DOMINION OF CANADA

DEPARTMENT OF AGRICULTURE

DOMINION EXPERIMENTAL FARMS

REPORT OF THE CHIEF SUPERVISOR

J. FIXTER

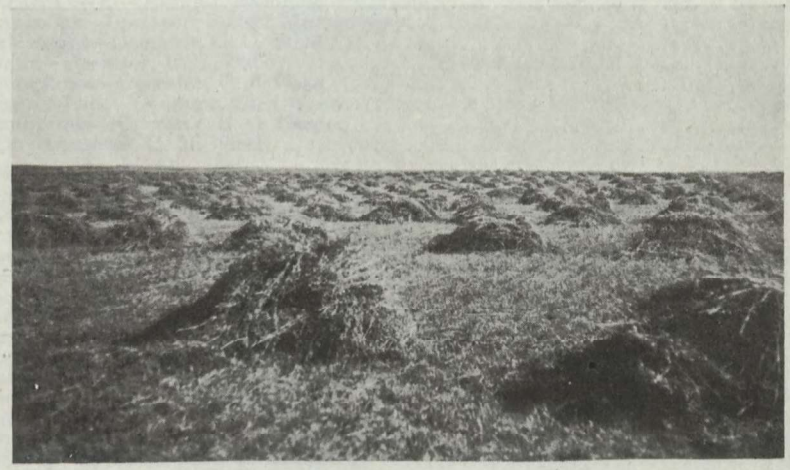
ON

THE ILLUSTRATION STATIONS

IN

BRITISH COLUMBIA, ALBERTA, and SASKATCHEWAN

FOR THE YEAR 1925



Alfalfa on the Illustration Station, Iron Springs, Alberta—two crops of hay yielded a profit of $41.12 per acre

Printed by the Authority of the Hon. W. R. Motherwell, Minister of Agriculture, Ottawa, 1926

CONTENTS

17185—1½

CONTENTS—Con.

ILLUSTRATION STATIONS

IN

BRITISH COLUMBIA, ALBERTA, SASKATCHEWAN AND MANITOBA

REPORT OF THE CHIEF SUPERVISOR, JOHN FIXTER

During the past year one hundred and forty-two Illustration Stations have been in operation and work of a progressive nature carried on. Eight of these stations are located in Prince Edward Island, thirteen in Nova Scotia, thirteen in New Brunswick, thirty-eight in Quebec, eight in Ontario, nine in Manitoba, twenty-three in Saskatchewan, sixteen in Alberta, and fourteen in British Columbia.

For the collection of data and recording of results which have made possible the following report of the work of the division the superintendents of branch Farms and Stations and supervisors of Illustration Stations as named below are responsible:—

J. C. Moynan, Assistant, Ottawa.

Superintendents—

W. T. Hunter, Summerland, B.C.
E. M. Straight, Sydney, B.C.
W. H. Fairfield, Lethbridge, Alta.
J. G. Taggart, Swift Current, Sask.
M. J. Tinline, Brandon, Man.

Supervisors—

A. E. Richards, Summerland, B.C.
R. E. Everest, Lethbridge, Alta.
E. C. Sackville, Swift Current, Sask.
J. D. Guild, Brandon, Man.

PRODUCTION AND SALE OF SEED

The growing of crops for seed purposes is increasingly becoming an important line of work on many of the Illustration Stations. These include the most suitable varieties of cereals for each district; also such crops as hardy strains of clover and certified potatoes. The stations serve as centres on which these crops are first grown and where the farmers may observe their characteristics and suitability to the district. The surplus seed of such crops is offered for sale at moderate prices. This year such sales, made by the different Illustration Station operators, amounted to 28,646 bushels of seed grain, 3,504 bushels of potatoes, and 7,660 pounds of grass and clover seed.

POULTRY IMPROVEMENT

The breeding, housing, and feeding of poultry has received considerable attention during this year. A number of operators made their first steps towards establishing pure-bred flocks. Others have directed attention to the question of housing, some having remodelled their old poultry house, whilst others have built new, up-to-date houses. At the present time poultry-keeping is functioning as an important side-line on all of the Illustration Stations. A good laying strain of Barred Rocks have already been developed on the stations that have been in operation for a few years, the foundation stock originally having been procured from the different Experimental Farms. By so doing, these Illustration Stations are now in a position to supply the requests of their neighbours for bred-to-lay poultry and hatching eggs. During the past year they have sold in their respective districts 484 pure-bred pullets, 576 cockerels, and 987 settings of eggs, in this way contributing to the improvement of the poultry in these districts.

17183—2

REPORT OF THE ILLUSTRATION STATIONS FOR BRITISH COLUMBIA

A. E. Richards, B.S.A., Supervisor

Ten Illustration Stations have been operating in the interior of British Columbia during the year 1925. Seven are located in the comparatively new section of the province along the line of the Canadian National Railway. These Stations serve the Bulkley, Nechako and Upper Fraser River valleys. The remaining three Stations are located in the southern portion of the province.

THE CLIMATE IN GENERAL

There are certain observations which might be made from a study of the climatic record for Central British Columbia. Although the figures for this year are somewhat below a ten-year average, a repetition of such seasons is to be expected.

The climate of central British Columbia might be characterized by the dry cold winters followed by slow advancement of spring and the rapid advancement of summer, accompanied by high daily temperature with long hours of sunshine. Growth is comparatively slow from the opening of spring to midsummer but from this time onward to harvest the rapidity of crop growth is astonishing.

It will be noted that rainfall during the growing season and particularly in the spring of the year is comparatively light. The major portion of the annual precipitation is received during the late summer or fall and this climatic characteristic holds true over a number of years. Observations and records show, however, that the average annual precipitation is very effective in the production of crops. Fortunately the moisture retentive powers of the central interior soil is fairly high and on ground which has not been burned over, holds up in a remarkable way during drought. The mean summer temperature is comparatively low with very little wind. Nights are cool, usually with heavy dews formed. All these factors retard evaporation and to a large degree offset the light rainfall.

THE SEASON

When spring opened in the interior of British Columbia there was every indication of a favourable year. A heavy snowfall during the winter, slow thaw in the spring with practically no frost in the surface soil permitted the moisture to soak into the ground. Undoubtedly this condition had a large influence in preventing a more serious reduction to normal crop yields, for during the entire growing season rainfall was light, as indicated in the meteorological table for the year.

PRECIPITATION FOR 1925 AT THE ILLUSTRATION STATIONS

Month	Armstrong	Francois Lake	Kamloops	McBride	Prince George	Salmon Arm	Salmon Valley	Smithers	Telkwa	Vanderhoof
	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches
January	2·90	1·10	1·22	2·24	1·30	4·35	2·80	1·00	1·40	1·50
February	0·92	1·90	1·30	1·85	3·05	2·11	2·70	1·40	1·95	1·10
March	0·73	1·80	0·48	2·69	1·62	0·61	1·05	0·65	1·68	0·77
April	0·71	0·20	0·94	0·72	0·03	0·49	1·13	0·28	0·28	0·29
May	1·35	0·06	0·24	0·76	0·62	0·66	0·65	.....	0·25	0·57
June	1·03	1·16	1·41	1·05	1·46	0·92	0·44	0·59	1·37	1·01
July	1·32	1·02	0·45	1·11	1·18	0·46	1·02	0·28	1·44	1·18
August	0·86	2·39	1·72	2·16	2·79	1·10	3·52	1·52	2·39	1·57
September	0·87	1·11	0·99	2·40	3·52	0·41	2·30	1·80	1·54	2·17
October	1·14	1·37	0·70	0·99	0·41	0·69	1·20	0·37	1·13	1·59
November	0·61	1·72	1·05	1·02	2·34	0·62	2·37	1·55	2·46	1·05
December	3·18	3·81	2·97	1·81	1·46	3·04	3·62	4·51	2·57	2·64
	15·62	17·64	13·47	18·80	19·78	15·46	22·80	.....	18·46	15·44

MAXIMUM AND MINIMUM TEMPERATURES AT ILLUSTRATION STATIONS IN BRITISH COLUMBIA, 1925
(In degrees Fahrenheit)

Month	Armstrong		Francois Lake		Kamloops		McBride		Prince George		Salmon Arm		Salmon Valley		Smithers		Telkwa		Vanderhoof	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
January	40	−4	37	−10	42	0	38	−15	38	−15	49	3	34	−22	28	−18	41	−15	36	−23
February	45	6	42	−14	48	0	44	−10	45	−6	52	14	42	−12	28	−16	40	−6	44	− 8
March	54	17	45	−13	56	10	51	− 6	51	−10	54	21	49	− 5	38	0	45	− 1	50	−12
April	75	24	58	6	70	24	73	20	64	8	79	29	60	8	46	4	62	8	64	8
May	84	30	79	24	85	26	86	19	83	24	88	34	86	22	.....	.....	79	23	79	21
June	96	40	87	29	95	32	92	32	91	31	97	39	92	31	.....	30	87	31	89	27
July	96	42	86	33	97	38	90	33	92	36	97	49	88	37	80	36	83	33	89	32
August	94	36	84	35	94	31	84	33	88	30	94	41	84	37	.....	32	86	27	82	31
September	80	36	72	20	80	26	76	18	75	21	80	35	.....	.....	.....	.....	72	21	72	17
October	62	22	60	7	62	14	57	1	61	0	66	26	.....	.....	.....	.....	61	3	57	− 1
November	51	19	48	9	44	12	52	− 2	56	1	56	19	.....	.....	.....	.....	50	4	44	− 5
December	48	26	48	7	46	16	48	12	49	8	45	26	.....	.....	.....	.....	49	7	44	0

PRICES CHARGED WHEN MAKING UP PRODUCTION COSTS

Rent of land per acre	Based on value of land at prevailing rate of interest.
Horse and manual labour	Based on prices in the district.
Cost of twine and threshing	Based on prices in the district.
Use of machinery	$2.00 per acre.
Manure	$2.00 per ton.

COST OF SEED (BRITISH COLUMBIA)

		$ cts.
Oats, Banner (reg.)	per bushel	1 00
Oats, Victory (reg.)	" "	1 10
Wheat, Marquis (reg.)	" "	2 40
Wheat, Ruby (reg.)	" "	2 40
Spring Rye	" "	1 97
Potatoes (Certified)	" "	2 10
Peas, Golden Vine	" "	4 00
Spring Vetch	" "	5 10
Corn, North West Dent	" "	4 80
Corn, Longfellow	" "	4 80
Sunflowers	" pound	0 12
Timothy	" "	0 16
Orchard grass	" "	0 38
Clover, Common Red	" "	0 22
Clover, Alsike	" "	0 14
Clover, White Sweet	" "	0 16½
Alfalfa, Turkestan	" "	0 29
Alfalfa, Grimm	" "	0 43

RETURN VALUES (BRITISH COLUMBIA)

		$ cts.
Clover and Timothy hay	per ton	17 00
Alfalfa hay	" "	16 00
White Sweet Clover hay	" "	14 00
Oats, Peas and Vetch hay	" "	16 00
Oat hay	" "	14 00
Oat straw	" "	6 80
Wheat straw	" "	3 40
Sunflower fodder, green	" "	5 50
Sunflower ensilage	" "	6 00
Corn ensilage	" "	7 00
Oats and Peas, ensilage	" "	7 00
Potatoes	" bushel	1 10
Oats	" "	0 70
Wheat	" "	1 50
Field Peas, grain	" "	3 50

The cost of manure is distributed over the crops in the rotation in the following proportions: 40 per cent is charged to the hoed crop; 30 per cent is charged to the grain crop; 20 per cent is charged to the first year hay crop; 10 per cent is charged to the second year hay crop.

Yields of hay and mixed crops are estimated throughout the report.

ARMSTRONG, B.C.

Operator, W. B. McKechnie

Illustration Station work commenced on this farm in the spring of the present year. Soil is a comparatively heavy clay loam typical of a considerable area. The climate might be characterized by a fairly heavy snowfall, good early spring and fall precipitation with a very light rainfall during the summer months. Of the various hay crops alfalfa seems best adapted to natural conditions and will be given considerable attention in the Station operations. A seven-year rotation will be maintained which will include five years alfalfa, one year field peas and one year fall wheat.

Results of the season's work are given in the following table.

OPERATIONS AT ARMSTRONG, SEVEN-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Alfalfa hay		June 18	1¾ tons	8 06 per ton	13 82
B	Alfalfa hay		June 20	1¾ tons	8 26 per ton	13 55
C	Alfalfa hay		June 20	1¾ tons	8 26 per ton	13 55
D	Alfalfa—new seeding					
E	Alfalfa—new seeding					
F	Field peas, Golden Vine	April 17	July 18	12½ bush.	1 33 per bush.	27 12
G	Fall wheat, Jones' Fife	Sept. 16	July 13	33 bush., 18 lb.	0 69 per bush.	26 97

The district experienced an unusually dry season with the result that very little second crop alfalfa was cut and the newly seeded fields failed to make a stand.

Ruby wheat grown from registered seed on Illustration Station, Francois Lake.

FRANCOIS LAKE, B.C.

Operator, J. R. Stanyer

Spring opened later than usual at this point. Work on the land commenced May 5 and seeding was general by the 12th. Hot dry weather in May followed by dull cool days in June kept plant growth in check. Consequently hay crop was light. Rain later in the season greatly benefited grain and new seedings of clover and grasses.

Results of the season's work are given in the following table: —

OPERATIONS AT FRANCOIS LAKE, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Potatoes, Irish Cobbler.....	May 13	Sept. 27	150 bush.	1 24 per bush.	−21 00
	Field peas, Golden Vine.....	May 13	Sept. 18	8 bush., 14 lbs.	3 92 per bush.	0 66
B	Mixed, peas and oats.....	May 13	Sept. 5	2 ton, 666 lbs.	10 89 per ton	13 29
C	Oats, Banner, cut for hay....	May 12	Sept. 11	1 ton, 500 lbs.	17 84 per ton	− 4 80
D	Wheat, Ruby.....	May 12	Sept. 8	17 bush., 43 lb.	1 37 per bush.	2 30

Field peas have been grown on this Station for the past three years with satisfactory results. No loss from frost has been experienced and peas were harvested each year in a well matured condition. In 1922 the Arthur variety yielded 20 bushels per acre at a cost of $1.84 per bushel. In 1923 Arthur gave 18 bushels per acre at a cost of $2.81 per bushel and Golden Vine variety 22 bushels per acre at a cost of $2.21 per bushel. This season these two varieties gave practically the same yield. Although greatly reduced on account of the drought, peas are of splendid quality. This is a crop which deserves more attention from farmers in central British Columbia. Not only does the field pea provide grain, fodder or ensilage of high quality but also due to its nitrogen gathering powers is an excellent soil improver.

ALFALFA, CLOVER AND GRASS VARIETY TESTS

The primary function of the Illustration Station is to apply, under field conditions, the results of investigations and experiments conducted on the Dominion Experimental Farms. There are certain agricultural localities, however, which are remote from the experimental stations and which have natural conditions peculiar to themselves. Such is the situation in central British Columbia. Here, with the co-operation of interested operators, the Illustration Station is conducting experimental work on a small scale with various farm crops.

For the purpose of testing the adaptability of varieties of grasses, clovers and alfalfas to central interior soil and climate conditions the operator on each Illustration Station in central British Columbia has set aside a plot of ground for this work. From twenty-five to thirty varieties are tested on each Station in sixty-six foot rows. The grasses and clovers were sown in the spring of 1924 and notes are made periodically on germination, comparative growth, strength of stand, winter hardiness and second growth.

This work has important educational value in acquainting the farmers in the District with the different types and varieties of grasses where they can compare their growth and behaviour under natural conditions. The tests serve also as a preliminary to making up suitable mixtures for the field.

Grasses which appear most adaptable to natural conditions and have been selected for hay mixtures in the field are meadow fescue, timothy, western rye and orchard grass.

Alfalfa varieties which show most promise are Cossack, Grimm and Siberian. All clovers are making satisfactory growth.

KAMLOOPS, B.C.

Operator, C. R. GREEN

This Station is located in the Rose Hill dry farming area ten miles south of Kamloops. The problem with which farmers in this district are faced and to which the Illustration Station is devoting attention is the maintenance of soil fertility under limited soil moisture conditions. Although there is sufficient moisture in normal years to grow a fair crop of grain, great difficulty has been experienced in establishing satisfactory stands of the soil building crops. Alfalfas and the common clovers have been displaced in tests covering four years by the white sweet clover as a fodder crop and soil improver for the district.

Results of the season's work are given in the following table:—

OPERATIONS AT KAMLOOPS, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Sweet clover hay (new seeding).	.....	.....	.....	.....	.....
B	Mixed, oats and spring rye..	May 6	June 29	1,600 lbs.	20 50 per ton	−5 20
C	Sweet clover (new seeding)..	Nov. 1	.....	.....	.....	.....
D	Corn, N.W. Dent (ensilage).	May 15	Sept. 14	4 ton, 1,700 lbs	6 92 per ton	0 39
	Sunflowers, Mammoth Russian ensilage.	May 7	Sept. 21	6 ton,1,664 lbs.	5 22 per ton	5 33
	Demonstration field.....	.....	.....	.....	.....	.....
E	Mixed, spring rye and oats..	April 18	July 2	1,700 lbs.	15 37 per ton	−1 16

Field "A" seeded naturally from second growth sweet clover in 1924. Seed lay broadcast on the surface over winter and in the spring the field was harrowed thoroughly. Germination was excellent but dry weather thinned the stand considerably.

In a district such as this where soil is light and rainfall often deficient it is sometimes advisable not to plough the land but simply disc or cultivate in preparation for the succeeding crop. This particularly applies to a piece of clean land which grew a cultivated crop such as corn or sunflowers the preceding year and is to be seeded down to clovers or alfalfas. In seeding a field to these crops a firm seed bed is desirable and soil moisture must be carefully conserved.

In consideration of these factors, sweet clover on Field "C" was drilled in on the corn and sunflower stubble in the late fall of 1924 after all possibility of germination was passed. Germination was excellent the following spring. Seedlings had the advantage of early spring moisture and as a result have made strong growth and a satisfactory stand.

Sweet clover appears to hold an important place in the cropping system of this dry area. It is an excellent soil building legume, fairly drought resistent and appears quite thrifty on alkali land.

McBRIDE, B.C.

Operator, J. T. OAKLEY

Work on the land commenced in this district April 26, which was a few days earlier than points further west.

Fall wheat on Mr. Oakley's farm came through the winter without injury. Considering the dry season the yield of clover hay was particularly good on the Station. The demonstration on these fields and the encouragement to farmers by means of the clover-growing competition has done much to popularize this

crop in the district. The mixed crop of peas, oats and vetch was sown at the following rates per acre,—Banner oats, two bushels; Golden Vine field peas, one bushel; Spring vetch, one-half bushel. Vetch made strong growth and appears well suited to natural conditions here.

Results of the season's work are given in the following table:—

OPERATIONS AT McBRIDE, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
					$ c.	$ c.
A	Hay, first year	.....	July 27	1 ton, 333 lbs.	13 85 per ton	3 67
B	Oats, Banner	April 30	Sept. 2	50 bush.	0 42 per bush.	14 00
C	Hay, second year	.....	July 22	2 tons	6 91 per ton	20 18
D	Sunflowers, Mammoth Russian, (green fodder).	May 9	Aug. 20	8 tons	9 47 per ton	−31 76
	Potatoes, Early St. George.	May 7	Oct. 8	100 bush.	0 97 per bush.	13 00
	Mixed, oats, peas, and vetch (cut for hay).	May 7	Aug. 11	3 tons, 667 lbs.	15 44 per ton	1 87

CO-OPERATIVE TESTS WITH THE UNIVERSITY OF BRITISH COLUMBIA IN FALL WHEAT VARIETIES

For the past two years the University of British Columbia has furnished samples of thirteen selected varieties of fall wheats to be tested on the northern Illustration Stations. The division has co-operated in this work and the supervisor has kept records on winter hardiness, habit of growth and maturity. Thirteen varieties were tested in duplicate on five of the central interior stations. Of the beardless wheats which showed winter hardiness and matured satisfactorily the most promising varieties appear to be Crail Fife, Dawson's Golden Chaff and O.A.C. 104. Of the bearded type Kharkof and Kanred are especially hardy. Probably the outstanding wheat under all tests is Crail Fife. This wheat showed a low percentage of winter injury, gave fine length and strength of straw, stooling was good, head large and it was well matured by August 20.

PRINCE GEORGE, B.C.

