60	18 682	11·91	2 369
Burr Leaming	Carter	60	23 1,109	8·98	2 230
Twitchell's Pride	Fredericton E. F	72	21 1,560	9·67	2 212
N. W. Dent (Neb. grown)	McKenzie	66	18 10	10·64	1 1,831
Leaming	J. Parkes	66	19 914	9·67	1 1,763
White Cap Yellow Dent	S. Briggs	60	17 848	9·96	1 1,471
Wisconsin No. 7	J. Parkes	66	15 1,020	10·45	1 1,242

FIELD ROOTS

During the past season very good yields of roots were secured. Carrots did particularly well, surpassing both swedes and mangels in yield of dry matter per acre. Tests were carried out with 50-foot rows. The dates of seeding for mangels, turnips, carrots and sugar beets were May 15, 19, 16 and 15, respectively; while the dates of harvesting were October 13, 19, 18 and 14. They were all irrigated as required.

MANGELS—TEST OF VARIETIES

Variety	Source	Yield per acre		Dry matter	Dry matter per acre	
		tons	lb.	%	tons	lb.
Svalof Red	General Swedish	23	754	16·99	3	1,943
Giant Rose Sugar	Bruce	24	1,658	14·35	3	1,126
Elevathan Mammoth	H. Hartman	20	1,527	16·31	3	773
Giant White Feeding	Bruce	27	886	12·30	3	751
Eckendorffer Yellow	H. Hartmann	29	370	11·33	3	613
Red Eckendorffer	General Swedish	26	1,434	12·30	3	572
Royal Giant Sugar Beet	Steele Briggs	25	820	12·89	3	551
Stryno Barres	H. Hartman	25	530	11·82	2	1,973
White Green Top	"	26	272	11·13	2	1,818
Yellow Globe	Steele Briggs	29	80	9·86	2	1,727
Eckendorffer Red	H. Hartman	25	1,401	10·74	2	1,520
Gatepost	Bruce	19	1,204	13·77	2	1,398
Taroje Barres	H. Hartmann	26	853	10·16	2	1,370
Large Yellow Globe	Bruce	29	80	9·08	2	1,273
Danish Sludstrup	Dupuy & Ferguson	18	1,752	13·96	2	1,270
Yellow Intermediate	C.E.F. Ottawa	18	300	14·35	2	1,209
Golden Tankard	Bruce	23	1,335	10·55	2	994
Prize Mammoth Long Red	S. Briggs	16	525	14·45	2	700
Fjerritslev Barres	H. Hartmann	20	1,818	11·23	2	696
Golden Fleshed Tankard	S. Briggs	19	623	11·91	2	600
New Ideal	"	18	1,752	11·82	2	462
Yellow Eckendorffer	Gen. Swedish	22	1,593	9·67	2	409
Mammoth Long Red	S. Briggs	15	1,944	13·77	2	399
Barres Half Long	Gen. Swedish	16	1,106	12·99	2	300
Giant Yellow Interm	Bruce	15	1,654	12·50	1	1,957
Yellow Leviathan	S. Briggs	10	328	15·72	1	1,196

FIELD TURNIPS—TEST OF VARIETIES

Variety	Source	Yield per acre		Dry matter	Dry matter per acre	
		tons	lb.	%	tons	lb.
Bangholm	Gen. Swedish	34	534	10·16	3	963
Good Luck	Steele Briggs	28	338	10·55	2	1,944
Ditmars	H. H. McNutt	31	1,307	9·87	2	1,932
Canadian Gem	Steele Briggs	30	694	9·67	2	1,869
Elephant or Monarch	Bruce	28	1,209	9·96	2	1,698
Purple Top	"	24	1,949	8·30	2	1,458
Canadian Gem	"	29	370	9·18	2	1,358
Hartleys Bronze Top	"	23	1,916	11·13	2	1,333
Improved Yellow	Gen. Swedish	27	886	9·57	2	1,253
Jumbo	Steele Briggs	26	1,434	9·68	2	1,172
Bangholm	Nappan E.F.	19	1,885	11·43	2	559
Magnum Bonum Purple Top	Bruce	26	1,434	8·20	2	382
Bangholm	H. Hartman	24	1,658	8·30	2	122
Shepherds Golden Globe	"	17	1,138	9·67	1	1,386