Operator, R. J. Blackburn

Spring opened a week to ten days later than the 1924 season but good soil moisture conditions and favourable growing weather in early spring soon overcame this handicap and by the end of May crop growth was well advanced.

Work on this Station is now well established. Second growth clover on field "B" was turned under in the fall of 1924 in preparation for the hoed crop this year.

Results of the season's work are given in the following table:—

OPERATIONS AT PRINCE GEORGE, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Hay, second year	.....	July 20	1 ton 1,400 lbs.	6 61 per ton	17 66
B	Sunflowers, Mammoth Russian (ensilage)	May 13	Aug. 24	4 tons 1,300 lbs	5 12 per ton	4 09
	Field peas, Arthur	May 13	Sept. 7	14 bush. 35 lbs	1 68 per bush.	26 54
	Mixed, peas and oats (ensilage)	May 13	Aug. 19	2 tons 1,568 lbs.	7 48 per ton	−1 33
C	Banner oats, seeded	May 12	Sept. 17	50 bush. 4 lbs.	0 40 per bush.	15 03
D	Hay, first year	.....	July 18	1 ton 200 lbs.	9 95 per ton	7 75
	Demonstration field					
E	Alfalfa hay, first year	.....	July 15	1 ton	9 18 per ton	6 82

Sunflowers and a mixture of oats and peas are grown for ensilage on the Station. Both crops seem well adapted to the district. Sunflowers are sown at the rate of 10 pounds per acre. The mixed crop is sown at the rate of one and one-half bushels Banner oats and one bushel Golden Vine field peas. Comparative yield and cost per ton for the three preceding years is given in the table below.

—	—	Yield per acre	Cost per ton
			$ cts.
1922	Sunflower, Mammoth Russian	7 tons, 1,768 lbs.	6 37
	Mixed, oats and peas	4 tons, 500 lbs.	6 45
1923	Sunflowers, Mammoth Russian	5 tons, 500 lbs.	5 93
	Mixed, oats and peas	9 tons, 500 lbs.	3 51
1924	Sunflowers, Mammoth Russian	4 tons, 1,300 lbs.	5 12
	Mixed, oats and peas	2 tons, 1,568 lbs.	7 48

Inspecting grass and clover variety plots at Prince George Illustration Station.

Clovers came through the winter without injury. New seedings have made an excellent stand. One of the most hopeful signs in this new district is the increased acreage devoted to clover and alfalfa. These leguminous crops and the ensilage crops are at the foundation of successful mixed farming. Work with these crops has gone beyond the experimental stage and results on the Illustration Station have demonstrated in a convincing way that clovers and alfalfas and such ensilage crops as sunflowers, peas and oats can be successfully and profitably grown in central British Columbia.

SALMON ARM, B.C.

Operator, A. V. Clarke

Winter frosts caused serious injury to fall wheat and clovers. First spring work was done on this Station April 23. Hot, dry weather followed seeding and continued through the growing season to the detriment of all crops.

Results of the season's work are given in the following table:—

OPERATIONS AT SALMON ARM, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Oats, Banner	April 27	July 31	30 bush.	1 21 per bush.	−15 30
B	Hay, second year (failed)	.....	.....	.....	.....	.....
C	Hay, first year	.....	July 2	1,500 lbs.	33 53 per ton	−12 39
D	Corn, North West Dent	May 16	Sept. 15	12 tons	5 78 per ton.	14 64

Corn appeared to remain at a standstill until late summer when refreshing rains gave it new life. The proper and timely use of machinery saves much hand labour in growing this crop. By blocking a number of spouts in the two-horse grain drill the corn was sown in rows 42 inches apart. Harrowing before and after the crop emerged aided weed control, lessened the need for later cultivation and reduced labour costs.

CORN GROWING COMPETITION IN SALMON ARM DISTRICT

For the purpose of encouraging the more general use of corn as ensilage and as a cleaning crop on farms in the Salmon Arm District, the division conducted a competition during the current season. The competition also served to test the comparative suitability of the two varieties, North West Dent and Longfellow, in this locality.

Twenty-seven farmers entered the competition. A membership fee of fifty cents was charged. This was pooled and returned as prize money to the seven men gaining highest points.

Observations and records on competition plots show that during the current season North West Dent made a stronger and more uniform stand, eared and matured earlier and on a large majority of plots gave greater tonnage per acre than Longfellow.

The interest that farmers showed in the work was very encouraging. Several men who had not grown corn before are now thoroughly convinced of its value as a forage crop and propose to extend the acreage another year. On the strength of the good showing which corn made two men built the first silos on their farms this season.

SALMON VALLEY, B.C.

Operator, J. S. Johnson

The district experienced a very dry season and for that reason crops are much below average. Clover hay gave profitable returns and provided splendid pasturage after the removal of the crop.

Results of the season's work are given in the following table:—

OPERATIONS AT SALMON VALLEY, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Wheat, Ruby	May 18	Sept. 8	6 bush.	3 46 per bush.	−11 76
B	Sunflowers, Mammoth Russian					
	Mixed peas and oats (cut for hay)	May 18	Aug. 7	1,500 lbs.	42 03 per ton.	−19 52
C	Hay, first year		July 15	1 ton, 500 lbs.	7 20 per ton	12 25
D	Hay, first year		July 15	1,250 lbs.	13 32 per ton	2 30
	Demonstration field					
E	Oats, Banner (cut for hay)	May 18	Aug. 7	1 ton ,250 lbs.	23 98 per ton	−11 22
F	Oats, Banner (cut for hay)	May 18	Aug. 7	1 ton	18 97 per ton	−4 97

Clovers survived the winter without injury. In seeding down meadows, Ruby wheat at one and one-quarter bushels per acre is used as a nurse crop. Clover and grass mixture is sown at the following rates per acre: Timothy, four pounds; orchard grass, two pounds; meadow fescue, two pounds; western rye, two pounds; common red clover, four pounds; alsike, four pounds, and alfalfa, two pounds.

SMITHERS, B.C.

Operator, Geo. Oulton

Soil on this Station is a comparatively light silty loam which rapidly loses its moisture during high summer temperature.

The four-year rotation is well suited to such a condition. Manure is applied at sixteen tons per acre to the hoed crop and every four years the soil on each field is improved by turning under the second growth of clover and timothy sod.

OPERATIONS AT SMITHERS, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Wheat, Ruby	May 2	Aug. 18	16 bush., 36 lbs	1 13 per bush.	6 14
	Oats, Banner (cut for hay)	May 2	Aug. 14	2 tons	8 89 per ton	5 11
	Oats, Banner (ensilage)	May 2	Aug. 3	5 tons, 80 lbs.	5 36 per ton	4 10
B	Oats, Banner (cut for hay)	May 3	Aug 18	2 tons	9 60 per ton	8 80
	Oats, Banner (ensilage)	May 3	Aug. 5	9 tons, 900 lbs	2 52 per ton.	42 11
C	Fall wheat, Dawson's Golden Chaff	Sept. 11	Aug. 13	12 bush.	1 31 per bush.	2 28
	Field peas, Golden Vine	May 13	Aug. 28	10 bush.	1 80 per bush.	17 00
	Sunflowers, Mammoth Russian	May 14	Aug. 26	6 tons	7 22 per ton	−7 32
	Mixed, oats, peas and vetch (cut for hay)	May 14	Aug. 28	2 tons	11 02 per ton	2 98
	Potatoes, Green Mt.	May 13	Oct. 2	113 bush., 18 lbs.	0 58 per bush.	58 92
D	Hay, second year		July 7	¼ ton	32 80 per ton.	−3 95

Fall wheat in the rotation wintered without injury. One acre corn was grown in test with sunflowers. A frost during the latter part of June injured both crops. Sunflowers recovered and made fair growth but corn failed to produce a crop.

Considering the dry weather, clovers and grasses made a splendid catch this season. This was due in a large measure to careful seed bed preparation

and to good practice in seeding. Clover and grass was drilled in on a deep, firm seed bed to a depth of one to two inches. The nurse crop of oats sown separately was cut early for hay and green feed which permitted the clovers to make covering growth before winter set in. If possible the nurse crop should be cut following a good shower so that the clover and grass seedlings will have the advantage of the freshening effects of the rain. Otherwise to suddenly take away the shade which the nurse crop provides may parch the seedlings.

TELKWA, B.C.

Operator, F. M. Dockrill

Almost ideal conditions existed in the Bulkley for seeding operations. Excellent soil moisture conditions and May temperatures bordering on 80 degrees brought a rapid response from plant life. Grain sprouted in five days and complete germination of clover and grass seedings was obtained.

Results of the season's work are given in the following table:—

OPERATIONS AT TELKWA, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (—) loss per acre
					$ cts.	$ cts.
A	Hay, second year	.....	July 14	1,600 lbs.	12 91 per ton	3 27
B	Hay, second year	.....	July 14	1,600 lbs.	12 91 per ton	3 27
C	Wheat, Marquis	May 5	Sept. 1	33 bush.	0 63 per bush.	28 71
D	Potatoes, Gold Coin	May 20	Oct. 6	200 bush. 40 lbs.	0 73 per bush.	74 22
	Sunflowers, Mammoth Russian (ensilage)	May 20	Sept. 20	8 tons	5 71 per ton	2 32
	Demonstration field					
E	Oats, Banner	May 15	Aug. 31	85 bush.	0 30 per bush.	34 00
	Oats, Banner (cut for hay)	May 15	Aug. 17	4 tons	7 16 per ton	27 36

Marquis wheat grown from registered seed on this Station matured in 118 days this year and in 129 days last year. The Dominion Chemist comments on a sample of the 1924 crop as follows:—

> "This is an excellent sample; indeed it might almost be classed with wheats of exceptionally high quality. Considering the large size of the berry, its plumpness and weight, the protein content (15.97 per cent) is decidedly high. There is little doubt but that this wheat would yield a flour of very good baking value."

A sample sent to the Western Grain Inspection Division graded 1 Northern. The inspector states that this is a very fine quality of Marquis wheat, well matured and of fine colour.

Such reports afford some indication of the possibilities of this district from a wheat growing standpoint.

THE TRENCH SILO

Mr. F. M. Dockrill, operator at Telkwa, B.C., has ably demonstrated the efficiency of the trench silo. The silo is excavated from a small bench of land located near the barn where good natural drainage is obtained. Dimensions are: length, thirty feet; width, thirteen feet; and depth, nine feet. It took approximately six days' work with a team and two men to complete the job. Material costs including plank and nails amounted to $20.

Mr. Dockrill gives the following description of the silo: "The material excavated was very hard, in fact we had to blast so that costs were higher than the ordinary. I lined the silo with plank throughout and supported them with sixteen-foot posts with cross girders at the top, to keep the sides from pressing in, when the silo is empty. The plank sides are more satisfactory than earth and consequently give less spoilage. A straw cutter is used with a cutting box about twelve inches wide operated by a seven-horsepower engine."

The posts were kept high so that the horse could pass under the girders without interference when tramping the silage. The front of the silo is on the sloping edge of the bank. It is therefore necessary to put planks across the front when filling.

"We find that for every six loads of sunflowers a load of sheaf grain or straw put through the cutter helps to take up some of the excess moisture and acidity of the sunflowers."

Mr. Dockrill had seventy tons of ensilage sealed up for winter feeding when he completed filling his silo this season. When the silo was opened October 28, the end planks were removed and the silage taken from the top to the bottom of the silo. Mr. Dockrill states he is feeding forty pounds per cow and would not milk cows without it. The ensilage is of a splendid feeding quality and feeding commenced with practically no loss.

VANDERHOOF, B.C.

Operator, D. Turcotte

The appearance of clovers and alfalfas in the spring was very encouraging. No loss was sustained over winter and although dry weather during the growing season retarded growth and consequently reduced yields of alfalfa and clover hay these crops show promise in the district.

Results of the season's work are given in the following table:—

OPERATIONS AT VANDERHOOF, FOUR-YEAR ROTATION

Field	Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
					$ cts.	$ cts.
A	Hay, first year	.....	July 14	1,334 lbs.	17 66 per ton.	−0 44
B	Oats, Banner	May 15	Aug. 14	33 bush.	0 42 per bush.	9 24
C	Hay, second year	.....	July 8	900 lbs.	19 32 per ton.	−1 05
D	Potatoes, Green Mountain	May 22	Oct. 9	115 bush.	0 91 per bush.	21 85
	Sunflowers, Mammoth Russian (fodder)	May 16	Oct. 9	3 tons	8 20 per ton	−6 60
	Mixed, oats and peas (cut for hay)	May 7	Aug. 3	1½ tons	17 25 per ton	−1 87
	Field peas, Golden Vine	May 7	Aug. 18	8 bush. 40 lbs.	3 87 per bush.	−3 18
	Demonstration fields					
E	Alfalfa hay, first year	.....	July 21	608 lbs.	34 76 per ton	−5 70
F	Alfalfa (new seeding)	May 8	.....	.....	.....	.....
G	White sweet clover hay	.....	July 14	1 ton	13 47 per ton	0 53
	Oats, Banner	May 6	Aug. 20	35 bush.	0 22 per bush.	16 80

Low temperatures and dry weather during the growing season checked the alfalfa. That sown in rows and cultivated gave higher returns then the broadcasted method. Of the two varieties in test Grimm appears more thrifty than Turkestan. Both varieties gave a very fair second cutting. Orchard grass and meadow fescue made much stronger second growth than timothy.

On account of the dry weather which is usually experienced during the spring months in the central interior everything possible should be done to conserve the moisture in the autumn rains and winter snows. When the soil is

turned up by the plough in the spring, much of the stored up moisture is lost through evaporation. Fall ploughed land on the other hand can be worked down immediately spring opens and the seeding date advanced several days. The comparatively short season in the central interior makes this an important consideration.

Prize-winning stand in clover-growing competition, Prince George District.

CLOVER-GROWING COMPETITION

When Illustration Station work started in central British Columbia, farmers hesitated to grow clovers because of winter-killing and heaving out of the plants due to spring frosts. This may have been due to the use of southern grown seed, light seeding and to pasturing too close in the autumn.

In order to encourage the growing of clover in central British Columbia, a clover growing competition has been conducted by the division during the past year. By this means adaptability to climate and soil conditions and the value of the crops for forage and seed production is tested over a wide area. Two varieties, Alsike and Common Red were used. Tests were also made in sowing with and without a nurse crop of grain.

Forty-nine farmers entered the competition. Plots were seeded in the spring of 1924 and stands were judged in June, 1925, before the hay crop was cut. Prizes were awarded for best stands of clover in each district.

The importance of heavy seeding of hardy red clover seed, such as northern and home-grown seed, is being encouraged, the pasturing of newly seeded meadows is being discouraged, so as to leave a good covering on the ground for winter protection.

FIELD DAY

Field Days were held on Illustration Stations in central British Columbia during the latter part of June and early July. Attendance at the meetings was as follows: McBride, sixty-four present; Prince George, eighty-five present; Salmon Valley, twenty-four present; Francois Lake, twenty-three; Telkwa, twenty; Smithers, forty-three, making a total attendance of two hundred and fifty-nine persons. The local Farmers' Institute co-operated at each point to make the Field Day a success.

ILLUSTRATION STATIONS EXHIBIT

The supervisor attended Fall Fairs at Prince George, Smithers and New Westminster with an Illustration Stations exhibit. The exhibit was mainly educational, illustrative of the work of the division. Three points emphasized most strongly by means of the exhibit were, (1) the value of clover and alfalfa and other leguminous crops on the mixed farm, (2) cultural practices which make the best use of soil moisture, (3) the value of clean seed. Representative exhibits of produce grown on each of the Illustration Stations were on display.

REPORT OF THE ILLUSTRATION STATION, PEACE RIVER DISTRICT, B.C.

W. D. Albright, Superintendent, Experimental Sub-Station, Beaverlodge, Alta.

FORT ST. JOHN, PEACE RIVER DISTRICT

Operator, J. W. Abbott

The growing season of 1925 was decidedly droughty in this district. From May 1 to August 14 the total rainfall amounted to 3.19 inches. June was the wettest month, there being a number of light showers, the total netting 1.75 inches of rain. These showers were invariably followed by a drying southwest wind from the Pine Pass region. The month of August and early September was unusually wet; a killing frost was registered on August 22, one week earlier than last year.

Field work commenced on May 1. Marquis wheat was seeded on May 6, at the rate of $1\frac{3}{4}$ bushels per acre on summer-fallowed land. The crop made rapid growth for the first six weeks. As the drought period advanced, the crop gradually assumed a yellow tinge. The August rains were too late to materially benefit the crop. The crop was harvested on August 19 and yielded 23 bushels per acre giving a sample that would grade No. 2.

Banner oats seeded at the rate of 2 bushels per acre on May 9 and harvested on August 17, yielded 39 bushels per acre on summer-fallowed and 21 bushels from stubble land.

Irish Cobbler potatoes planted on summer-fallow land on May 25 yielded 169 bushels and Country Gentleman, 151 bushels per acre.

Hall's Westbury turnips planted on May 26 yielded 15.4 and Trifoleum Denmark, 15.8 tons per acre, both varieties having suffered a six per cent damage from cutworms during June.

Work was started with grasses and clovers on seven plots, the seedings being as follows:—

1. Western rye grass.
2. Brome grass.
3. Western rye and brome grass.
4. Brome grass and sweet clover.
5. Western rye and alfalfa.
6. Alfalfa.
7. Sweet clover.

One-half of each plot was seeded on wheat and oat stubble land. Here the catch was thin and patchy; one-quarter of each plot was seeded with a nurse crop of oats and one-eighth of the plot with a nurse crop of wheat. When a nurse crop was used, either wheat or oats, the grasses and clovers were a complete failure. The remaining one-eighth of each plot was seeded on summer-fallow without a nurse crop. With each mixture, little headway was made until June. From then on, each plot appeared to develop a thick stand particularly Brome and alfalfa. August rains brought the growth of each of these plots along so that before fall, some of the grasses and clovers had reached the bloom stage.

REPORT ON THE ILLUSTRATION STATIONS FOR VANCOUVER ISLAND, B.C.

E. M. Straight, B.S.A., Superintendent, Experimental Station, Sidney

Illustration Station work had its beginning on Vancouver island in 1923. Since no supervisor was appointed for the island, the work was given some oversight by the superintendent of the Experimental Station at Sidney, B.C. At that time two stations were selected, one at Courtenay and the other at Comox. Work was begun in 1924. Both operators undertook straight four-year cropping systems, viz. roots, grain, clover hay, timothy. Since it was necessary to start operations on old turf land that had not been cultivated for many years, it was not possible to get into the full stride of the rotations at once. However, the work is well under way. In 1924 a third station was selected at Alberni. The Alberni farming district is somewhat new, areas small and land rough. However, the enthusiasm of the farming community makes up for any lack there may be in other directions.

COURTENAY, B.C.

Operators, Halliday Bros.

The soil at this Station is a fairly good type of loam. The land at Courtenay does not suffer for moisture to the same extent as at the Experimental Station, Sidney, since the rainfall is much greater. As mentioned, the Station was taken out of an old turf badly filled up with weeds. To keep these in check has occasioned much labour, but a good friable condition of the soil was established, however, and maintained on the cultivated area. As the cultivated portion extends once over the entire rotation the weeds are being eradicated.

RESULTS OF THE SEASON'S WORK AT COURTNEY

Field	Crop	Yield per acre	Actual cost	Estimated value of crop per ton	Profit or loss (±) per acre
			$ cts.	$ cts.	$ cts.
A	Oats	2,750 lbs.	28 20 per ton	40 00	+ 16 22
B	Potatoes	7·4tons	14 62 per ton	60 00	+335 81
	Corn	20 tons	1 19 per ton	6 00	+ 96 20
C	Hay	1½ tons	13 21 per ton	25 00	+ 17 68
D	Hay				

COMOX, B.C.

Operator, J. A. Carthew

Some preparatory work was done on this Station in 1923, and the first crop obtained in 1924. The character of the soil makes it difficult to plough until after the advent of the fall rains. Without this summer cultivation, weeds of many varieties developed, which were held down with difficulty. This was done, however, on the cultivated area, so that the appearance of the fields from the road was very good. The soil here is red clay loam.

RESULTS OF THE SEASON'S WORK AT COMOX

Field	Crop	Yield per acre	Actual cost	Estimated value of crop per ton	Profit or loss (±) per acre
			$ cts.	$ cts.	$ cts.
A	Oats	2,311 lbs.	28 28 per ton	40 00	+ 13 54
B	Corn	15 tons	2 76 per ton	6 00	+ 48 60
C	Potatoes	9,000 lbs.	24 05 per ton	60 00	+161 78
D	Hay	2·4tons	5 50 per ton	25 00	+ 46 80

ALBERNI

Operator, C. Chase

Mr. Chase is the operator of the new station at Alberni. He has demonstrated one thing, that it is possible to carve a farm out of the British Columbia forest, to put up farm buildings and to succeed. His land is, in part, rough and stumps of gigantic size are still common. These are being removed as rapidly as time will permit.

RESULTS OF THE SEASON'S WORK AT ALBERNI

Field	Crop	Yield per acre	Actual cost	Estimated value of crop per ton	Profit or loss (±) per acre
			$ cts.	$ cts.	$ cts.
A	Oats	2,700 lbs.	24 21 per ton	40 00	+ 21 55
B	Fallow				
C	Corn	6 tons	6 90 per ton	6 00	− 5 40
D	Oats and peas	2,500 lbs.	33 16 per ton	40 00	+ 8 54

REPORT OF THE ILLUSTRATION STATIONS FOR ALBERTA

R. E. Everest, B.S.A., Supervisor

THE SEASON

The year 1925, in the main, was favourable for crop production in Alberta. Certain small districts suffered from drouth. The southeast of the province suffered from low rainfall, as did parts of the southwest to a lesser extent. July was the disappointing month of the summer for southern points, while in the central portion of the province a steady rain on the 6th of July was the saving rainfall of the season. In the course of twenty-four hours over quite an area a rainfall ranging from 2½ to 3½ inches was recorded.

Work upon the land was under way by April 15, and harvest was unusually early, binders being in the field by the 3rd of August. September came in wet, and rough weather continued to the end of October. Beautiful open weather throughout November and December permitted all grain to be threshed and other farm work, such as hauling, to be completed by the new year.

The late storms resulted in injury to colour and increased the moisture content of cereals, so that the grade of wheat marketed after August was considerably reduced. However, the prevailing price gave farmers who had harvested crops of ten bushels or more per acre a paying and profitable year. The outcome of this condition results in a steady return to prosperity in agriculture. The autumn precipitation, though discouraging in the handling of the 1925 crop, augurs well for the growing season of 1926.

That the moisture conditions for the crop year 1925 may be more clearly depicted the autumn precipitation of 1924 appears in tabular form, followed by the precipitation records of 1925.

PRECIPITATION AUTUMN MONTHS, 1924

—	Bindloss	Delacour	Foremost	Glenwoodville	Grassy Lake	High River	Milk River	Orion	Pincher Creek	Sunnynook	Wainwright	Whitla	Youngstown	Lethbridge
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
September	0·79	0·55	0·48	0·70	1·09	0·22	0·67	0·77	0·71	1·33	0·80	1·10	2·01	1·46
October	0·75	1·30	Nil	1·13	0·37	1·52	1·04	0·73	1·79	0·27	0·40	0·46	0·35	0·59
November	0·63	0·80	0·50	0·80	0·90	0·90	1·00	0·60	1·36	0·30	0·55	1·00	0·60	1·02
December	1·00	1·40	0·80	1·80	0·70	1·60	0·80	0·80	2·25	0·90	1·00	1·20	1·80	1·54
Totals	3·17	4·05	1·78	4·43	3·06	4·24	3·51	2·90	6·11	2·80	2·75	3·76	4·76	4·61

MONTHLY PRECIPITATION AT STATION POINTS IN ALBERTA, 1925

—	Bindloss	Delacour	Empress	Foremost	Glenwoodville	Grassy Lake	High River	Jenner	Kipp	Milk River	Orion	Pincher Creek	Sunnynook	Wainwright	Whitla	Youngstown	Lethbridge
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
January	0·15	0·90	0·40	0·70	0·23	0·50	0·50	0·33	0·50	Nil	0·65	0·67	0·50	0·60	0·50	1·00	0·30
February	0·05	0·70	0·20	0·50	0·66	0·90	0·40	0·32	0·80	0·50	0·40	0·95	0·65	1·20	0·60	0·70	0·99
March	0·40	0·70	0·91	0·55	1·72	0·18	1·40	1·03	1·70	1·46	0·95	2·54	0·47	0·15	0·70	1·00	2·26
April	2·10	0·65	3·22	2·52	1·46	2·14	Nil	1·94	1·82	1·91	2·12	0·88	2·22	1·45	3·35	2·25	1·99
May	0·21	1·00	0·53	0·24	0·83	0·29	0·65	0·38	0·87	0·20	0·48	0·53	0·31	1·20	0·70	0·20	0·43
June	2·68	4·29	2·33	2·18	2·08	2·78	2·84	1·78	3·53	3·33	2·67	2·95	1·81	2·34	2·57	2·55	3·40
July	2·52	1·86	1·42	0·65	0·97	0·40	1·80	2·68	0·43	0·52	0·41	1·60	4·10	1·02	1·45	2·92	0·82
August	1·33	0·95	0·92	2·58	2·14	1·96	1·59	0·48	2·50	1·81	1·51	2·71	0·05	0·52	1·53	0·42	1·85
September	2·60	5·36	1·71	2·40	3·83	3·00	4·86	2·42	5·25	4·20	3·94	6·22	2·76	1·13	3·33	1·16	4·86
October	0·54	1·60	0·39	0·38	1·95	0·39	1·05	1·35	1·48	1·40	0·72	2·23	0·31	0·70	0·80	0·48	1·08
November	0·20	0·60	0·20	Nil	0·33	Nil	Nil	0·18	0·20	.....	Nil	0·72	Nil	Nil	Nil	0·25	0·16
December	0·40	0·50	0·20	0·50	0·10	0·70	0·40	0·60	0·40	.....	0·60	0·15	0·70	0·50	0·40	0·65	0·62
Totals	13·18	19·11	12·43	13·20	16·50	13·24	15·49	13·49	19·48	incomplete	14·45	22·15	13·88	10·81	15·93	13·58	18·76

During the year 1925 sixteen Illustration Stations were operated in the province of Alberta and one near the border in Saskatchewan was included in the Alberta territory, making seventeen Stations in all that were supervised from the Experimental Farm at Lethbridge. Fourteen of these stations are located within the dry farming areas and the other three are irrigated stations.

SPECIAL FEATURES

Pleasing progress was made in poultry improvement work. This is especially noticeable where Barred Plymouth Rock fowl was the breed the operator was keeping. In such cases their stock has all been from the high producing strain of Barred Rock poultry built up upon the Experimental Station, Lethbridge. Now, in several localities the fine flock of the operator and the improving flocks of his neighbours stand out as testimony to the wide spread and speedy results obtained by this policy.

So favourably has this class of bird become known that one operator, Mr. Wagar, of Orion, last spring sold sixty-seven settings of eggs. Farmers coming as far as ten miles in their quest for this line of winter egg laying fowl.

Upon the irrigation Stations where water was first supplied from the projects in 1924, our work in establishing alfalfa fields is outstanding. Upon each of these stations two cuttings of alfalfa were taken this season from fields that were in the rough on the first of May, 1924. This pioneer work in establishing satisfactory fields of alfalfa so quickly has been encouraging and should prove to be of value to irrigation farmers who will have to grow this crop so extensively in the future.

CROP SEASON 1925

In compiling this report the cost of production and profit or loss are based on the rates that are given below.

Cost Values

Rent Dry Land Stations	8% of land value.
Rent Irrigated Stations	$8.00 per acre.
Use of machinery	1.00 per acre.
Horse labour	0.10 per hour.
Manual labour per hour	Rates prevailing in the district.
Threshing per bushel	
Binder twine per pound	

Cost of Seed

Wheat per bushel	$1 80
Oats per bushel	0 68
Barley per bushel	1 20
Corn per pound	0 08
Sunflowers per pound	0 09
Potatoes per ton	45 00
Millet per cwt	6 50
Sweet clover common per pound	0 10
Sweet clover Arctic per pound	0 17
Western rye grass	The price paid the season the field was seeded; divided equally over years the meadow will remain down.
Alfalfa	

Return Values

Alfalfa hay per ton	$10 00
Western rye grass hay per ton	10 00
Oat sheaf hay per ton	10 00
Sweet clover hay per ton	10 00
Corn fodder green per ton	3 50
Potatoes per ton	25 00
Wheat per bushel	1 20
Oats per bushel	0 40
Barley per bushel	0 55
Arctic sweet clover seed per lb	0 10

Allocation Cost of Summer-Fallowing

Two-thirds charged to the first crop and one-third charged to the second crop.
The yields given for hay and fodder crops are estimated weights.

Dry Land Stations

BINDLOSS, ALBERTA

Operator, JOHN BARNES

In 1925 work on the land commenced at this Station, April 21. The month of May was very dry and by the middle of June wire worms had thinned the wheat stand considerably. The dry summer was very hard on fodder crops and so checked the growth of wheat that it necessitated harvesting with the header.

Wheat was sown at the rate of one and one-quarter bushels on fallow land and one bushel per acre on second crop land. Rainfall for the five months, April to August, totalled 8.84 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT BINDLOSS

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or loss (−) per acre
				$ cts.	$ cts.
Three Year Rotation—					
Summer-fallow	.....	.....	.....	5 26 per acre	
Wheat, Marquis after fallow	May 5	Sept. 9	13 bush.	0 84 per bush.	4 68
Wheat, Marquis after wheat	May 4	Sept. 9	12 bush.	0 57 per bush.	7 56
Three Year Rotation—					
Summer-fallow	.....	.....	.....	5 27 per acre.	
Wheat, Marquis after fallow	May 4	Sept. 9	16 bush.24 lb	0 67 per bush.	8 69
Arctic sweet clover hay	.....	June 25	769 lb.	16 78 per ton.	−2 61
Two Year Rotation—					
Wheat after corn and sunflowers	May 4	Sept. 9	5bush.54lb	1 41 per bush.	−1 24
Corn and sunflowers	May 14	Pastured off.	4 tons.	2 93 per ton.	2 28
Demonstration Test Fields—					
Arctic sweet clover seed	.....	Aug. 15	65 lb.	0 12 per lb.	−1 30
Western rye grass and oat hay	.....	July 13	1,167 lb.	8 68 per ton.	0 60

The heading and threshing plan adopted in this community cut the cost of the operations in two and also avoided the losses which attend stacking and re-lifting of headed grain. The plan followed was to carry two headers and a threshing outfit on the same job, thus effecting the work of a combine by use of the all available machinery.

At a winter Short Course for Farmers held in the town of Bindloss, the operator, Mr. Barnes, occupied a period very acceptably with an outline of and the purpose underlying the illustration work as conducted upon his farm.

DELACOUR

Operator, A. H. FENNESSEY

In 1925 work on the land commenced at this Station April 13. Conditions throughout the growing season were favourable and a good crop was harvested.

Wheat was sown at the rate of one and a quarter bushels per acre. Rainfall for the five months April to August inclusive totalled 8.75 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT DELACOUR

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or loss (—) per acre
				$ cts.	$ cts.
Three Year Rotation—					
Summer-fallow				9 16 per acre.	
Wheat, Marquis after fallow	April 17	Aug. 19	35 bush. 30 lb.	0 54 per bush.	23 43
Wheat, Marquis after wheat	April 29	Aug. 17	27 bush.	0 71 per bush.	13 23
Four-Year Rotation—					
Summer-fallow				9 55 per acre.	
Wheat, Marquis after fallow	April 17	Aug. 17	33 bush.	0 56 per bush.	21 12
Western rye grass (1st year)		July 18	2 tons 500 lb.	5 71 per ton.	9 65
Western rye grass (2nd year)		July 18	1 ton.	6 79 per ton.	3 21
Three Year Rotation—					
Summer-fallow				9 16 per acre.	
Wheat, Marquis after fallow	April 17	Aug. 18	37 bush.	0 52 per bush.	25 16
Arctic sweet clover and oat hay		Sept. 1	1,000 lb.	21 71 per ton.	—5 85
Demonstration Test Field—					
Alfalfa		July 6	1 ton 1,000 lb.		
		Sept. 14	1,000 lb.	4 78 per ton.	10 44

Average Yield of Six Years 1920 to 1925

Wheat on fallow	28 bush. per acre.
Wheat second crop	18 bush. per acre.
Western rye grass hay	1 ton 208 lb. per acre.

EMPRESS, SASKATCHEWAN

Operator, WILLIAM ROWLES

Spring opened about the usual time and the first grain was sown on the illustration fields April 14. The season was droughty though not so dry as the previous year when 5.39 inches was the amount of precipitation recorded for the five months, April to August.

Harvesting was started August 8, eleven days earlier than in 1924. Rainfall for the five months period April to August inclusive totalled 8.42 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT EMPRESS

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or loss (—) per acre
				$ cts.	$ cts.
Four-Year Rotation—					
Summer-fallow				4 56 per acre.	
Wheat, Marquis on fallow	April 14	Aug. 8	22 bush.	0 51 per bush.	15 18
Corn for ensilage	May 25	Sept. 15	9 tons.	1 49 per ton.	18 09
Wheat, Marquis after corn	April 15	Aug. 8	11 bush. 30 lb.	0 92 per bush.	3 22
Five-Year Rotation—					
Summer-fallow				4 36 per acre.	
Wheat, Marquis on fallow	April 14	Aug. 8	16 bush. 30 lb.	0 54 per bush.	10 89
Corn for ensilage	May 25	Sept. 12	9 tons.	1 35 per ton.	19 35
Millet where rye grass failed	May 27	July 16	1 ton.	6 85 per ton.	3 15
Hay, Brome grass and sweet clover	A failure.				

Sweet clover and brome grass seedings of 1924 failed to give a hay return in 1925. Doubtless the season of 1924 was too dry for these small seeds to establish themselves.

The operator, Mr. Rowles, took into the winter a good quantity of corn ensilage made in the trench silo that had been taken out the summer of 1924. This succulent feed will be used in a most acceptable way in the feeding of milch cows that are carried on the farm.

Going back to the 1924 results for comparison the past year is seen to be much more profitable. In 1924 report out of six crops returns four show a loss in the balance column, while in 1925 the seven crops carried out all show a profit. Two inches of rain more in the growing months of 1925 above 1924 exerted a deciding influence on crop returns.

FOREMOST, ALBERTA

Operator, T. H. Frankish

In 1925 work on the land commenced at this Station April 15. This district though dry in 1924 was dryer in 1925. May and July were the months that were very short of moisture the past season. Rainfall for May was .24 and for July .65 inches. Wheat was sown on fallow at the rate of one and a quarter bushels per acre and on second crop land at one bushel per acre. Rainfall for the five-month period April to August totalled 8.17 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT FOREMOST

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow				4 91 per acre	
Wheat, Marquis, after fallow	May 2	Aug. 3	8 bush.	1 29 per bush.	−0 72
Wheat Marquis after wheat	May 4	Aug. 3	8 bush., 48 lbs.	1 20 per bush.	Balanced
Three-year Rotation—					
Summer-fallow				4 91 per acre	
Wheat, Marquis after fallow	May 4	Aug. 3	9 bush., 48 lbs.	1 03 per bush.	1 67
Sweet clover and oat hay		Aug. 30	1,800 lbs.	10 38 per ton	−0 34
Two-year Rotation—					
Wheat after corn and sunflowers	May 2	Aug. 3	7 bush.	1 17 per bush.	0 2[illegible]
Corn and sunflowers	May 13		Failure	7 51 per acre	−7 51

In the failure of a sweet clover stand for hay the land was disced and sowed to oats for sheaf feed. This substitute crop gave a light yield of oat hay.

Average yield of wheat on fallow for nine years 1917 to 1925 is thirteen bushels per acre.

GRASSY LAKE

Operator, J. E. James

In 1925 work on the land commenced at this Station April 9. The fields here to some extent redeemed themselves from the 1924 total failure recorded. Rains were plentiful in April, light in May, fair in June and short for July. Wheat yields on the Station were high enough to give the operator a good supply of seed for recommencing his general farm cropping in 1926. The rate of seeding wheat was one bushel per acre. Rainfall for the five months April to August totalled 7.57 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT GRASSY LAKE

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow				6 43 per acre	
Wheat, Marquis after fallow	April 30	Aug. 4	26 bush.	0 56 per bush.	16 64
Wheat, Marquis after wheat	April 30	Aug. 3	16 bush., 12 lbs	0 76 per bush.	7 13
Three-year Rotation—					
Summer-fallow				6 90 per acre	
Wheat, Marquis after fallow	May 1	Aug. 3	12 bush.	0 98 per bush.	2 64
Sweet clover and oat hay		Aug. 4	1,600 lbs.	13 80 per ton	−3 04
Two-year Rotation—					
Wheat after corn and sunflowers	April 30	Aug. 3	17 bush. 24 lbs.	0 57 per bush.	10 96
Corn N.W. Dent	May 9	Sept. 23	1 ton, 1,000 lbs.	7 97 per ton	−6 70

This district was in the heart of the most severely stricken area by crop failure in 1924. Looking back over an average of nine years Grassy Lake should not class with the dryest parts of Alberta.

The average yield of wheat on fallow for nine years 1917 to 1925 is fifteen bushels per acre.

HIGH RIVER

Operator, B. F. Kiser

In 1925 work on the land commenced at this Station April 16. April and May were low in rainfall, only .65 inches being recorded for the two months. Later rains were equal to the production of a good crop as is borne out by the threshing returns. Wheat on fallow was sown at the rate of one and one-half bushels per acre, and on second crop land at one and one-quarter bushels per acre. Rainfall for the five months April to August totalled 6.88 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT HIGH RIVER

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow				8 24 per acre	
Wheat, Marquis after fallow	April 17	Aug. 25	40 bush.	0 53 per bush.	26 80
Wheat, Marquis after wheat	April 17	Aug. 20	32 bush.	0 54 per bush.	21 12
Three-year Rotation—					
Summer-fallow				8 24 per acre	
Wheat, Marquis after fallow	April 18	Aug. 21	25 bush.	0 76 per bush.	11 00
Arctic sweet clover hay		July 1	2 tons, 800 lbs.		
		Aug. 31	1,200 lbs.	3 58 per ton	19 26
Two-year Rotation—					
Wheat after corn and sunflowers	April 21	Aug. 22	20 bush.	0 61 per bush.	11 80
Corn after wheat	May 18	Sept. 1	1 ton, 1,000 lbs	6 33 per ton	−4 24
Sunflowers after wheat	May 18	Sept. 2	6 tons	1 58 per ton	11 52

Averaging the yields of corn for 1924 and 1925, it is found to be 1 ton 833 pounds per acre. Sunflowers in the same field for these years averaged 9 tons per acre. It is safe to say that sunflowers is the crop best suited to this district for silage purposes.

The trench silo taken out in 1924 was again filled with corn and sunflowers for winter feeding. Mr. Kiser in the winter of 1924-25 used his ensilage in

feeding, car lots of, beef cattle with profitable results. The sunflower crop over and above what the silo would hold was shocked in the field and this further supply of fodder was fed very acceptably in the sheaf to the young and dry stock during the winter.

On this farm the five acre field of sweet clover has given good yields and proved profitable from a feed standpoint. This year the hay is from the Arctic seed used in 1924 and Mr. Kiser observes that in leafiness and fine quality of hay this strain is superior to the common white blossom sweet clover.

The average yield of wheat on fallow for nine years 1917 to 1925 is twenty-four bushels per acre and of wheat second crop over the same period, fifteen bushels per acre.

High River was our highest wheat yielding station in 1925.

JENNER

Operator, Jerry Fisher

This Station is in an area that suffered from a crop failure as a result of drought.

Where grain was harvested the yield did not give a return equal to the cost of production. The field details are prepared and held as records, but no object would be served by including them in this report.

MILK RIVER

Operator, P. W. Stimson

In 1925 work on the land commenced at this Station, April 10. A fair supply of moisture was in the soil; on May 19th an auger test on fallow showed moist soil to a depth of four feet, and on second crop land the moisture was present to a depth of two and one-half feet. Rainfall for May and July months was very light which checked fodder crop tonnage and reduced grain yields below these received in 1924. The grain in the district was principally harvested with the header in 1925.

Wheat on fallow was sown at the rate of one and a quarter bushels per acre and on second crop land at one bushel per acre.