CARROTS—VARIETY TEST

Variety	Source	Yield per acre		Dry matter	Dry matter per acre	
		tons	lb.	%	tons	lb.
Imp. Inter. White	Ewing	31	146	14·26	4	862
Long Red Surrey	Steele Briggs	26	272	15·43	4	65
Large White Belgian	"	28	1,499	13·87	3	1,975
Champion	H. Hartmann	24	787	15·62	3	1,621
Imp. Inter. White	Dupuy & Ferguson	28	919	13·28	3	1,559
White Belgian (French)	Ewing	30	403	12·50	3	1,550
Mammoth Inter. (Smooth) White	Bruce	28	338	13·18	3	1,425
Yellow Belgian	Ewing	31	1,307	11·72	3	1,420
White Belgian	Bruce	26	1,143	13·87	3	1,371
Long Orange Belgian	"	25	530	13·57	3	857
Imp. Short White	Steele Briggs	28	338	12·11	3	823
New Yellow Inter	Halifax Seed Co	23	174	14·35	3	626
Half Long White	Gen. Swedish	22	1,012	13·87	3	243
White Belgian	Halifax Seed Co	26	272	11·91	3	226
White Belgian	H. Hartmann	20	1,237	12·11	2	994
Long Orange	Bruce	15	1,073	15·72	2	885

The carrots were sown in two drills, 6 inches apart, to a row. The rows were 3 feet apart. By this method of planting it is evident that larger yields can be produced than by planting a single drill to a row.

SUGAR BEETS

From the following table it will be seen that all varieties produced a fine crop this season, and, quoting from the report of the Dominion Chemist, "leave nothing to be desired in respect to sugar content and purity." The seed used was all from the Dominion Sugar Company:—

SUGAR BEETS—TEST OF VARIETIES

—	Yield per acre		Dry matter	Dry matter per acre		Sugar in juice	Co-efficient of purity
	tons	lb.	%	tons	lb.	%	%
Schreiber & Son	17	848	24·12	4	405	21·94	91·28
Dieppe	15	1,073	26·56	4	253	21·90	89·69
Henning & Harving	16	1,396	23·73	3	1,925	21·80	93·05
Dr. Bergmann	14	1,621	25·00	3	1,405	21·74	91·22
Home Grown	14	1,040	25·29	3	1,344	22·02	93·89
Rabbethge & Giesecke	13	1,360	24·61	3	733	22·90	96·07
Horning	13	1,360	23·63	3	465	21·76	91·43
Vilmorins Imp. "B"	12	974	24·12	3	24	21·61	91·43

POULTRY

During the winter of 1924-25 most of the stock was disposed of, as the buildings were moved nine miles to the new area at Windermere. It was felt that in commencing on the new area it would be wise to begin only with eggs or chicks, as in this way the ground would not become fouled by the older stock. However, a few females were taken over to breed from, but were kept in a confined area.

Most of the buildings and equipment were transported across the ice on Lake Windermere. The largest laying-house, 16 feet by 48 feet, was cut in two, but all the rest of the buildings moved quite readily. During the early spring and summer, concrete foundations and floors were constructed under the poultry buildings. A new building, 16 feet by 68 feet, which will contain feed-room, incubator-room and brooding-pens, was constructed during the year. With the various repairs to the buildings that were transported the poultry plant will be fairly complete.

HATCHING

The hatching results while showing a distinct improvement over the past few years, still leave room for considerable advance. The long period of confinement through the cold winter seems to have a marked influence on the viability of the chick in embryo, while many of those that do hatch are particularly weak, and many die. During the hatching season 1,665 White Leghorn eggs were set, 93.2 per cent being fertile, while 49.1 per cent of the eggs hatched, or 52.7 per cent of the fertile eggs hatched.

INCUBATORS

Three makes of incubators were used, namely, Jubilee, Prairie State and Buckeye. The results from these were in the order named. It was found difficult to keep the humidity requirements in the Buckeye machine.

REARING

The chicks were reared in colony-houses under Buckeye oil-burning hovers. The quality of the coal makes it undesirable as a fuel in the coal-brooders, and very satisfactory results have been obtained during the past three years from oil-burners. The chicks were given the run of new land as soon as they could get out. As the cockerels developed so that they could be distinguished from the pullets they were separated and later sold as broilers.

HOUSING

In October the pullets were culled fairly rigorously and nine lots of twenty birds each were put in separate pens in order to conduct various feeding trials. These trials are not complete at the time of report and will be reported on later. Production, however, was fair in November, and was higher during December than in January and February. The birds are housed in what is

Combination poultry building including incubator-room, feed-room, record-room and three brooder-rooms.

known as the Farmer's Poultry house. It is 16 feet in depth, has approximately one-third cotton and one-third glass in front, with straw-loft above. All birds are trap-nested, and pedigree breeding is conducted.

TURKEYS

A small flock of turkeys is kept at the Station. These birds are sold both for breeding and for table use. The flock is particularly free from disease, and very good returns are made.