Rainfall for the five months, April to August, totalled 7.77 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT MILK RIVER

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow				5 68 per acre	
Wheat, Marquis after fallow	May 7	Aug. 6	13 bush., 48 lbs.	0 95 per bush.	3 45
Wheat, Marquis after wheat	May 7	Aug. 6	14 bush., 36 lbs.	0 81 per bush.	5 69
Three-year Rotation—					
Summer-fallow				5 54 per acre	
Wheat, Marquis after fallow	May 6	Aug. 6	17 bush., 36 lbs.	0 75 per bush.	7 92
Sweet clover and oat hay		Aug. 5	1,000 lbs.	15 15 per ton	−2 57
Two-year Rotation—					
Wheat after corn and sunflowers	May 7	Aug. 5	30 bush.	0 44 per bush.	22 80
Corn and sunflowers after wheat	May 13		Failure	5 54 per acre	−5 54
Demonstration Test Field—					
Alfalfa		July 1	1 ton, 1,600 lbs.	4 00 per ton	10 80

In the second three-year rotation, sweet clover is sown with the wheat on fallow. In this work a lighter seeding by one peck of wheat is made and the drill held a notch shallower than in the regular sowing of wheat. Seed of sweet clover is used at the rate of 10 pounds per acre and before seeding is treated with nitro culture for inoculation, then mixed with the wheat.

The average yield of wheat on fallow for nine years 1917 to 1925 is seventeen bushels and wheat second crop for the same period eleven bushels per acre.

ORION

Operator, George Wagar

Work on the land commenced at this Station April 21. On the 20th of May an auger test on fallow reached dry soil at eighteen inches. The same condition was present in spring ploughed land, indicating very small if any carry over of moisture by work of fallowing in 1924. The season throughout was very discouraging and another crop failure from a profit standpoint was the result. Wheat was sown at the rate of one bushel per acre. Rainfall for the five months April to August totalled 7.19 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT ORION

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (—) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow				5 62 per acre	
Wheat, Marquis after fallow	April 21	Aug. 14	7 bush.	1 42 per bush.	—1 54
Wheat, Marquis after wheat	May 1	Aug. 14	5 bush., 30 lbs.	1 81 per bush.	—3 35
Three-year Rotation—					
Summer-fallow				5 08 per acre	
Wheat, Marquis after fallow	April 22	Aug. 14	7 bush., 30 lbs.	1 37 per bush.	—1 27
Sweet clover and oat hay			Failure	10 37 per acre	—10 37
Two-year Rotation—					
Wheat after corn and sunflowers	April 22	Aug. 14	2 bush., 30 lbs.	2 22 per bush.	—2 55
Corn and sunflowers	May 15	Sept. 1	1 ton, 1,000 lbs.	6 26 per ton	—4 14
Demonstration Test Fields—					
Alfalfa, sown in rows	May 10	Failure		5 56 per acre	—5 56
Wheat seeded to rye grass	April 28	Aug. 14	4 bush.	2 12 per bush.	—3 68

The wheat crop was harvested with the header; where it was long enough to tie, the straw was so dry and britle that the packers of the binder threshed out the grain, hence wheat long or short in the straw was all harvested by the heading method.

The moisture content of soil in autumn of 1925 is greater than has been for some seasons past which will give a reasonable hope for a fair crop in 1926.

PINCHER CREEK

Operators, SANDGREN AND CARLSON

In 1925 work on the land commenced at this Station May 6. The months of April and May were low in precipitation and June followed with less than half of its 1924 amount of rainfall. These conditions cut the hay tonnage greatly and reduced the grain yields to little more than a half a crop. Working with the object of checking and controlling the weed menace (as started in 1924) was continued in 1925. Fall rye seedings failed to winter and these fields were cultivated and re-seeded to barley and sweet clover.

The treatment on crops grown on the station fields was as follows: One alfalfa, one western rye grass and one sweet clover hay, one field fallowed and five fields in barley seeded with sweet clover. The work was well looked after, hence the weed control idea is having a fair opportunity to make good.

Rainfall for the five months April to August totalled 8.67 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT PINCHER CREEK

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (—) loss per acre
				$ cts.	$ cts.
Summer-fallow—				9 44 per acre.	
Barley where fall rye failed	May 26	Sept. 15	22 bush.	0 72 per bush.	—3 74
Barley following barley	May 26	Sept. 15	30 bush.	0 66 per bush.	—3 30
Western rye grass hay	.....	July 8	1,000 lbs.	12 64 per ton	—1 32
Sweet clover hay	.....	July 8	1 ton, 800 lbs.	5 61 per ton	6 15
Alfalfa hay	.....	July 8	800 lbs.	1,230 per ton	—0 92

Beef and cream production enter into the activities of the Sandgren and Carlson ranch, Pincher Creek. Eighty-three head of winter fed Hereford steers were marketed in the spring of 1925. This bunch was a fine breedy lot of doers in the feeding field throughout the winter and weighed better than 1,400 pounds a piece when sold.

From the range cows a dozen animals have been selected for dairy use. The appearance and performance of these animals in milk production was somewhat of a surprise to our general estimate of the white faced breed.

The fattening ration used in the winter of 1924-1925 was of sweet clover, timothy and upland hay for roughage, with coarse grains and low grade wheat meal as concentrates.

The milking ration consisted of alfalfa and timothy hay with sunflower ensilage. Very little meal was fed to the milch cows in the winter of 1924-25.

A thrifty bunch of Hereford steers at Pincher Creek winter feed to a 1,400 pound average.

SUNNYBROOK

Operator, ROBERT MONTGOMERY

In 1925 work on the land commenced at this Station April 27. A fair fall of moisture for April was followed by a low rainfall in May, and for three days at the last of May a very drying wind blew, seriously affecting crop prospects.

When July 1st was reached a crop failure seemed almost inevitable, but this point (Sunnybrook) falls within the area which was so well served by a heavy rain on July 6th. This rain came steadily throughout the night totalling three and one-half inches.

Wheat was sown at the rate of one bushel per acre. Rainfall for the five months April to August totalled 8.49 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT SUNNYBROOK

Rotation and Crop	Date sown	Date cut	Yield per acre	Cost	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow	.....	.....	.....	5 50 per acre	
Wheat, Marquis after fallow	April 29	Aug. 24	12 bush.	0 80 per bush.	4 80
Wheat, Marquis after wheat	May 2	.....	Failure	5 80 per acre	−5 80
Three-year Rotation—					
Summer fallow	.....	.....	.....	5 50 per acre	
Wheat Marquis after fallow	April 27	Aug. 24	12 bush.	0 79 per bush.	4 92
Wheat as substitute hay crop	May 6	.....	Failure	5 80 per acre	−5 80
Two-year Rotation—					
Wheat after corn and sunflowers.	May 6	Aug. 27	15 bush.	0 61 per bush.	8 85
Corn after wheat	May 23	Aug. 28	2 tons	6 23 per ton	−5 46
Sunflowers after wheat	May 23	Aug. 28	1,500 lbs.	16 62 per acre	−9 84
Demonstration Test Field—					
Wheat seeded to western rye grass	May 6	Aug. 28	15 bush.	0 66 per bush.	8 10

WAINWRIGHT

Operator, G. C. BOYD

In 1925 work on the land commenced at this Station April 8. Precipitation for the winter, spring and summer was on the short side, with the result that by the middle of July all crops were suffering for want of moisture. Relief rains did not come later in the month and for this district a light crop was harvested. Wheat on fallow was sown at the rate of one and one-half bushels per acre. Rainfall for the five months April to August totalled 6.53 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT WAINWRIGHT

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or loss (−) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow	.....	.....	.....	6 31 per acre.	
Wheat, Marquis after fallow	April 17	Aug. 12	18 bush., 24 lbs.	0 86 per bush.	6 26
Wheat, Marquis after wheat	April 16	Aug. 10	17 bush.	0 86 per bush.	5 78
Four-year Rotation—					
Summer-Fallow	.....	.....	.....	6 21 per acre.	
Wheat, Marquis after fallow	April 17	Aug. 12	16 bush., 48 lbs.	0 86 per bush.	5 71
Western rye grass hay (1st year)	.....	July 28	2 tons, 600 lbs.	4 48 per ton.	12 70
Western rye grass hay (2nd year)	.....	July 27	1 ton, 1,000 lbs.	4 67 per ton.	7 99
Three-year Rotation—					
Summer-fallow	.....	.....	.....	6 79 per acre.	
Oats Banner after fallow	May 21	Aug. 25	53 bush., 14 lbs.	0 28 per bush.	6 41
Sweet clover hay	.....	July 7	1,600 lbs.	8 87 per ton.	0 90
Two-year Rotation—					
Wheat after corn and sunflowers.	April 16	Aug. 10	20 bush.	0 55 per bush.	13 00
Corn N.W. Dent after wheat	May 27	Sept. 1	2 tons, 500 lbs.	4 97 per ton.	−3 31
Sunflowers after wheat	May 27	Sept. 1	2 tons.	5 59 per ton.	−4 18
Demonstration Test Field—					
Alfalfa hay	.....	July 7	1,200 lbs.	11·37 per ton.	−0 82
Oats, Victory, second crop	May 21	Aug. 25	33 bush., 14 lbs.	0 41 per bush.	−0 33

Wheat on the differing soil treatments shows but little variation in the yield or cost of production. The wheat on rowed crop land leads both in yield and production cost. This field threshed out well for the straw it carried.

Western rye grass is the most profitable feed crop for the past season. The field of alfalfa was winter killed, corn and sunflowers suffered from drought and the depredations of rabbits, while sweet clover also suffered from low rainfall.

From the 1924 crop Mr. Boyd sold locally 610 bushels of wheat, 220 bushels of oats, and 75 bushels of barley, and in poultry for the year 1925 breeding season eight barred rock cockerels were distributed through sales.

The Wainwright Station is favourably place to be viewed by numbers of farmers who drive to town from the north. The fields are always neat and the work in up to the minute shape. Consequently Mr. Boyd is much sought out for information and discussion on many phases of method and practice in crop production.

WHITLA

Operator, R. H. Babe

In 1925 work on the land commenced at this Station April 9. From a dry 1924 and a light winter precipitation, conditions were not the most favourable in the spring of 1925 for a good crop year. Moisture for the five months April to August, totalled 9.60 inches exceeding that of the same period 1924 by 3.74 inches. This fair supply of summer moisture carried growth along to a ten to fourteen bushel harvest. Wheat was sown at the rate of one bushel per acre.

Table giving Results of the Season's Work at Whitla

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or loss (−) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer fallow				5 87 per acre.	
Wheat Marquis after fallow	May 1	Aug. 3	11bush., 36 lbs.	1 10 per bush.	1 16
Wheat Marquis after wheat	May 1	Aug. 3	12 bush.	1 14 per bush.	0 72
Three-year Rotation—					
Summer, fallow				6 49 per acre	
Wheat Marquis after fallow	May 1	Aug. 3	10 bush., 48 lbs.	1 15 per bush.	0 54
Sweet clover and oat hay		Aug. 12	1,600 lbs.	17 03 per ton.	−5 62
Two year Rotation—					
Wheat after corn and sunflowers.	May 1	Aug. 3	13 bush., 24 lbs.	0 65 per bush.	7 37
Corn N.W. Dent after wheat	May 18		2 tons	3 65 per ton.	−0 30

With the present day costs and a selling price on wheat of $1.20 a ten bushel per acre crop is apparently about the margin of profit or loss.

YOUNGSTOWN

Operator, G. S. Coad

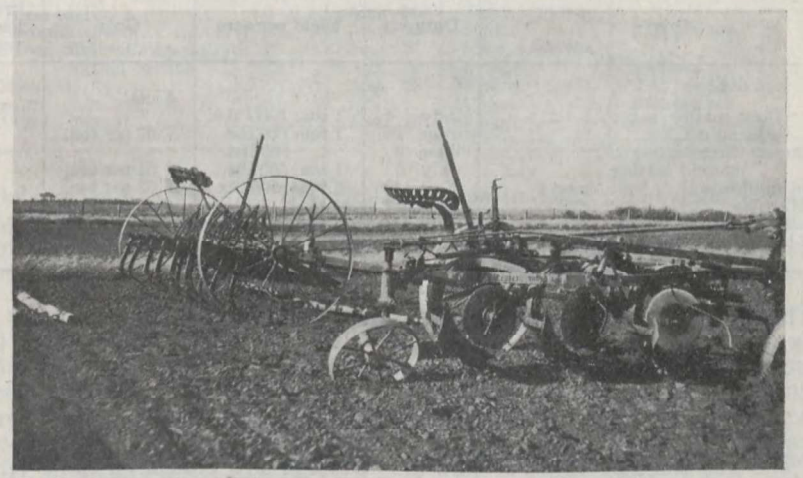
In 1925 work on the land commenced at this Station April 8. Youngstown falls within the area so favoured with a saving rain on July 6. This all night rain amounted to 2.54 inches. Had the soil come from 1924 with a good supply of moisture the summer rains for this locality would have been equal to production of a good crop of grain. Wheat was sown at the rate of one bushel per acre. Rainfall for the five months, April to August totalled 8.34 inches.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT YOUNGSTOWN

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost	Profit or Loss (—) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Summer-fallow	.....	.....	.....	6 50 per acre	
Wheat Marquis after fallow	April 11	Aug. 3	20 bush., 15 lbs.	0 60 per bush.	12 15
Wheat Marquis after wheat	April 29	Aug. 12	21 bush., 15 lbs.	0 66 per bush.	11 47
Four-year Rotation—					
Summer-fallow	.....	.....	.....	4 95 per acre.	
Wheat Marquis after fallow	April 16	Aug. 12	13 bush., 24 lbs.	0 87 per bush.	4 42
Western rye grass hay (1st year)	.....	July 15	1 ton, 500 lbs.	8 05 per ton	2 44
Western rye grass hay (2nd year)	.....	July 14	1 ton, 1,000 lbs.	3 86 per ton	9 21
Three-year Rotation—					
Summer-fallow	.....	.....	.....	6 55 per acre	
Wheat Marquis after fallow	April 20	Aug. 11	21 bush.	0 61 per bush.	12 39
Sweet clover and oat hay	.....	July 14	1 ton, 1,500 lbs.	6 78 per ton	5 63
Two-year Rotation—					
Wheat after corn and sunflowers	April 11	Aug. 3	20 bush.	0 48 per bush.	14 40
Corn N.W. Dent after wheat	May 13	Aug. 4	2 tons, 1,000 lbs	4 14 per ton	—1 60
Sunflowers after wheat	May 12	Aug. 5	5 tons	2 07 per ton	7 15
Demonstration Test Fields—					
Banner oats	May 8	Aug. 13	40 bush.	0 33 per bush.	2 80
Alfalfa	.....	July 30	1,500 lbs.	7 97 per ton	1 52

The operator, Mr. Coad, threshed and had his wheat (grading No. 1) on the market in August.

The influence of our Station and Operator is gaining ground in the neighbourhood and a more direct effort for the dissemination of our results and the display of our field work is in order.



Good implements to prepare summer-fallow. Combining wide machines lowers the cost.

IRRIGATED STATIONS

GLENWOODVILLE

Operator, GLEN WOOD

This Station was selected in the United Irrigation District in the spring of 1924. The same year the fields were laid off, crops seeded and water applied.

Ten fields of two acres each are put down to a rotation that for fourteen years has proved itself to be one of the most profitable under irrigation of those employed on the Dominion Experimental Farm, Lethbridge. This rotation consists of six fields in alfalfa, one field in wheat, one field in hoed crop, one field in oats and the tenth field in barley seeded back to alfalfa.

In addition to this rotation a permanent pasture of ten acres is put down with a border system of irrigation.

The Rotation	*Ten Years' Duration*
First year	Alfalfa.
Second year	Alfalfa.
Third year	Alfalfa
Fourth year	Alfalfa.
Fifth year	Alfalfa.
Sixth year	Alfalfa.
Seventh year	Wheat.
Eighth year	Hoed crop.
Ninth year	Oats.
Tenth year	Barley seeded down to Alfalfa.

Rates of Seeding	
Alfalfa	15 pounds per acre.
Wheat	1¾ bushels per acre.
Oats	2½ bushels per acre.
Barley	2 bushels per acre.

In the 1924 seeding, sweet clover was used instead of alfalfa on the first two fields that would plough out of sod. The reason for this is obvious; the price of sweet clover was 10 cents and of alfalfa 35 cents per pound.

In 1925 the alfalfa, hoed crop and wheat fields received two applications and the barley, oats and sweet clover fields one application of water.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT GLENWOODVILLE

Crop	Date cut	Yield per acre	Cost	Profit or loss (−) per acre
			$ cts.	$ cts.
Alfalfa first cutting	July 4	1 ton, 1,477 lbs.		
Alfalfa second cutting	Aug. 26	1 ton, 600 lbs.	7 07 per ton.	8 90
Sweet clover first cutting	June 2[illegible]	880 lbs.		
Sweet clover second cutting	July 2[illegible]	1 ton, 500 lbs.	7 51 per ton.	4 21
Corn and sunflowers	Sept. 17	8 tons, 500 lbs.	2 52 per ton,	8 08
Wheat Marquis	Sept. 7	34 bush., 30 lbs.	0 65 per bush.	18 97
Oats Banner	Aug. 31	34 bush.	0 52 per bush.	−4 08
Barley O.A.C. No. 21	Aug. 31	16 bush., 24 lbs.	1 05 per bush.	−8 25

The light yields in barley and oats are accounted for in part by the water having stood on a portion of these fields, due to a faulty waste water outlet, which resulted in drowning out to a certain extent.

PERMANENT PASTURE

A ten-acre area was levelled, bordered and seeded for pasture purposes. This work was done in 1924. The seed mixture used was made up as follows: English blue grass, 6 pounds; Kentucky blue grass, 6 pounds; Western rye Grass, 4 pounds; timothy, 2 pounds, and alfalfa, 4 pounds, making a rate of 22 pounds per acre.

The border system of irrigation is used in order to reduce to a minimum the cost of applying water.

The land occupied by the station has some difficult problems both in spreading water to all parts and in securing a get away for waste water. Coping with these difficulties gave an excellent opportunity for illustrating how the irrigation farmer can overcome such problems. These water difficulties, how-

ever, led to some necessary patching in 1925 on spots where stands of clover and grasses were light from the 1924 seeding. The pasture during the summer was also enclosed with a substantial woven wire stock fence. Work in these lines prevented the field from carrying stock early in the season. The growth of grasses and alfalfa was luxuriant, and two cuttings of hay were taken, the first, July 9th, yielding 1 ton 1,400 pounds, and the second August 27th, giving 1 ton 600 pounds per acre. Later in the autumn fifty ram lambs grazed this area for a considerable period.

Mr. Wood's fields of alfalfa and pasture grasses were viewed by farmers and others of the community. These inspections served admirably in bringing to favourable notice what has already been accomplished in the introduction of this work.

IRON SPRINGS

Operator, E. G. Gordon

The location at Iron Springs was selected in the spring of 1924. In that year the fields were laid off, crops seeded and water applied.

This district is one of the dry areas of Southern Alberta, and the bringing of water by the Lethbridge Northern Irrigation project means the reclaiming of it for agricultural production and settlement.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT IRON SPRINGS

Crop	Date cut	Yield per acre	Cost	Profit or loss (—) per acre
			$ cts.	$ cts.
Alfalfa first cutting	June 30	3 tons, 750 lbs.		
Alfalfa second cutting	Aug. 25	3 tons	3 55 per ton	41 12
Sweet clover first cutting	June 27	1 ton, 1,000 lbs.		
Sweet clover second cutting	Aug. 6	1 ton	8 04 per ton	4 90
Wheat Marquis	Aug. 29	32 bush.	0 65 per bush.	17 60
Potatoes	.....	11 tons	6 71 per ton	201 19
Barley O.A.C. No. 21	Aug. 18	45 bush.	0 51 per bush.	1 80

Oats did not appear on the rotation fields in 1925. The land that in the regular course should have grown oats was used for a corn and bean crop one acre of each. The corn gave two tons of cured fodder after 40 bushels of cobs had been picked. The beans owing to bad autumn weather were not harvested.

PERMANENT PASTURE

An eight-acre field was bordered and seeded for pasture purposes in 1924. The past season further work was done on the field in seeding and levelling, also the area was enclosed with a woven wire stock fence. On July 17 the hay was cut, yielding one and one-half tons per acre; later in the season this pasture was used for cattle grazing. The pasture is located next the building lay out; hence answers well for work with dairy cattle.

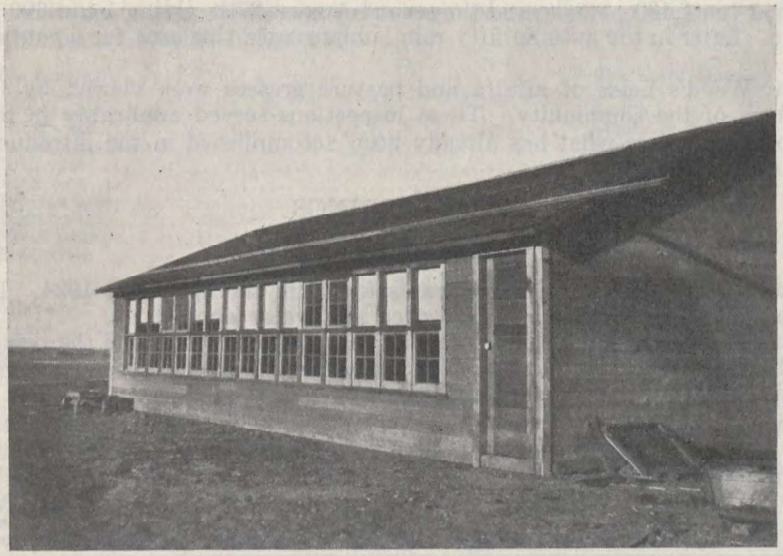
KIPP

Operator, C. M. Nicol

The location at Kipp was selected in the spring of 1924. In that year the fields were laid off crops seeded and water applied.

The operator, Mr. Nicol, for a number of years has been milking cows to supply a retail milk route built up by himself in the nearby mining town of Coal-

hurst. Previous to this year the feed for the cows kept had been a difficult and an expensive problem to solve. The real solution came in the 1925 alfalfa hay crop made possible by the ditch water from the Lethbridge Northern Irrigation project.



Poultry house under construction at Kipp.

TABLE GIVING RESULTS OF THE SEASON'S WORK AT KIPP

Crop	Date cut	Yield per acre	Cost	Profit or loss (—) per acre
			$ cts.	$ cts.
Alfalfa first cutting	June 30	1 ton, 1,400 lbs.		
Alfalfa second cutting	Aug. 24	1 ton, 500 lbs.	5 94 per ton	11 98
Sweet clover first cutting	July 1	1 ton		
Sweet clover second cutting	Aug. 22	1 ton	7 74 per ton	4 52
Wheat and sweet clover hay	June 30	1 ton, 1,000 lbs.		
Wheat and sweet clover hay	Aug. 13	2 tons, 1,000 lbs.	6 08 per ton	15 68
Oats Banner	Aug. 19	57 bush.	0 38 per bush.	1 14
Barley O.A.C. No. 21	Aug. 19	17 bush., 24 lbs.	1 64 per bush.	—19 07

PERMANENT PASTURE

Ten acres were laid off levelled, bordered and seeded in 1924 for pasture purposes. In 1925 further work was necessary in patching small areas that had not been reached with water the season of seeding. Work this year corrected these defects and a good stand of grasses and alfalfa throughout the field was obtained by autumn. During the summer the pasture was enclosed by a woven wire stock fence.

A coulee runway with a dam across for stock watering will connect the pasture to the farm building site. This arrangement will make a convenient pasture of this field for the milch cows.

The Illustration Station at Kipp fronts on the Blue and Black trail.

MEETINGS AND EXHIBITIONS

During the winter of 1925 two silo meetings were held, one at High River, February 27, and the second at Pincher Creek the afternoon of March 4.

A summer field meeting was held at Wainwright on the afternoon of July 18. Assistance was given with the Dominion Experimental Farms Exhibit on four days at Calgary Fair, and on three days at Edmonton Fair. Both of these exhibitions were held in the month of July.

Throughout the 1925 season the interest and work of the Illustration Station operators registers a decided advance over that of recent past years, and thus marks improvement in the service the Stations are rendering to the localities in which they are placed.

REPORT OF THE ILLUSTRATION STATIONS IN SASKATCHEWAN

E. C. Sackville, B.S.A., Supervisor

During the year 1925 twenty-three Illustration Stations were in operation in the province of Saskatchewan. With the exception of four of these Stations, the work is under the supervision of the Experimental Station at Swift Current. Three in the east part of the province are supervised by the Brandon Experimental Farm, and one in the Empress district, which is quite convenient to some of the Alberta Stations, was placed under the supervision of the Lethbridge Farm this year.

The season of 1925 on the whole was favourable for crop production in most of the districts where Illustration work was carried on. A heavy fall of snow in the previous winter and a good supply of moisture with favourable weather during the greater part of the growing season contributed to make a strong growth of all crops. One adverse factor which affected most districts was a prolonged hot, dry period during July. However, most crops came through this well, particularly the wheat. Oats suffered more and yields were not so good. Hay crops made most of their growth before the dry period set in and yields in most cases were satisfactory.

The early snowfall and wintry weather which came on September 26 caught a few of the operators with some oats still in the stook. These were threshed later and still gave a good quality of grain.

The record of the rainfall at each Station for the season is given in the table below.

RAINFALL, APRIL–NOVEMBER, FOR 1925, IN INCHES—SASKATCHEWAN

Station	April	May	June	July	Aug.	Sept.	Oct.	Total
Shaunavon	.....	0·74	1·48	1·17	1·66	1·92	0·20	7·17
Pambrum	.....	0·64	1·02	1·30	0·45	1·03	0·03	4·47
Ogema	.....	0·87	2·27	1·35	0·10	3·34	0·72	8·65
Radville	.....	0·21	4·21	2·30	0·25	2·40	0·25	9·62
Trossachs	.....	0·33	4·30	1·85	0·47	2·86	.....	9·81
Weyburn	0·45	0·58	4·15	2·35	.....	2·60	.....	10·13
Avonlea	.....	0·40	3·22	1·30	0·25	2·95	.....	8·12
Parkbeg	.....	1·10	5·48	1·49	0·13	2·52	0·57	11·29
Tugaske	.....	0·61	5·55	0·91	0·69	0·97	0·87	9·60
Riverhurst	1·77	0·66	5·35	2·26	0·86	1·24	0·89	13·03
Demaine	2·01	1·02	1·85	1·09	1·65	0·63	.....	8·25
Herbert	.....	0·89	1·40	0·92	1·09	1·92	.....	6·22
Davidson	1·25	0·65	5·26	1·20	1·00	0·71	0·45	10·52
Guernsey	.....	0·89	3·65	1·97	1·27	1·08	0·83	9·69
Marcelin	.....	0·94	3·71	1·61	2·10	2·15	.....	10·51
Meota	.....	1·04	2·92	0·89	2·50	1·43	0·38	9·16
Spruce Lake	.....	1·95	3·24	1·03	1·09	0·55	0·32	8·18
Lloydminster	.....	0·75	2·18	0·33	2·33	0·89	0·20	6·68
Kindersley	.....	0·54	2·35	1·42	1·35	1·25	.....	6·91

In order to arrive at the cost of producing crops, the following charges are used:—

Rent of land, per acre	8 per cent interest on land value.
Use of machinery per acre	$1.50
Manual labour	Rates prevailing in the district.
Horse labour	
Threshing	
Binder twine	

The Cost of Seed—

Wheat, per bushel	$ 1 70
Oats, per bushel	0 60
Barley, per bushel	0 75
Corn, per bushel	4 62
Sunflowers, per pound	0 11
Sweet clover, per pound	0 10
Western rye grass, per pound	0 10
Brome grass, per pound	0 11
Alfalfa, per pound	0 40

In calculating the profit from each crop, the following values have been allotted:—

Wheat, per bushel	$ 1 35
Oats, per bushel	0 40
Barley, per bushel	0 55
Hay, per ton	10 00
Corn (silage) per ton	3 50
Corn (fodder) per ton	7 00

AVONLEA

Operator, J. W. MILLER

Work on the land was started about the middle of April and the first seeding of wheat on the 28th. The rainfall from the opening of spring to the end of July was 4.92 inches, and during June, 3.22 inches fell, and two of these rains were heavy enough to soak the ground. All crops made good progress until about the middle of July, when a prolonged period of hot, dry weather set in. This caught the grain at the critical stage of filling, so in most cases only two kernels of wheat developed in each spikelet, and yields were below the average. Oats suffered from the drouth more than wheat.

Harvest was started August 5.

The following table gives the results of the season's work:—

OPERATIONS AT AVONLEA

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Six-Year Rotation—					
Fallow				7 27 per acre	
Wheat, Marquis, after fallow	April 28	Aug. 12	12 bush.	1 22 per bush.	1 56
Oats, Banner, after wheat	May 12	Aug. 18	15 bush.	0 89 per bush.	−6 90
Corn, N.W. Dent, after oats	May 12	Sept. 4	5 tons	2 90 per ton	3 00
Wheat, after corn, seeded half to sweet clover, half to Western rye grass	April 29	Aug. 12	8 bush.	1 21 per bush.	1 12
Hay—					
Sweet clover	April 23	June 27 (1st cut)	2 tons	3 66 per ton	15 85
	24 (with wheat)	Aug. 28 (2nd cut)	½ ton		
Western rye grass		July 6	1 ton	7 24 per ton	2 76
Three-year Rotation—					
Fallow				7 35 per acre	
(Wheat fallow substituted this year)				7 65 per acre	
Wheat, Marquis, second crop	April 28	Aug. 5	13 bush.	1 19 per bush.	2 08
Demonstration Test Fields—					
Wheat, seeded with sweet clover, 8 lbs., Brome, 8 lbs.	April 28	Aug. 5	18 bush.	0 86 per bush.	8 82

The field of wheat after fallow in the six-year rotation had been two years in hay previous to the fallow when this rotation was started. This may account for the low yield as compared with the wheat after ordinary fallow.

Corn gave a fairly good yield in spite of the dry, hot weather, and the crop was cured in the silo.

Sweet clover gave the heaviest yield of the hay crops. It made most of its growth before the dry period set in.

DAVIDSON

Operator, Reuben Lloyd

Seeding was delayed later than usual this year, as there was considerable moisture, both rain and snow in April. Wheat was sown on the Station on the 18th of May. The moisture supply throughout the growing season was above the average. 8.36 inches of rain fell, and 5.26 inches of this in the month of June. Wheat made the most favourable growth of all crops. Oats suffered to some extent from the hot weather during July. The total rainfall for the season was 10.52 inches. Harvest was fairly late, the first wheat being cut September 2.

The following table gives the results of the season's work:—

Operations at Davidson

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Six year Rotation—					
Fallow	.....	.....	.....	6 25 per acre	
Wheat, Marquis (oats substituted this year)	May 21	Sept. 2	33⅜ bush.	0 27 per bush.	4 37
Oats, Banner (registered)	May 21	Sept. 2	37 bush.	0 24 per bush.	5 92
Corn	Badly damaged by cutworms—field fallowed.				
Wheat, seeded with sweer clover and Brome	May 18	Sept. 2	31 bush.	0 52 per bush.	25 73
Hay—half sweet clover, half W. rye grass	Crop light—ploughed in and field fallowed.				
Three-year Rotation—					
Fallow	.....	.....	.....	3 13 per acre	
Wheat, Marquis, after fallow	May 18	Sept. 3	28⅜ bush.	0 56 per bush.	22 43
Wheat, second crop	Field in fallow this year.			6 25 per acre	
Demonstration Test Field—					
Alfalfa (Grimm)	This field reseeded this year.				

Wheat, second crop after a fallow in which Sweet clover was ploughed under, yielded 22⅛ bushels per acre. This crop was the cleanest on the Station.

The field of alfalfa which was seeded down in 1921 practically all winter killed and failed to make a stand this spring. Another field was seeded with a nurse crop of wheat and the catch looks promising. The average yield of the alfalfa hay for two years was 1⅜ tons per acre.

There will be considerable pure Marquis seed wheat for sale this year by the operator of this Station.

A flock of Barred Rock poultry has been developed by Mr. Lloyd from a few sittings of hatching eggs procured two years ago from one of the Experimental Farms. A considerable number of settings of eggs, and besides thirty cockerels for breeding purposes, have been sold to people in the district.

DEMAINE

Operator, W. J. SWAN

Spring opened in good time and the first field of wheat was sown on the Illustration fields April 21. There was a good supply of moisture early in the spring and sufficient during the growing season to promote a good growth of all crops. However, the extreme heat of July reduced the prospective heavy yield of grain crops to about an average production. Cutworms did considerable damage to the corn crop. Cutting of wheat was started August 10.

The following table gives the results of the season's work:—

OPERATIONS AT DEMAINE

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Demonstration Test Fields—					
Wheat, Marquis, after fallow....	April 22	Aug. 10	18¾ bush.	0 78 per bush.	10 68
Oats, Banner, after wheat.....	May 22	Aug. 22	38¼ bush.	0 37 per bush.	1 14
Corn, after oats.....	May 27	Aug. 22	1¾ tons	7 12 per ton	−0 20
Wheat, registered Marquis, after fallow.....	April 21	Aug. 8	24½ bush.	0 43 per bush.	22 54
Sweet clover and Brome grass hay.....	1924	July 13	2½ tons	2 80 per ton	18 00
Western rye grass and alfalfa hay	1924	July 13	1½ tons	4 88 per ton	7 68

A beginning was made in growing registered seed at this Station this year. A four-acre field was seeded with second-generation Marquis and this will be multiplied on a larger field next year. Some pure seed of both wheat and oats will be available this year for anyone in the district who wishes to get a start with pure seed.

GUERNSEY

Operator, C. H. SNIDER

Spring was later than usual in this district and the first seeding of wheat was done May 5. There was a fair carryover of moisture from the previous fall, and during the growing season 6½ inches of rain fell. This was favourable for the production of a crop above the average. However, a spell of drought in July was an unfavourable factor and then later when rains came rust developed and reached the black spore stage, which further reduced both yield and quality of grain. The highest yield of wheat was 16 bushels on fallow. Oats were not damaged by rust and gave a good yield. Harvest was late, the first cutting being done August 28. Total rainfall for the season was 9.69 inches.

The following table gives the results of the season's work:—

OPERATIONS AT GUERNSEY

Rotations and Crops	Date sown	Date cut	Yield per acte	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Four-year Rotation—					
Fallow	.....	.....	.....	6 05 per acre	
Wheat, Marquis, after fallow	May 5	Aug. 31	16 bush.	0 95 per bush.	6 40
Oats, seeded with Western rye grass, Brome and sweet clover	May 12	Sept. 1	50 bush.	0 27 per bush.	6 50
Hay mixture	May 15-24	July 24	1½ tons	4 22 per ton	8 67
Three-year Rotation—					
Fallow (corn substituted)	May 24	Sept. 8	2 tons	4 60 per ton	−2 20
Oats, Banner, seeded with sweet clover	May 12	Sept. 1	50 bush.	0 27 per bush.	6 50
Hay, sweet clover (catch thin, oats reseeded)	June 13	Sept. 8	2¼ tons	5 54 per ton	10 03
Demonstration Test Fields—					
Wheat, after corn, seeded with alfalfa	May 12	Aug. 28	15 bush.	0 63 per bush.	10 80
Wheat, after wheat—					
Half Marquis	May 6	Sept. 1	10 bush.	0 72 per bush.	6 30
Half Red Fife	.....	.....	6½ bush.	1 08 per bush.	1 75
Western rye grass	1923	July 24	1¼ tons	3 59 per ton	11 22

Registered wheat was grown on this Station this year and inspected by the Dominion Seed Branch inspector. The aim is to grow as good seed as possible for distribution in the district. Last year one field was ploughed twice to see whether more sow thistles could be killed in this way. The results did not show any advantage from this extra work. The experiment is being continued for another year.

The sweet clover sown last year failed to make a stand this spring and was reseeded with a nurse crop of oats. A thick stand of sweet clover is a good crop to smother out sow thistles. As this crop is cut early for hay, then later a second time, any thistles present will be destroyed, before reaching maturity.

Western rye grass gave a good yield of hay, but does not form a close enough sod to effectually choke out strong growing weeds.

The corn crop was thinned out considerably by the cutworms, but made good growth where it was a stand. A trench silo was put down this summer by the operator, and the corn was made into ensilage. This silo is 40 feet long, 12 feet wide, and seven to eight feet deep. It is located along the end of the cow barn and connected with the entrance to the feed alley by a small shed.

Some green oats were used to supplement the corn and complete the filling of the silo. A good bank of feed was thus put away for the winter. When the corn crop is kept free of weeds by thorough cultivation and hoeing in the row if necessary it is a good crop to control weeds.

A field of Grimm alfalfa was seeded this year, 10 pounds to the acre, with a nurse crop of wheat after corn, and a successful catch was obtained.

One acre of peas (Chancellor) was grown this year and gave good results.

HERBERT

Operator, M. HOLMES

Spring was later than usual in this district and seeding of wheat on the Station was started May 4. The rainfall during the growing season was only 3¼ inches, but it was very effective as most of it came in the month of June and first week in July, the important growing period for grain crops. In addition

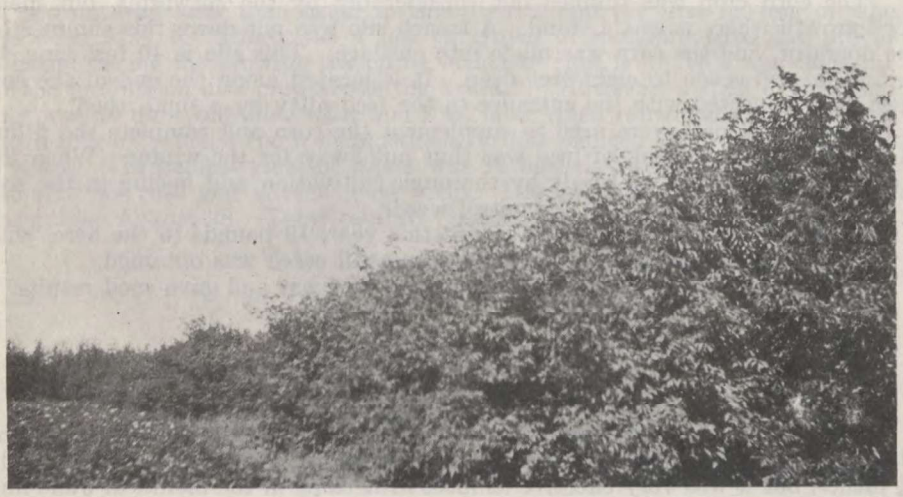
to this low rainfall, hot, dry weather prevailed most of the month of July. Even with these unfavourable conditions, crops came through much better than expected and very fair yields were obtained. Harvesting began on August 4, when wheat after corn was cut.

The following table gives the results of the season's work:—

OPERATIONS AT HERBERT

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (—) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow	.....	.....	.....	8 69 per acre.	
Wheat, Marquis, after fallow	May 4	Aug. 10	19½ bush.	0 89 per bush.	8 83
Wheat, Marquis, second crop	May 4	Aug. 10	10⅝ bush.	1 27 per bush.	0 83
Six-year Rotation—					
Fallow	.....	.....	.....	8 87 per acre	
Wheat, Marquis, after fallow	May 4	Aug. 10	22⅝ bush.	0 79 per bush.	12 54
Oats, Banner (fallow this year)	.....	.....	.....	9 04 per acre	
Corn, N.W. Dent	May 19	Sept. 4	1 ton	12 05 per ton	—5 05
Wheat, seeded half to sweet clover, half to western rye grass	May 5	Aug. 11	17½ bush.	0 59 per bush.	13 30
Hay—					
Sweet clover	(May 10-24	June 25	1⅓ tons	5 86 per ton	4 97
Western rye grass	with wheat)	Aug. 6	320 lbs. seed	0 03 per lb.	22 97
Two-year Rotation—					
Fallow	.....	.....	.....	8 69 per acre	
Wheat, half seeded to sweet clover	May 5	Aug. 12	24⅛ bush.	0 73 per bush.	15 37
Demonstration Test Fields—					
Alfalfa (Grimm) 30-in. rows	1920	June 25 1st cut Aug. 3 2nd cut	1 3/10 tons	6 45 per ton	4 62

Sweet clover gave a fair yield of hay in a dry season. Western rye grass was saved for seed. After threshing, the hay is about equal to straw for feed. Brome grass (after threshing) usually makes better feed than Western rye grass.



Windbreak at Herbert. Trees planted six years ago, since the establishment of the Illustration Station.

Alfalfa in 30-inch rows gave the best yield of the hay crops and also the best quality. This field has now been producing for four years (1922-1925) and the average yield of hay for that time has been one ton 1,400 pounds per acre.

The operator of this Station sells a considerable quantity of seed wheat every year to people in the district. The seed for the grain now grown on the Illustration Station came from the Experimental Farm at Swift Current.

The average yield of wheat at this Station on fallow for the past nine years (1917-25 inclusive) is 18 bushels per acre, and wheat after wheat for eight years (1918-25) 10½ bushels.

The average yield of Western rye grass hay for six years is one ton 400 pounds per acre.