MOVING BUILDINGS TO WINDERMERE

It is possible that some may be interested in a description of the methods of moving the poultry buildings from Invermere to the new area at Windermere. The buildings were moved during the second and third week of January. By road it is a distance of nine miles but by crossing by ice on the lake some bad hills were avoided and the distance reduced to about six miles. About three

weeks prior to moving the buildings Toby creek had become jammed with ice, the water overflowing the cribbing and spreading from one to three feet in depth over the flat below the poultry yards. When this froze it made an ideal roadbed to within a half mile of the lake. The buildings moved consisted of the following: 1 Farmer's poultry house, 16 feet by 48 feet; 1 Farmer's poultry house, 16 feet by 32 feet; 1 brooder-house on skids, 12 feet by 14 feet; 2 breeding-houses on skids, 12 feet by 10 feet; 1 laying-house, 14 feet by 16 feet; 2 covered scratch pens, 12 feet by 10 feet.

The first two buildings were divided into four and six pens respectively by movable partitions that were readily taken out and later replaced. The large building was cut into two portions by a carpenter and each portion thoroughly braced and supported.

The buildings were raised by jacks and placed on a large logging-sleigh with ten-foot beams and long stringers. In the case of the small buildings, two were loaded on to the sleighs. With the lighter loads a single team handled them until the lake was crossed but two teams were necessary to make the Windermere hill. With the larger buildings two and three teams were required.

The larger buildings were placed on blocks at Windermere and left until spring when concrete walls and floors were prepared and the buildings placed thereon.

The total cost of moving these buildings was $350. They stood the journey well and arrived in excellent shape, with practically no damage resulting, as only one pane of glass was broken in transit and some paint scraped off in a few places by the binding chains.

GENERAL

It is felt that the best way in which the Station can assist the farmer is to be able to supply him with cockerels and setting eggs at prices that are commensurate with the breeding and quality of the birds. The best time to apply for cockerels is in the late fall. Orders for eggs may be placed any time, but preference is given to orders as they are received.

APIARY

The past season seemed particularly favourable for the bees, as they produced the largest honey crop yet recorded at the Station. The bees were moved to the Windermere area early in the spring, and, possibly due to disturbance caused by moving, three colonies were lost and one was united. The remaining colonies built up rapidly, and were strong when the honey-flow appeared. There is possibly a little larger area for the bees to work on the Windermere side of the valley, as they are stationed considerably further from the lake than on the Invermere area. The location selected for their new home is in the poultry area in a nook well surrounded with trees and shrubs that afford protection from the wind. During the year the Dominion Apiarist inspected the apiary, and also spoke at the Field Day held at the Station.

RETURNS FROM APIARY

From eight colonies, spring count, 1,088 pounds of extracted honey was taken, or an average of 136 pounds per colony, the highest yield from one colony being 203 pounds. The honey was put up in 4 and 4½-pound pails and sold at a retail price of 20 cents per pound, netting $217.60. During the year 70 pounds of sugar was fed, valued at $6.30. The net returns from the Apiary was $217.60, proceeds from honey, less $28 from loss of colonies that died, less $6.30 the value of sugar fed, giving $183.30, or a profit of $22.91 per colony, spring count.

RETURNS FROM APIARY

Year	Colonies to go into winter the previous fall	Colonies died in winter or united in spring	Colonies—spring count	Increase in colonies during season	Colonies to go into winter	Value of increase or decrease compared with previous fall		Total honey produced	Average weight of honey per hive—Spring count	Highest yield from one colony	Selling price per pound	Total value of honey	Value of sugar fed during season	Net production value	
						Inc.	Dec.							Per Apiary	Per Hive
	No.	No.	No.	No.	No.	$	$	lb.	lb.	lb.	cts.	$ c.	$ c.	$ c.	$ c.
1917	12	.....	12	2	14	10	.....	975	81·25	120·0	17	165 75	38 25	137 50	11 45
1918	14	4	10	.....	10	.....	20	1,189	118·9	192·0	28	332 92	22 00	290 92	29 09
1919	10	3	7	4	11	7	.....	885	126·4	234·0	33	292 05	23 40	276 65	39 52
1920	11	2	9	1	10	.....	7	810	90·0	199·0	47	380 70	46 00	327 70	36 41
1921	10	2	8	3	11	7	.....	322	40·3	79·5	35	112 70	26 50	93 20	11 65
1922	11	6	5	4	9	.....	14	465	93·0	146·0	25	116 25	16 80	85 45	17 09
1923	9	3	6	6	12	21	.....	502	83·7	110·0	25	125 50	19 50	127 00	21 16
1924	12	.....	12	.....	12	.....	.....	1,370	114·1	150·0	25	342 50	32 02	310 48	25 87
1925	12	4	8	.....	8	.....	28	1,088	136·0	203·0	20	217 60	6 30	183 30	22 91

CONTROL OF SWARMING

The method adopted at the Station is to go through the brood chambers every week or ten days and remove queen cells if present, and increase the working room of the bees. This can be done by moving or transferring frames of brood from the brood chamber to the super or supers above. Some advocate the jumbo frame for the brood chamber, but better results have been obtained by using a shallow super over the ordinary brood chamber of Langstroth frames, and giving the queen the run of this. If queen cells are formed they will nearly always be at the bottom of the shallow frames and can be readily detected by raising one end of the super and glancing along the lower side of the frame. It will be found that the addition of the shallow frame will do away to a large extent with the individual examination of the frames in the lower brood chamber. This last season the colonies were all re-queened, and with careful watching and by practising the above details, swarming was controlled.

FEEDING

The Miller feeder has been used exclusively in the fall with good results. For spring feeding an ordinary honey-pail with the lid punched full of holes has been used with satisfactory results. This past season 70 pounds of granulated sugar, valued at $6.30, were fed to 8 hives. This was an average of 8.75 pounds, valued at 79 cents per hive. The syrup is made in the proportion of two of sugar to one of water. The following table summarizes the feeding data for the past nine years:—

AMOUNT AND COST OF SUGAR FED—1917-1925

Year	No. of hives, fall count	Weight of sugar fed	Average weight of sugar per colony	Total value of sugar	Value of sugar per colony
		lb.	lb.	$ cts.	$ cts.
1917	14	340	24·3	38 25	2 73
1918	10	160	16·0	22 00	2 20
1919	11	180	16·4	23 40	2 13
1920	10	200	20·0	46 00	4 60
1921	11	200	18·18	26 50	2 41
1922	9	160	17·7	16 80	1 87
1923	9	176	19·6	19 50	2 17
1924	12	296	24·8	32 02	2 67
1295	8	70	8·75	6 30	0 79

WINTER PROTECTION

Twelve colonies were prepared for winter, eight in Kootenay hive cases and four in an Ontario wintering-box. The winter of 1924-25 was mild, and the bees came through in fairly good shape. They were moved across to Windermere in the early spring and although all alive at the time of moving threee colonies died later, possibly due to the disturbance incident to shifting; and one colony

was very weak and was later united. During the winter the bees had several flights, and brood-rearing commenced early in April.

GENERAL NOTES

An exhibit from the Station consisting of a new background depicting various Station operations with appropriate description along with models of buildings, implements and a showing of grains, was displayed at Trail, Nelson, Slocan, Grand Forks and Lake Windermere. Considerable interest was manifested as noted by the literature, such as circulars and bulletins, that was distributed and the various questions and information that was sought.

Material from the Station was forwarded to the Experimental Farms exhibit at Vancouver in August. In December a large potato exhibit was arranged at the Provincial Potato Show at New Westminster.

Various provincial and local conventions were attended throughout the year.

Articles on various phases of agricultural activity for the press and " Seasonable Hints " were sent out during the year.

On several occasions the lantern and slides depicting work carried on at the Station was used to advantage in addressing various meetings.

A large Field Day was held on August 1 at which representatives of all the Farmers' Institutes from District " I " were present, and approximately 275 people. Luncheon was served at noon followed by various speakers along agricultural lines, including the Hon. E. D. Barrow, Provincial Minister of Agriculture, and C. B. Gooderham, the Dominion Apiarist. The afternoon was spent in showing the visitors over the plots and gardens, and in a stock-judging competition.

Correspondence with farmers is increasing, also a large amount of literature is distributed this way.

Samples of peas and potatoes have been distributed from the Station the past two years. A small charge is made to cover the postage. In some cases distribution has been made of cuttings from some of the willows and poplars, but this has not been a general practice.

Considerable expansion was undertaken on the Windermere area during the past year. The holdings at Windermere now comprise 285 acres of Lot 108. During the early spring this was enclosed in wire fencing with steel posts. This fence is strong, neat in appearance and particularly durable. Early in May nearly a mile of semi-circular steel flume, 19-inch diameter, was erected, delivering water from the Windermere Creek to the highest point on the Station. Approximately 50 acres of oats and peas for hay, and ten acres of sunflowers were seeded, while throughout the summer considerable ground was broken and prepared for crop the succeeeding year. In the fall a tractor was obtained for silo-filling, and later used to advantage on the land.

During the year considerable building was undertaken. The dairy barn was completed, a silo erected, and later a small dairy constructed. As mentioned under the poultry section, the various poultry buildings from Invermere were moved to the Windermere area; also a new poultry building constructed. A horse-barn was finished, and a set of large farm scales installed. A foreman's house was erected, and the basement excavated for the superintendent's residence, and considerable material acquired for its construction. An excavation for a large reservoir was made, and about 1,800 feet of 4-inch pipe laid to a depth of six feet. Furnaces for the various cottages were obtained, and considerable painting was undertaken. The place is beginning to take shape and another year will see considerable improvement to the area, as a good deal of cross-fencing will be put up, roadways improved, orchard set out and experimental plots commenced.

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