Average yield of sweet clover hay for four years is one ton 1,725 pounds.

KINDERSLEY

Operator, ROBERT SIMPSON

Spring opened here in good time and the first seeding of wheat on the Station was done April 20. There was plenty of moisture at the time of seeding and all crops made a good start. During the four months, April 1 to August 1, the rainfall was 4½ inches. Though this was light, over half of it (2.35 inches) fell during June, at the time the need was greatest, particularly for grain crops. Growth was favourable until the second week in July, when a hot, dry spell set in for over two weeks. This checked the filling process to some extent and reduced the yield accordingly. However, all crops came through well and gave a good average yield. Harvesting of grain was started August 4. Hay was cut July 13.

Rates of seeding on this Station are 1¼ bushels for wheat and 2 bushels for oats, per acre. Western rye grass, Brome and sweet clover 12—14 pounds per acre. Alfalfa, 10 pounds; corn, 20 pounds; sown with a grain drill in rows 3½ feet apart.

The following table gives the results of the season's work:—

OPERATIONS AT KINDERSLEY

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Six-year Rotation—					
Fallow	.....	.....	.....	7 48 per acre	
Wheat Marquis, after fallow	April 20	Aug. 10	25 bush.	0 67 per bush.	17 00
Oats, Banner	May 16	Aug. 22	40 bush.	0 32 per bush.	3 29
Corn, N.W. Dent and N. Dak. White Flint	May 21	Aug. 31	750 lbs.	22 29 per ton	−5 73
Wheat, after corn, seeded half to sweet clover, half to rye grass	May 1	Aug. 4	22⅜ bush.	0 50 per bush.	19 33
Hay—					
Sweet clover	April, 1924 (nurse crop, wheat)	July 13	1st cut 2½ tons		
		Aug. 31	2nd cut 1,500 lbs.	2 47 per ton	24 46
Western rye grass	April, 1924	July 13	2½ tons	3 55 per ton	16 13
Three-year Rotation—					
Fallow—					
Ploughed and surface worked	.....	.....	.....	8 03 per acre	
Surface worked only	.....	.....	.....	5 55 per acre	
Wheat, Marquis—					
After fallow ploughed and surface worked	April 29	Aug. 15	22½ bush.	0 73 per bush.	13 79
Surface worked only	April 29	Aug. 15	22 bush.	0 65 per bush.	15 40
Wheat, Marquis, 2nd Crop—					
Disced 2nd crop after ploughed fallow	May 6	Aug. 22	17⅓ bush.	0 74 per bush.	10 68
Disced 2nd crop after surface worked fallow	May 6	Aug. 22	11⅓ bush.	0 97 per bush.	4 37
Spring ploughed 2nd crop after ploughed fallow	May 6	Sept. 7	14½ bush.	0 94 per bush.	5 85
Demonstration Test Fields—					
Brome grass (hay)	May 19, 1923 (with nurse crop of oats)	July 3	1 ton	6 76 per ton	3 24
Alfalfa (Grimm) hay	May 19, 1923 (with nurse crop of oats)	July 3	1,700 lbs.	8 76 per ton	1 05

The operator of this Station sold 500 bushels of pure Marquis seed wheat from the 1924 crop to farmers in the district. In order to encourage the people to sow this class of seed, he sold it at pool price. There will be a considerable quantity of high-quality wheat for sale from this year's crop also. A beginning was made in growing registered seed this year, one field being sown with second-generation Marquis. Pure Banner oats are grown on this Station.

Interesting results were obtained from the cultural experiments in the two different methods of fallowing and also the three methods of preparing the land for the second crop of wheat. One field was fallowed by ploughing and surface cultivating after as found necessary. The other field was fallowed by surface working only, not ploughing at all. The yields for this year, which are given in the table, show that the crops from the two different treatments were, for all practical purposes, the same. A three-year rotation. 1st-year fallow, 2nd-year wheat, 3rd-year wheat (2nd crop) is used for this experiment. In preparing the stubble land for the 2nd crop of wheat the following treatments are tried:—

(1) Spring discing on the stubble field which was fallowed for the first crop by surface working only.

(2) Spring discing also on half the field which was fallowed for the first crop by ploughing and surface working after.

(3) Spring ploughing on the other half of the field mentioned in No. 2.

By referring to the table above, yields of wheat, second crop, it will be seen that treatment No. 1 (spring discing on stubble land which had not been ploughed when fallowed) caused the yield to fall down considerably lower than the other treatments. While the same preparation (discing) but on stubble land which had been ploughed when fallowed gave a yield six bushels per acre higher. Spring ploughing on one-half of the last-mentioned field gave 3¼ bushels per acre less than the discing. These results are only for one year, and the experiment is laid down so that it can be continued for a number of years in order to obtain more reliable information. However, the results so far seem to indicate that surface working of the land for one crop may be all right, but to continue this for the second crop may not give as good results.

Six varieties of wheat were tested out at this Station in rod rows, in co-operation with the Cereal Division of the Central Experimental Farm, Ottawa. The results of these tests will be given in the Annual Report of the Cereal Division.

Sweet clover and western rye grass sown last year on fallow with wheat for nurse crop both gave a heavy yield of good-quality hay this year. Sweet clover was cut a second time and in all gave a total yield of 3¼ tons per acre. Brome grass and alfalfa seeded two years ago gave lighter yields, but made choice hay.

A pure-bred flock of Barred Rock chickens has been built up by the operator from two settings of eggs procured in the spring of 1924. Twenty settings of hatching eggs and six cockerels were sold to people in the district this season.

A field meeting was held at this Station on August 5.

LLOYDMINSTER

Operator, Hugh Hill

The first seeding was done on this Station May 1, and the seed bed was moist and in good tilth at that time. During the growing season there was less than four inches of rain, which is below the average. However, 2.12 inches of this fell during the first week in June when most needed. After this there were only light rains until August, which was rather late, though it probably helped some of the grain in filling. Wheat and oats came through remarkably well, while forage crops also gave fair yields. Harvesting was started August 20.

The following tables gives the results of the season's work:—

OPERATIONS AT LLOYDMINSTER

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow	.....	.....	.....	8 80 per acre	
Oats, seeded with sweet clover	May 15	Aug. 23	52 bush.	0 24 per bush.	8 32
Sweet clover hay—clover killed, oats reseeded	May 28	Aug. 23	35 bush.	0 28 per bush.	4 20
Five-year Rotation—					
Fallow	.....	.....	.....	7 89 per acre	
Wheat, Marquis, after fallow	May 1	Aug. 22	26 bush.	0 50 per bush.	22 10
Oats, seeded with Western rye grass, 10 lbs., and alfalfa, 6 lbs	May 16	Aug. 20	26 bush.	0 38 per bush.	0 52
Hay, 1st year	May 10 24 (with oats)	July 20	1½ tons	5 62 per ton	5 26
Hay, 2nd year	1923	July 20	⅞ ton	7 33 per ton	2 40
Demonstration Test Fields—					
Corn (N.W. Dent)	May 30	Sept. 1	2½ tons	6 10 per ton	−6 50
Sunflowers (Giant Russian) (rows 30-in. apart)	May 30	Sept. 1	4 tons	3 15 per ton	1 40
Wheat, after corn and sunflowers	May 1	Aug. 22	27½ bush.	0 41 per bush.	25 85
Sunflowers in wide rows 6 feet apart	May 15	Sept. 1	7 tons	1 70 per ton	12 60
Peas (Chancellor)	May 2	.....	15 bush.	0 98 per bush.	30 30

The Marquis wheat and Banner oats grown on this Station are all from registered seed. Last year Mr. Hill sold considerable grain for seed purposes in the district. An acre of peas (Chancellor) were sown this year on spring-ploughed stubble land and gave a yield of 15 bushels of good quality.

Sweet clover seeded last year with a nurse crop of oats failed to make a stand this spring and the field had to be reseeded. It has been found more difficult to secure a catch of clover on this Station than western rye grass. However, when a stand is secured the yield is usually heavier. A mixture of western rye grass 10 pounds, alfalfa 6 pounds, has given very fair yields and makes a hay of excellent quality.

An experiment in growing sunflowers in rows (10 feet apart) was tried out this year. This crop was cultivated with the ordinary 4-horse cultivator and kept clean. It will be noted from the table above that a heavier yield was obtained from the wide rows than from a field sown the ordinary way.

At this Station the average yield of wheat on fallow for the five years (1921-25 inclusive) is 23 bushels per acre.

MARCELIN

Operator, J. B. Godbout

The first seeding on this Station was done May 6. The rainfall from the opening of spring until August 1 was 6·26 inches, which was sufficient to promote a strong growth of all crops. Harvesting was commenced August 26. The yield and quality of both grain and hay were excellent.

The following table gives the results of the season's work:—

OPERATIONS AT MARCELIN

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost pf production	Profit or (—) loss per acre
				$ cts.	$ cts.
Oats, Banner, seeded half with alfalfa, half with sweet clover	May 25	Aug. 28	100 bush.	0 19 per bush.	21 00
Oats, Banner, seeded with western rye grass, 7 lbs.; brome, 7 lbs.	May 25	Sept. 4	90 bush.	0 22 per bush.	16 00
Hay, sweet clover	May 23-24	July 15	1½ tons	7 74 per ton	2 82
Hay, western rye grass	May 22-24	July 16	2 tons	5 27 per ton	9 46
Corn, N.W. Dent	May 19	Sept. 4	10 tons	2 36 per ton	13 40
Sunflowers, Giant Russian	May 19	Sept. 7	12 tons	1 67 per ton	21 96
Marquis wheat, 2nd crop	May 6	Aug. 26	42 bush.	0 41 per bush.	39 48
Early Red Fife wheat, 2nd crop	May 5	Aug. 29	45 bush.	0 39 per bush.	43 20
Hay, western rye grass and sweet clover	May 13-24	July 20	4 tons	2 82 per ton	28 72

Two varieties of wheat—Marquis and Early Red Fife—were grown this year. These were sown on spring-ploughed stubble land where the same varieties had been on fallow the year previous. It will be noted from the table above that the Early Red Fife gave a slightly heavier yield than Marquis. There were traces of rust on both varieties, but more on the Fife; fortunately it was not far enough advanced to do any appreciable damage.

Six varieties of wheat, mostly the early sorts, including "Garnet," were sown in rod rows for a test this year. Cutworms destroyed some rows and did so much damage to others that no fair comparison could be made. This test will be continued next year.

The operator of this Station sold all the pure seed wheat he had to spare to eight of his neighbours last spring. There will be a considerable quantity, both of wheat and oats, available from this year's crop also.

The heaviest-yielding hay crop was obtained from a field of western rye grass and sweet clover mixture. Sweet clover alone on another field was a rather patchy catch, and the yield was not so heavy. Alfalfa was sown this year with a nurse crop of oats and a successful stand secured.

Corn gave a good yield. Sunflowers suffered the most from cutworms, yet gave a heavy yield where the stand was good. These crops were ensiled in the trench silo which was excavated last year. There are now quite a number of trench silos in this district, most of which were put down last year.

MEOTA

Operator, Walter Tait

Spring opened in good time in this district and wheat was sown on two of the Station fields on April 22. The rainfall for the whole season was not heavy, being 9·16 inches, but five inches fell during the growing period for grain crops and three inches of this in June, which was just the time the need was greatest. During the last three weeks of July the weather was hot and dry for the most part, which was not favourable for the best filling of the grain. However, on the whole, crops came through well. Wheat on the fallowed land gave a very good yield of high-quality grain. Harvest was started August 12.

The following table gives the results of the season's work:—

OPERATIONS AT MEOTA

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (−) loss per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow	.....	.....	.....	6 41 per acre	
Wheat, Marquis, after fallow	April 22	Aug. 12	31⅛ bush.	0 55 per bush.	24 96
Wheat, Marquis, 2nd crop	April 30	Aug. 12	15⅛ bush.	0 85 per acre	7 60
Five-year Rotation—					
Fallow	.....	.....	.....	6 41 per acre	
Wheat, Marquis, after fallow	April 22	Aug. 13	29 bush.	0 58 per bush.	22 33
Oats, seeded with western rye grass, 10 lbs.; alfalfa, 6 lbs.	May 12	Aug. 15	1 ton (green feed)	10 21 per ton	−0 21
Hay, 1st year	May 16 (reseeded)	Sept. 2	1 ton	7 39 per ton	2 61
Hay, 2nd year	1923	July 17	2 tons	3 96 per ton	12 08
Three-year Rotation—					
Fallow	.....	.....	.....	6 41 per acre	
Wheat, seeded with sweet clover	April 29	Aug. 13	14⅛ bush.	0 86 per bush.	7 10
Hay, sweet clover	Clover winter killed—		reseeded.		
Two-year Rotation—					
Corn (N.W. Dent) (N.D. White Flint)	May 14	Sept. 4	3 tons	4 46 per ton	−2 88
Wheat after corn (after fallow this year)	April 22	Aug. 13	27 $\frac{3}{10}$ bush.	0 59 per bush.	20 74

Wheat after fallow gave over twice the yield of wheat after wheat this year. Both were sown in April. The stubble land for second crop was spring ploughed early, packed, seeded and harrowed. The fallow field was harrowed, seeded and harrowed. This fallow was ploughed early last year, on May 30, and cultivated as necessary to keep down weed growth during the summer.

Wheat in a rotation following western rye grass (down two years, then fallowed) has not given quite so heavy a yield as wheat after the ordinary fallow following two crops of grain. The average yields for the past seven years are as follows:

Wheat after fallow in 3-year grain rotation, 29½ bushels per acre. Wheat after fallow in 5-year rotation, including two years Western rye grass hay, 27½ bushels. The average yield of wheat (2nd crop) for the past seven years has been 17½ bushels per acre.

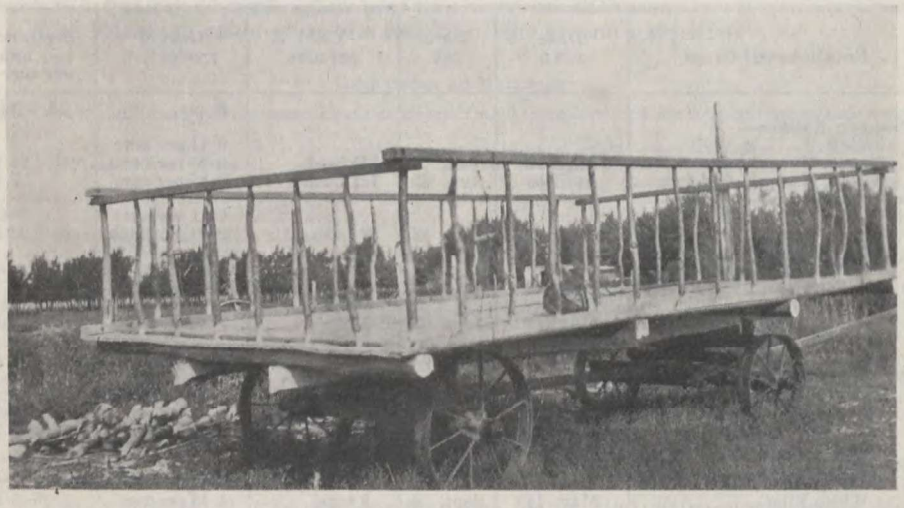
Registered Marquis wheat was grown on the Illustration fields this year and was inspected and approved by the Canadian Seed Growers Association inspector. The policy is to keep the seed up to a high standard.

Arctic sweet clover sown with wheat on fallow last year failed to make a stand this spring and the field was re-seeded. Last year, being so dry, was an unfavourable season for securing a catch of clover. This is the third season sweet clover has failed to make a stand here. A field of alfalfa which has been producing for three years winter killed and was ploughed down. The average yield of this crop for two years in hay was 2⅛ tons per acre. A seed crop was taken one year; yielding 120 pounds per acre. The hay made excellent feed. Another field will be seeded down next spring.

The average yield of western rye grass hay for five years is 1½ tons per acre.

Corn was thinned out to some extent by the cutworms, and at first did not show up well; however, it made rapid growth later in the summer and gave a fair yield. This was ensiled in the trench silo.

A test of six different varieties of wheat in rod rows was carried on by Mr. Tait again this year in co-operation with the Cereal Division of the Central Experimental Farm, Ottawa.



A convenient home-made hay rack.

OGEMA

Operator, T. E. Gamble

Spring opened at the average time and work on the land started about April 20. The first seeding of wheat was done April 27. The rainfall for the four months' period April 1 to end of July was 4.49 inches, and for June alone, 2.27 inches. All crops made very fair progress until the hot wave struck the district about the middle of July. Due to the restricted moisture and the heat, grain did not fill well, so yields were much reduced from what they promised at the end of June. Harvest was early, the first wheat being cut August 4.

Rates of seeding at this Station are 1¼ bushels for wheat, and 2 bushels for oats; sweet clover and grasses, 12 pounds per acre.

The following table gives the results of the season's work:—

OPERATIONS AT OGEMA

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (−) per acre
				$ cts.	$ cts.
Three-year rotation—					
Fallow	.....	.....	.....	8 21 per acre	
Wheat, seeded sweet clover 10 lbs., Western rye grass 6 lbs	April 29	Aug. 7	14½ bush.	1 04 per bush.	4 40
Hay (Western rye grass)	1923, with wheat	July 6	1⅝ tons	4 09 per ton	9 45
Six-year Rotation—					
Fallow	.....	.....	.....	7 82 per acre	
Wheat, Marquis, after fallow substitute	April 27	Aug. 4	15⅜ bush.	0 77 per bush.	9 05
Oats, Banner	May 2	Aug. 14	20 bush.	0 63 per bush.	−4 60
Corn	May 24	Sept. 14	2 tons	3 96 per ton	6 08
Wheat, seeded to half sweet clover, half Brome grass	April 28	Aug. 7	18 bush.	0 73 per bush.	11 16
Hay—					
Sweet clover	April, 1924 (with wheat)	July 16	½ ton	12 78 per ton	−1 39
Brome grass	April, 1924 (with wheat)	July 14	⅛ ton	8 82 per ton	0 94
Demonstration Test Field—					
Hay mixture (Western rye, Brome, and sweet clover)	1921	Used for	pasture.		

Corn was sown in rows 6½ feet apart, the ordinary grain drill being used. This crop made good growth and gave a yield of two tons per acre of fodder. In cultivating this corn the ordinary duck-foot cultivator was used, one or two of the feet in the centre being removed and the row straddled. This cultivated all the ground between the rows and was done just as easily as on a bare fallow, except that one had to drive more carefully. Wide rows give more room for cultivation, so are easier kept clean. Mr. Gamble, the Operator of this Station, after two years' experience, states that he is satisfied this is the best way to grow corn for a summerfallow substitute.

Corn grown as a partial substitute for summer-fallow.

Registered Marquis wheat was grown on the Illustration fields and besides on a larger field on the main part of the farm this year, so there is a considerable quantity of registered wheat for sale.

A beginning was made in keeping milk records at this Station this summer.

PAMBRUM

Operator, H. W. Appelgren

The first seeding on the Illustration fields was done April 29. The rainfall for the growing season was much below the average; from April 1 to August 1, only 2.96 inches. Crops, however, made very fair progress, but a very hot spell in July prevented best filling of the grain, and yields below the average resulted. Harvesting was started August 10.

The following table gives the results of the season's work:—

OPERATIONS AT PAMBRUM

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (−) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow				6 76 per acre	
Wheat, Marquis, after fallow	April 29	Aug. 10	13⅜ bush.	1 05 per bush.	4 14
Wheat, Marquis, 2nd crop	May 15	Aug. 17	11⅛ bush.	1 12 per bush.	2 57
Six-year Rotation—					
Fallow				6 76 per acre	
Wheat (oats substituted this year)	May 20	Aug. 22	20 bush.	0 66 per bush.	−5 20
Oats (field fallowed this year)				7 05 per acre	
Corn	May 20	Aug. 22	1 ton	11 53 per ton	−4 53
Wheat, seeded half to sweet clover, half to Western rye grass	May 15	Aug. 17	16⅜ bush.	0 61 per bush.	12 13
Hay—					
Sweet clover	April 30, 1924 (with wheat)	Aug. 17	60 lbs. seed	0 15 per lb.	−3 01
Western rye grass	April 30, 1924 (with wheat)	July 13	1½ tons	11 92 per ton	−2 30
Demonstration Test Field—					
Hay (Western rye and Brome mixture)	June, 1923 (without nurse crop)	July 11	¾ ton	8 23 per ton	1 33

The average yield of wheat on fallow for the nine-year period, 1917-1925 inclusive, is 19⅛ bushels per acre, and wheat, second crop, for eight years, 1918-1925 inclusive, is 11⅛ bushels.

PARKBEG

Operator, THOS. L. HUMPHREY

Spring opened about the usual time and cultivation of the land was started April 20; seeding of wheat, May 5. There was sufficient rainfall during the growing season for favourable growth of grain crops. From April 1 to August 1 there was a rainfall of 8.07 inches and for June alone, 5.48 inches. The latter part of July was hot and dry, preventing the maximum filling of the grain; however, a very good yield of high-quality grain was harvested. Hay crops made a fairly good growth. Harvest was started August 4, and hay was cut July 15. Wintry weather, with a fairly heavy snowfall, set in September 26. The oats were caught in the stook, but were threshed later on when the snow went away. Total rainfall for the season was 11.29 inches.

The following table gives the results of the season's work:—

OPERATIONS AT PARKBEG

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (—) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow substitute, corn in rows 6 feet apart	June 8	Sept. 4	3½ tons	2 73 per ton	2 70
Wheat, Marquis, seeded to sweet clover 10 lbs., Brome 6 lbs.	May 5	Aug. 4	20 bush.	0 72 per bush.	12 60
Hay, Sweet clover and Brome	Hay catch thin, reseeded to millet; growth short, pastured.				
Five-year Rotation—					
Fallow	.....	.....	.....	6 98 per acre	
Wheat, Marquis, after fallow.	May 5	Aug. 10	26 bush.	0 61 per bush.	19 24
Corn, N.W. Dent	May 21	Sept. 4	2 tons	5 39 per ton	—4 87
Wheat, seeded half to sweet clover, half to Western rye grass	May 5	Aug. 4	21 bush.	0 47 per bush.	16 48
Hay—					
Sweet clover	May 10, 1924	July 15	2 tons	2 46 per ton	15 07
Western rye grass	(with wheat)	July 15	1⅛ tons	3 06 per ton	11 10
Two-year Rotation—					
Fallow	.....	.....	.....	6 39 per acre	
Wheat (half seeded to sweet clover)	May 5	Aug. 11	16½ bush.	0 69 per bush.	10 89
Demonstration Test Fields—					
Oats (3rd crop) fall ploughed	May 8 1922	Aug. 7	40 bush.	0 32 per bush.	3 20
Brome grass hay		July 15	$\frac{7}{10}$ tons	6 67 per ton	2 33

Corn as a summer-fallow substitute was sown in ordinary rows, 3½ feet apart, and also in wide rows, 6 feet apart. Though the field in wide rows was sown 18 days after the other, the yield (green weight per acre) was much heavier. Both fields were cut on September 4, and the crop ensiled in a trench silo. In commenting on the two crops, Mr. Humphrey, the Operator, states: "Field 4 (wide rows) was the best corn in every way, except that the cobs were a little more developed in Field 6 (ordinary rows). The wide-row crop was fully two feet higher than the other and did not wilt so much during the dry spell." It was also noticeable that the soil in the wide-row field at the end of the season had moisture closer to the surface and was in better tilth than the field in rows 3½ feet apart. Both these fields will be sown to wheat in 1926, and accurate records taken of yields of each.

Late seeding gives a better chance to kill weeds, though if delayed too long the corn will not reach a stage of maturity which gives the best quality of ensilage.

The wide-row method of growing corn gives more room for intertillage. This was done with the ordinary spring-tooth cultivator by removing a couple of teeth in the centre and straddling the row. It was found much easier to control the weeds in the wide-row crop than in the ordinary rows. This is one very important advantage in this system of growing corn, for it is the labour connected with the keeping of the crop clean which deters many people from sowing much acreage to corn.

Sweet clover hay gave a little heavier yield than western rye grass, though the stand was not so uniform.

Oats were sown this year on a field which had already had two grain crops and a profitable yield was obtained. The heavy rainfall of June helped to produce this result. It is not intended to follow this practice, as two grain crops after fallow are quite sufficient for the average rainfall of this district.

The operator has some pure Marquis seed wheat for sale from this year's crop, some of which has already been sold to neighbouring farmers.

RADVILLE

Operator, J. H. STOCKTON

The spring season opened in good time in this district, and three of the fields on the Station were seeded to wheat April 17. There was a fair amount of moisture carried over from the previous autumn rains, for over three inches fell during September and October, 1924. During the growing season, there was 6·72 inches of rain, but in July a prolonged hot, dry spell prevailed and all crops suffered. However, wheat on the early-worked fallow came through with a good yield, but most other crops were below the average. Harvesting was started in good time, the first wheat being cut August 8.

The following table gives the results of the season's work:—

OPERATIONS AT RADVILLE

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (—) per acre
				$ cts.	$ cts.
Six-year Rotation—					
Fallow				6 09 per acre	
Wheat, Marquis	April 17	Aug. 8	23 bush.	0 70 per bush.	14 95
Oats, Banner	May 11	Aug. 21	20 bush.	0 64 per bush.	—4 80
Corn	May 26	Sept. 23	3 tons	8 88 per ton	—5 64
Wheat, seeded one-half sweet clover, one-half Western rye grass and Brome	April 17	Aug. 10	10⅘ bush.	0 83 per bush.	5 40
Hay, Sweet clover	April 30, 1924 with wheat	July 6	2 tons	2 97 per ton	14 05
Western rye grass and Brome.	April 30, 1924 with wheat	July 6	⅘ ton	13 18 per ton	—1 91
Three-year Rotation—					
Fallow				6 05 per acre	
Wheat, Marquis, after fallow.	April 17	Aug. 8	23 bush.	0 70 per bush.	14 95
Wheat, Marquis, 2nd crop	May 5	Aug. 27	12 bush.	0 84 per bush.	6 12
Demonstration Test Fields—					
Wheat, Marquis, after sweet clover one-half cut	April 22	Aug. 13	9⅘ bush.	1 28 per bush.	0 64
Wheat, Marquis, one-half ploughed in	April 22	Aug. 13	10⅘ bush.	1 41 per bush.	—0 64

Wheat after fallow gave practically double the yield of second crop this year. The extra reserve of moisture stored in the fallow sustained growth during the dry period.

Wheat after a fallow where a sweet clover crop was ploughed under gave only a slightly heavier yield than on the adjoining field where the clover was taken off previous to fallowing. The difference this year would not compensate for the loss of the hay crop.

Sweet clover gave twice as heavy a yield of hay as western rye grass this year.

The Operator of this Station sowed registered Marquis wheat this year and had the standing crop inspected. Some of the wheat has already been sold to neighbours for seeding next spring, but a considerable quantity is still available.

The acre plots which are used for soil treatment of badly burnt-out land were sown to second crop of oats this year. There were no significant variations in yields this season from the different treatments of these plots given two years ago. However, the plot treated with both manure and lime gave a slight increase in yield over any of the others. On one plot, a crop of sweet clover was ploughed in early in June and on another a crop of clover hay was taken previous to fallowing. These will be seeded to wheat next year.

RIVERHURST

Operator, R. F. Rudd

Seeding was later than usual on this Station, first wheat being sown May 8. The rainfall for the four months, April 1 to the end of July, was 10.04 inches which was much heavier than the average. Conditions on the whole were favourable for crop production. Harvesting of wheat started August 11. Total rainfall for the season was 13.03 inches.

The following table gives the results of the season's work:—

Operations at Riverhurst

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (−) per acre
				$ cts.	$ cts.
Six-year Rotation—					
Fallow				6 59 per acre	
Wheat, Marquis, after fallow	May 8	Aug. 10	18 bush.	0 83 per bush.	9 36
Oats, Banner	June 10	Aug. 17	30 bush.	0 42 per bush.	−0 60
Corn, N.W. Dent	June 10	Sept. 8	2½ tons	5 66 per ton	3 35
Wheat, seeded half with sweet clover, half with Western rye grass	May 11	Aug. 11	20 bush.	0 54 per bush.	16 20
Hay—					
Sweet clover	Clover and grass catch too thin for a stand—reseeded with Hungarian millet.				
Western rye grass	June 16	Aug. 17	1 *ton*	7 63 per *ton*	2 37
Three-year Rotation—					
Fallow				6 59 per acre	
Wheat, Marquis, after fallow	May 8	Aug. 10	29 bush.	0 58 per bush.	22 33
Wheat, Marquis, 2nd crop	May 18	Aug. 11	20 bush.	0 71 per bush.	12 80
Two-year Rotation—					
Wheat, Marquis, seeded with sweet clover	May 11	Aug. 11	19 bush.	0 80 per bush.	10 45
Sweet clover hay and fallow	Fallow this year			6 59 per acre	

A start was made in growing registered Marquis wheat at this Station this year. A five-acre field was sown on fallowed land.

Both sweet clover and western rye grass seeded last year failed to make a stand this spring and millet was sown as a catch crop. Though sown late, it gave a fair yield of nutritious hay.

The seed for the wheat grown on the Illustration fields was originally supplied from the Experimental Station, Swift Current, and is of a high quality. The surplus grain from these fields, after being cleaned, is always available for seed purposes for any one in the district who wishes to make a start with pure seed.

SHAUNAVON

Operator, Stanley Murch

Spring opened early, and seeding of wheat on the Station fields was started April 30. This was one of the driest seasons which this district has experienced. The total rainfall from spring until freeze-up was only 7·17 inches and for the four most important growing months, April 1 to August 1, 3·39 inches. Another adverse factor was the very hot weather which prevailed in July for about three weeks. However, wheat on most fallow land came through with a fair yield, but on the whole crops were light. Harvest was early, wheat being cut August 4.

The following table gives the results of the season's work:—

OPERATIONS AT SHAUNAVON

Rotation and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (—) per acre
				$ cts.	$ cts.
Six-year Rotation—					
Fallow				6 99 per acre	
Wheat, Marquis, after fallow	April 30	Aug. 12	12 bush.	1 16 per bush.	2 28
Oats, Banner	May 15	Aug. 27	½ ton (green feed)	19 34 per ton	—4 67
Corn, N.W. Dent	May 20	Sept. 8	1½ tons (fodder)	9 42 per ton	—2 91
Wheat, seeded half to sweet clover, half to western rye grass	April 30	Aug. 12	11½ bush.	0 79 per bush.	6 44
Hay—					
Sweet clover	April 26, 1924 with wheat	July 8	⅘ ton	8 62 per ton	1 10
Western rye grass		July 9	⅔ ton	16 35 per ton	—2 54
Three-year Rotation—					
Fallow substitute, Corn in rows 10 ft. apart	May 23	Sept. 8	2 tons (fed green)	4 44 per ton	—1 88
Wheat, Marquis, after fallow	April 16	Aug. 8	14½ bush.	0 96 per bush.	5 64
Wheat, Marquis, second crop	May 7	Aug. 12	8 bush.	1 21 per bush.	1 12
Demonstration Test Fields—					
Hay (Western rye and Brome mixture)	June 13, 1923 no nurse crop	July 11	¼ ton	20 80 per ton	—2 70
Wheat, after corn, seeded to sweet clover	May 1	Aug. 4	7 bush.	1 24 per bush.	0 77

Hay crops did not have sufficient moisture for normal growth. Sweet clover came through with a heavier yield than western rye grass or a mixture of western rye and brome.

A field of corn was sown in wide rows 10 feet apart. These rows made a stronger growth than the field in ordinary rows, and the wide rows seem to make a better fallow substitute. In order to test this, wheat will be sown on both these fields next year.

The average yield of wheat on fallow for the years 1922-1925 (omitting 1924 year of hail) has been 27⅓ bushels per acre. Wheat after corn this year gave a yield which was not much below that on fallow. Last year hail upset all results, but in 1923 wheat after corn gave 32 bushels per acre, while after fallow it gave 43.

Though the crop was lighter than usual, some seed wheat will be available again this year for any person who wishes to get started with pure seed.

SPRUCE LAKE

Operator, H. Eagle

Spring came about the usual time and wheat seeding on the plots was started the last day of April. The rainfall from spring until the end of July was 6·22 inches and was well distributed, so all crops made a strong growth. The weather was favourable for the production of a heavy yield of high-quality grain with no damage from frost or rust. Harvesting of Ruby wheat was started August 15. The rainfall for the season was 8·18 inches.

The following table gives the results of the season's work:—

OPERATIONS AT SPRUCE LAKE

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of Production	Profit or loss (−) per acre
				$ cts.	$ cts.
Five-year Rotation—					
Fallow				6 57 per acre	
Wheat after fallow ½Marquis	April 30	Aug. 19	38 bush.	0 50 per bush.	32 30
Wheat after fallow ½E. Red Fife			40 bush.	0 47 per bush.	35 20
Oats, seeded with Western rye grass and Sweet clover. (Barley substituted this year)	May 25	Aug. 28	36 bush.	0 29 per bush.	3 96
Hay, 1st year	May 9–24	July 16	1 7/20 tons	3 86 per ton	10 43
Hay, 2nd year	1923	July 14	1 9/20 tons	3 53 per ton	12 29
Demonstration Test Fields—					
Marquis wheat, 2nd crop	May 2	Aug. 20	31 bush.	0 45 per bush.	27 90
Red Bobs (E. Triumph) wheat, 2nd crop	May 1	Aug. 17	34 bush.	0 41 per bush.	31 96
Ruby wheat, 2nd crop	May 1	Aug. 15	30 bush.	0 46 per bush.	26 70
Hay (Western rye grass and alfalfa)	May 10–24	Aug. 3	2 tons	1 72 per ton	16 55
Sunflowers (Giant Russian)	June 2	Sept. 7	4½ tons	3 13 per ton	1 67

Four varieties of wheat were grown on the regular Station fields (5 acres) this year. In addition, six varieties were tested out in rod rows. Among these were some of the newer early sorts such as "Garnet." The yields from the rod rows are not yet available, but it will be noted from the table above that Early Red Fife and Marquis were tested together on fallow and gave almost the same yield. Marquis, Red Bobs and Ruby were tested side by side on stubble land, and there was not much difference in the yields. Red Bobs gave three bushels per acre more than Marquis this year and Marquis one bushel more than Ruby. After threshing, samples of these different wheats were sent to the Chief Grain Inspector, Winnipeg, to be graded. The Marquis, Early Red Fife and Red Bobs were all graded No. 2 and Ruby No. 1. It is intended next year to test the Garnet, a promising early variety, in one of the larger plots. This latter wheat is of good quality, is earlier than Ruby and has proven itself a heavier yielder.

The people of this district appreciate good seed and have taken advantage of the opportunity of getting a start from the Illustration Station. Last year, Mr. Eagle, the operator, sold 300 bushels of seed wheat of different varieties to farmers in the district. The demand was greater than the supply. This year there will be more available and besides wheat some Banner oats and O.A.C. 21 Barley, both grown from registered seed.

Sweet clover has not given good results at this Station so far. The difficulty has been in securing a satisfactory catch. Western rye grass and Brome, and a mixture (western rye grass and alfalfa) have given very good yields in normal seasons.

TROSSACHS

Operator, Charles Carlson

Spring was much earlier here than last year and all the wheat on the Station was seeded before the end of April. The rainfall during the growing season was 6·48 inches, most of which fell in June. This would have produced a crop better than the average had it not been for the extremely hot dry spell beginning the second week in July. At this time the grain was filling so did not make as heavy a yield as expected earlier in the season; however, on the whole, a profitable crop was produced. The first grain was harvested August 7.

The following table gives the results of the season's work:—

OPERATIONS AT TROSSACHS

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of Production	Profit or loss (−) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow				7 62 per acre.	
Wheat, Marquis, after fallow	April 22	Aug. 12	20 bush.	0 71 per bush.	12 80
Wheat, Marquis, second crop	April 29	Aug. 12	11½ bush.	1 06 per bush.	3 33
Six-year Rotation—					
Fallow				6 42 per acre.	
Wheat, Marquis, after fallow	April 22	Aug. 12	20 bush.	0 67 per bush.	13 60
Oats, Banner	May 13	Aug. 19	30 bush.	0 43 per bush.	−0 90
Corn (N. W. Dent)	May 25	Sept. 5	4 tons	2 49 per ton	4 04
Wheat, seeded half to sweet clover, half to Western rye grass and Brome	April 23	Aug. 12	17 bush.	0 53 per bush.	13 94
Hay—Sweet clover	(May 7, 1924,	Aug. 7	2 tons	2 82 per ton	14 37
Hay—Western rye grass and Brome	with wheat)	July 17	1¾ tons	4 46 per ton	8 87

Wheat on fallow after a crop of western rye grass and sweet clover made a stronger growth of straw than that on fallow after two grain crops; however, the yield of grain was the same in each case. Wheat after corn this year gave very nearly as heavy a yield as after fallow.

Hay crops made their growth before the dry period, so gave a good yield.

A pure-bred flock of poultry of the Rhode Island Red breed has been established by the operator of this Station, and he expects to have some hatching eggs for sale next spring.

The smaller fields which are used for soil treatment experiments, with a view to improving the condition of the burnt-out land were sown to wheat, second crop, this year. No significant variations in the yields of the different plots were shown this season from the treatments given two years ago for the first crop after breaking. Sweet clover was ploughed in on one field and land fallowed. On another field the clover crop was taken off previous to fallowing. These latter fields will be sown to wheat in 1926.

The corn crop was fairly good this year and this was used for filling the trench silo. This will be the third year the silo has been used, and Mr. Carlson is well satisfied with the results obtained. He states that the cows keep up their milk flow better on the silage than on any other feed he has ever used.

TUGASKE

Operator, Robert Wilson

The first seeding was done on the Illustration fields on May 7. The soil was moist and in good tilth, due in part to the heavy rainfall (3.38 inches) which fell last October. The supply of moisture during the growing season was adequate for the growth of all crops. June was a particularly wet month, with 5.55 inches of rain. With the exception of some very hot, dry weather in July, conditions for growth were almost ideal. Wheat, corn and hay crops came through with good yields, and oats fair. Harvest commenced about the usual time. The rates of seeding for this Station are 1¼ bushels for wheat, and 1¾—2 bushels for oats.

The following table gives the results of the season's work:—

OPERATIONS AT TUGASKE

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or loss (—) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Fallow				6 04 per acre.	
Wheat, Marquis, after fallow	May 7	Aug. 15	26⅞ bush.	0 55 per bush.	21 12
Wheat, Marquis, second crop	May 7	Aug. 15	19⅜ bush.	0 69 per bush.	12 94
Five-year Rotation—					
Fallow				8 04 per acre.	
Wheat, Marquis, after fallow	May 7	Aug. 15	21 bush.	0 77 per bush.	12 18
Oats, Banner, seeded to Western rye grass 10 lbs., alfalfa 6 lbs	May 18	Aug. 22	39½ bush.	0 39½ per bush	0 20
Hay (1st year)	May 17, 1924 (nurse crop-oats)	July 13	1⅜ tons	4 77 per ton	8 36
Hay (2nd year)	May, 1923	July 9	1½ tons	4 44 per ton	10 00
Two-year Rotation—					
Corn (N. W. Dent)	May 29	Aug. 28	8 tons	1 77 per ton	13 84
Wheat, Marquis, after corn	May 7	Aug. 15	17⅞ bush.	0 60 per bush.	13 20
Three-year Rotation—					
Fallow				6 45 per acre.	
Wheat, Marquis, seeded to sweet clover	May 7	Aug. 15	22⅜ bush.	0 65 per bush.	15 82
Hay (sweet clover)	May 9, 1924 (with wheat)	July 4 (1st cut)	1⅜ tons	4 42 per ton	13 40
		Aug. 29 (2nd cut)	1 ton		
Demonstration Test Fields—					
Alfalfa (Grimm)	(1920 no nurse crop)	July 14	1⅜ tons	5 72 per ton	5 99

Marquis wheat originally obtained from one of the Experimental Farms is grown on the Illustration fields. The purity of this seed is shown by the freedom from bearded or off-type heads in the growing crop. The surplus grain from these fields is always available for seed for the people of the district. Before being offered for sale, it is cleaned.

Sweet clover hay was cut twice this year and gave a total yield of 2½ tons. It was cut with the grain binder and the sheaves stooked in small, long stooks. This method of curing the hay has proven quite satisfactory, as the leaves are saved much better than by raking and cocking.

The alfalfa field has been down for five years. It responded to the favourable conditions and gave a very fair yield of excellent hay.

The following are the average yields of some of the crops on this Station for the past seven years (1919-25 inclusive):—

Wheat after fallow in a 3-year. rotation.....20⅜ bush. per acre.
Wheat after wheat, 3-year rotation.....15⅜ bush. per acre
Wheat after fallow in a 5-year rotation, including 2 years W. rye grass.....16½ bush. per acre.
Oats after wheat (5-year average).....38 bush. per acre.
Western rye grass hay..... 1½ tons per acre.
Sweet clover hay (3-year average)..... 2 tons per acre.
Alfalfa hay (4-year average).....1,620 lbs. per acre.

Corn (6-year average) .....6¾ tons (green weight) per acre.

WEYBURN

Operator, E. Meredith

Spring opened in good time and wheat seeding on the Station was started April 21, and all the grain was sown by May 7. This season was very favourable for crop production, particularly grain. 7.53 inches of rain fell from the opening

of spring until the end of July, and this was well distributed. The grain filled well and there was no damage from rust or frost. Harvesting of wheat started August 12. The rates of seeding on this Station are for wheat 1½ bushels; for oats, 2 bushels.

The following table gives the results of the season's work:—

OPERATIONS AT WEYBURN

Rotations and Crops	Date sown	Date cut	Yield per acre	Cost of production	Profit or (loss −) per acre
				$ cts.	$ cts.
Three-year Rotation—					
Wheat, Marquis, on fallow.....	April 22	Aug. 17	36 bush.	0 51 per bush.	30 24
Wheat, Marquis, 2nd crop, seeded to Sweet clover.....	May 2	Aug. 27	30 bush.	0 50 per bush.	25 50
Sweet clover hay and fallow...	1924 (with wheat)	July 10	1⅝ tons	5 11 per ton.	7 82
Six-year Rotation—					
Fallow.....	.....	.....	.....	7 46 per acre.	
Wheat, Marquis, after fallow..	April 27	Aug. 27	25 bush.	0 68 per bush.	16 75
Oats, Victory.....	May 7	Aug. 27	70 bush.	0 15 per bush.	17 50
Corn, N. W. Dent.....	May 22	Sept. 19	1 ton	10 28 per ton	−3 28
Wheat, seeded with Western rye grass and alfalfa.....	April 21	Aug. 12	24 bush.	0 45 per bush.	21 60
Hay.....	May 7-24 (with wheat)	July 14	1½ tons	6 46 per ton	5 31
Demonstration Test Fields—					
Alfalfa (Grimm).....	1921 (with wheat)	July 13	1½ tons	4 86 per ton	7 71

The heaviest yield of wheat (36 bushels) was obtained from a summerfallow after sweet clover. The stubble was ploughed in the fall and the land kept cultivated the following summer. The seed bed for the second crop of wheat was prepared by discing and harrowing.

Victory oats were sown after wheat, and land prepared by discing and harrowing also.

All grain is an excellent sample and will be sold for seed. A few sales have been made already.

Alfalfa has given good results on this Station and makes a hay of excellent quality. The average yield for the past four years (1922-1925) inclusive, has been 1½ tons per acre.

A mixture of western rye grass and alfalfa has also given very satisfactory results in both yield and quality of hay.

Sweet clover usually gives the heaviest yield of all, but is somewhat coarser. It is also difficult to cure. This year it was cut with the grain binder and stooked in fairly small, long stooks. This method proved satisfactory, as the leaves were well saved.

An excellent flock of pure-bred White Wyandotte poultry has been developed by the Operator of this Station. Next spring hatching eggs will be available for the people of the district who wish to purchase some.

The average yield of wheat on this Station on fallow for eight years, (1917-1925) inclusive (omitting 1924 year of hail) is 33⅓ bushels per acre, and wheat, second crop, for seven years (1918-25) inclusive (omitting 1924) is 28$^{9}/_{10}$ bushels per acre.

REPORT OF THE ILLUSTRATION STATIONS FOR MANITOBA AND EASTERN SASKATCHEWAN

J. D. Guild, B.S.A., Supervisor

Manitoba secured a good average crop in 1925. The season opened early in April with the result that field work in many cases commenced a full two weeks earlier than in 1924. Cool weather during May delayed germination considerably but the excessively wet June produced a forced growth in all field crops except corn. It was still too cold for this crop. On June 16-17 frost occurred over a section of the province and damage to grain, particularly barley, was reported.

The first cutting of all hay crops was very satisfactory. July however turned hot and dry and practically no second cuttings were obtained from the leguminous hays. Cereal crops also showed the effects of the extreme heat, though in this connection it is possible that a better crop was harvested where this condition prevailed than was secured where July rainfall produced a late maturing and consequently a badly rusted crop.

Fall frosts held off well and practically no damage was reported in this connection. Corn was not seriously touched until September 10. The warmer and more favourable months of July and August brought this crop along quickly, with the result that when harvested the corn had reached a more advanced stage of maturity than has been obtained for some years. It was generally conceded that the maturity of the crop was the feature of corn production in the province this year.

The percentage of fall ploughing done in the province varies in direct proportion to the speed with which the weather permitted fields to be threshed. It is certain that more ploughing was done this fall than in 1924. Some districts however made very little progress in this connection and it is doubtful if more than fifty per cent of the ploughing over the province was completed.

During the year work was discontinued at one Station, and six new stations were established in Manitoba. These together with the six in operation in 1924 brings the total under Brandon supervision to twelve stations. These are distributed over the eastern and northern sections of Manitoba and in eastern Saskatchewan. Several new locations have been inspected during the year and additional stations are in prospect for 1926.

In addition to the regular Station work some experiments with small plots of grasses, grains, clovers, vegetables, etc., were carried out along the Hudson Bay railway in northern Manitoba and at Hudson Bay Junction in Saskatchewan. Details of this work are included in this report.

Rates and Prices used as a basis in compiling report:—

Rent of land	8 per cent land value.
Use of machinery	$1.00 per acre.
Manual labour	Prevailing rates for the district.
Horse labour	
Threshing	
Twine	

SEED COST

Marquis registered	$1 75 per bushel
Ruby	2 00 "
Kota	2 25 "
Banner oats—2nd gen	1 43 "
Victory oats No. 1	1 18 "
Manchurian registered	1 00 "
Western rye grass	0 06½ per pound
Meadow fescue	0 18 "
Brome grass	0 12 "
Sweet clover	0 12 "
Alfalfa Grimm No. 1	0 40 "
Red clover	0 35 "
Alsike clover	0 18 "
Corn North Western Dent	4 50 per bushel
Corn Gehu	5 15 "
Sunflowers	8 50 per cwt.
Alaska oats	1 50 per bushel

RETURN VALUES

Wheat	$1 10 per bushel
Oats	0 35 "
Barley	0 50 "
Corn	3 00 per ton fodder
Sweet clover hay	10 00 "
Western rye and meadow fescue hay	10 00 "
Western rye, fescue and alfalfa hay	12 00 "
Timothy and alsike hay	12 00 "
Corn for ensilage	3 50 "

Summer-fallow.—Two thirds cost charged to first crop and one-third to second crop.
Manure.—Valued at one dollar per ton, divided equally over all crops in rotation.
Straw.—No value given.

CHURCHBRIDGE, SASK.

Operator, H. Grube.

This Station has now been operated for three years and the rotation and demonstration plots are becoming well established. Work commenced at this point on April 27 with the seeding of Marquis wheat. Generally speaking a satisfactory crop year was experienced. Over six inches of rain were recorded at this station from April 1 to September 30 and of this amount over three and three quarter inches fell in June.

The hay crops all yielded well, alfalfa being somewhat less satisfactory in this respect than either western rye grass or timothy. Sweet clover sown alone in 1924 yielded 2½ tons of a good quality hay, after which the plot was ploughed and treated as a fallow. Last year this clover had to be resown in mid-summer on account of insect damage on all the higher parts of the field.

Ruby wheat on fallow outyielded Marquis on corn ground, by four bushels per acre and was cut 11 days earlier but cost 16 cents per bushel more to produce. Corn gave an estimated yield of five tons per acre and was produced at a cost of $3.35 per ton.

OPERATIONS AT CHURCHBRIDGE

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (−) loss per acre
			$ cts.	$ cts.	
Six-year rotation—					
Western rye and alfalfa first crop		2½ tons	2 98 per ton	12 00 per ton	20 28
Western rye and alfalfa second crop		1½ ton	4 37 per ton	12 00 per ton	11 44
Sweet clover sown alone		2½ tons	5 26 per ton	10 00 per ton	11 85
Oats Banner after wheat	112	66½ bush.	0 22 per bush.	0 35 per bush.	8 61
Corn N.W.D. after oats	104	5 tons	3 35 per ton	3 00 per ton	−1 75
Wheat Marquis after corn	118	28 bush.	0 40 per bush.	1 10 per bush.	19 60
Demonstration Test Fields—					
Ruby after fallow	107	32 bush.	0 56 per bush.	1 10 per bush.	17 26
Alfalfa 3rd year		1½ tons	4 42 per ton	12 00 per ton	11 37
Timothy		2 tons	4 86 per ton	10 00 per ton	10 28
Western rye grass		2 tons	3 15 per ton	10 00 per ton	13 70

DAUPHIN, MANITOBA

Operator, A. G. FRENCH

This Station is located in one of the best farming districts in northern Manitoba. On account of the cold wet spring and the prevalence of weeds in the district crops this year were below average.

Plot work at this point has been of the demonstration type rather than of the rotation type owing to the fact that the permanent location of the Illustration field only became partially available this year. Two fields of grass were established this summer on the new field. These will be added to in 1926 to form the basis of the six year rotation adopted for this station.

Meadow fescue and western rye grass yielded 1½ tons per acre on one field and only 1 ton per acre on an adjoining field where sow thistle patches provided competition. Alsike, and a mixture of alsike and timothy were not satisfactory in that the alsike spring killed leaving in the one case a field which had to be resown to oats for feed, and in the other a practically straight timothy crop. Approximately two tons per acre of this timothy hay were secured. The oats sown late as a substitute for the alsike yielded 3 tons per acre.

Corn again gave a good return of well-matured fodder. In the two years during which North Western Dent corn has been tried at this station excellent results have been secured.

Victory Oats. Illustration Station, Dauphin. A 64-bushel crop.

Alaska oats, an early variety which has given good satisfaction in parts of eastern Canada, were tried on one field this year. They appeared to be quite a promising crop all summer, stood up well with a good length of straw, and matured uniformly. Hail damage at the time the crop was nearing maturity considerably reduced the yield and only 31½ bushels per acre were secured.

Victory oats were a much better crop. Being somewhat green at the time of the hail they were less damaged than the Alaska variety and yielded 64 bushels per acre. Both varieties will be tried again on the plots in 1926. A difference of nine days in the time taken to mature these oats was observed this year.

Marquis wheat on corn ground was a very satisfactory crop. Rust infection was quite obvious as this wheat neared maturity. A small corner of the

field had produced potatoes in the previous year and the rust appeared to be worse in this area than on the rest of the field. The yield and sample however were not markedly affected through this infection. 31½ bushels per acre of No. 2 northern wheat were secured. The crop matured in 104 days.

Meadow fescue and western rye grass were sown with barley on two fields on the new location. Good catches were obtained, and the barley yielded 35 bushels per acre. The land was previously in oats which had been sown late and cut early to catch wild oats. Half of the remainder of this new location was fall ploughed this year and the other half cultivated in preparation for 1926.

The suitability of alfalfa for Dauphin soils and climate was amply demonstrated on an acre plot next to the Illustration field. From the first cutting five loads were taken, from the second three loads, and from the third, approximately two loads. Sufficient moisture was available throughout the season at this point to ensure a succession of crops. The variety used was Grimm and the plot was sown in 1925.

GUNTON, MANITOBA

Operator, ELLWOOD FRASER

This Station has completed its second year of operation. The original six year rotation called for one field part corn and part fallow but this was changed this year to bare fallow on account of the difficulty of controlling sow thistles where the corn is not check-rowed. Two fields, one of corn and one of peas were added to the work in plots adjacent to the Illustration field where a failure through choking by weeds or other cause would not affect the regular rotation. Corn proved to be a failure. The spring was too wet and cold, germination was very uneven and the corn had made so little headway by the end of July that it had to be cultivated up and fallowed. The peas yielded at the rate of thirty-five bushels per acre and were produced at a cost of 81 cents per bushel.

Western rye grass and meadow fescue yielded 1½ tons per acre in the first crop year. A mixture of alfalfa, western rye, and fescue proved to be the most profitable crop of all due in part to the increased value resulting from the inclusion of the alfalfa and to the fact that two cuttings of this hay were secured.

Wheat after corn and sunflowers was the most profitable cereal crop, the yield being 28 bushels per acre and the cost 48 cents per bushel. As both the corn and sunflowers were only very moderate crops in 1924, no particular difference was observed in the wheat following these two crops this year.

A little over six inches of rain were recorded at this station from April 18 to September 19.

OPERATIONS AT GUNTON

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (−) loss per acre
			$ cts.	$ cts.	$ cts.
Six-year rotation—					
Western rye and fescue first crop	.....	1½ tons	4 48 per ton	10 00 per ton	8 27
Western rye	.....	1½ tons	3 99 per ton	10 00 per ton	9 00
Wheat, Marquis, after corn and sunflowers seeded to western rye and fescue	114	28 bush.	0 48 per bush.	1 10 per bush.	17 36
Fallow	.....	.....	7 81 per acre	.....	.....
Oats, Banner, after oats	101	36 bush.	0 36 per bush.	0 35 per bush.	0 36
Wheat, Marquis, after oats	111	26 bush.	0 53 per bush.	1 10 per bush.	14 82
Demonstration test fields—					
Alfalfa, western rye and fescue	.....	2¼ tons	3 08 per ton	12 00 per ton	20 79
Peas McKay	114	35 bush.	0 81 per bush.	2 00 per bush.	41 65

KAMSACK, SASKATCHEWAN

Operator, F. Craig

This Station was selected in 1924 and a six-year rotation adopted. Preparatory crops in 1924 were largely destroyed by hail but the work of last season warranted the establishing of the regular rotation this spring. Only one change has been made. Corn has taken the place of an early oat with the result that the seeding down plot is now placed in a more advantageous position than it would have formerly held under the original plan. Good results were secured this year with North Western Dent corn. Fall frosts held off until September 10 and the corn was cut the next day.

Two plots of western rye grass and meadow fescue each yielded one and one-half tons per acre of a good quality hay. One of these was broken and prepared for wheat next year. A good catch of these grasses was also obtained this year.

The operator had the bulk of his wheat crop cleaned through a Carter Disc Cleaner at a cost of 3 cents per bushel. Twelve hundred bushels were cleaned in this way in two days.

8.38 inches of rain were recorded at this station from May 22 to September 10.

Operations at Kamsack

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (−) loss per acre
			$ cts.	$ cts.	$ cts.
Six-year Rotation—					
Western rye and fescue first crop		1½ tons	5 62 per ton	10 00 per ton	6 57
Western rye and fescue first crop		1½ tons	5 13 per ton	10 00 per ton	7 30
Wheat, Marquis	115	22½ bush.	0 62 per bush.	1 10 per bush.	10 80
Corn N.W.D. after oats	118	5 tons	3 25 per ton	3 00 per ton	−1 25
Wheat, Marquis	119	23 bush.	0 63 per bush.	1 10 per bush.	10 81
Oats, Banner, after oats	111	59 bush.	0 32 per bush.	0 35 per bush.	1 77

WAWOTA, SASKATCHEWAN

Operator, C. Pryce

Work commenced at this point on April 27. The six-year rotation adopted in 1924 was regularly started this year. Crop returns were average.

Wheat after sunflowers yielded 16 bushels per acre while wheat after corn yielded 20 bushels per acre. Oats grown on corn land yielded 75 bushels per acre, costing 19 cents per bushel to produce. Western rye grass and meadow fescue sown in 1924 on flax land with a nurse crop of oats yielded approximately a ton and a half per acre.

Peas were added to the work this year but owing to the very poor harvesting and threshing weather these were not cut until October 30. Consequently many of the peas were lost on the ground and those obtained were in a tough, damp condition. The yield of twelve bushels per acre represents about half or less than half the possibilities of the district for pea production.

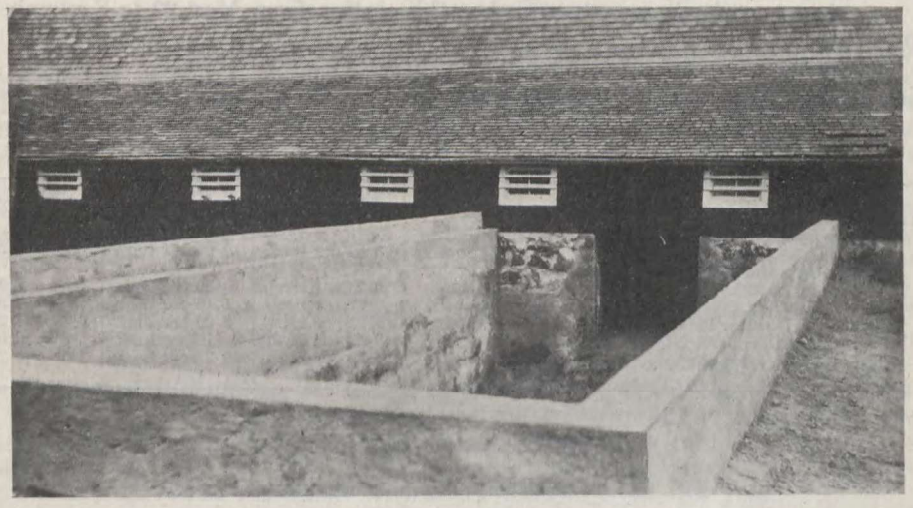
One acre of alfalfa yielded two tons of a fine quality hay. The dry July was responsible for the failure of the second crop, no second cutting being taken. Alfalfa in rows for seed production was considered a failure in the early spring and was cultivated up. Late fall clipping was responsible for this condition.

North Western Dent Corn was a failure and had to be cultivated and treated as a fallow. Gehu gave an estimated yield of 4½ tons per acre. This was

made into ensilage, the silo being filled alternately with loads of corn, sunflowers and oats. The trench silo excavated last year was enlarged this summer and cemented up making a permanent silo opening directly into the barn.

OPERATIONS AT WAWOTA

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (—) loss per acre
			$ cts.	$ cts.	$ cts.
Six-year Rotation—					
Western rye and fescue first crop		1½ tons	4 69 per ton	10 00 per ton	7 96
Western rye and fescue first crop		1½ tons	4 20 per ton	10 00 per ton	8 70
Marquis after sunflowers	115	16 bush.	0 55 per bush.	1 10 per bush.	8 80
Gehu corn after corn	131	4½ tons	3 02 per ton	3 50 per ton	2 16
Oats Banner after corn	110	75 bush.	0 19 per bush.	0 35 per bush.	12 00
Marquis after corn	117	20 bush.	0 50 per bush.	1 10 per bush.	12 00



Trench silo in use at the Illustration Station, Wawota.

DUGALD

Operator, T. H. Roberts

This Station is being operated under fairly typical Red River Valley conditions. The acquired problems might be briefly stated as rust, sow thistle and wild oats. Two rotations have been adopted both of which aim to control sow thistle and to obviate the difficulty of growing wheat on fallowed land without very serious rust infection.

Preparatory work this year included the sowing of grasses and clover with nurse crops, and alfalfa sown alone in rows for seed production. Good results were evident in the catches made by western rye grass and fescue and alfalfa mixtures with nurse crops. Sweet clover sown with barley also made good progress. Alfalfa in rows was hard pressed by sow thistle and wild oats, having been cut at intervals during the season, and appeared rather a thin stand late in the fall.

Two varieties of corn, North Western Dent and Gehu gave fairly good returns. Part of the North Western Dent on sweet clover sod was obviously heavier in yield than the remainder of the plot on summerfallow.

Marquis wheat on sweet clover sod yielded 15 bushels per acre and was produced at a cost of 85 cents per bushel giving a profit of $4.04 per acre. One acre of Banner oats on fallow yielded 100 bushels.

Part of the land used was sweet clover sod, part had been fallowed in 1924 and the remainder of the field was oat land spring ploughed. Over the whole field, wild oats almost took possession. These were not in evidence in 1924 when the field was selected but they made such headway this season that most of the plots had to be cut for feed in order to avoid serious shelling of the wild oats. In view of the presence of sow thistle over the whole district it would seem that a bad combination has been encountered.

PLUMUS

Operator, F. Buschau

A three-year and a six-year rotation are being established on this Station. Work commenced this year and preparatory crops were sown on wheat land which had been skim-ploughed in 1924 and ploughed again this spring. The soil is a light sandy loam, inclined to drift and infested with sow thistles.

This is the only Manitoba Station on which brome grass has been introduced, brome and sweet clover being sown as a mixture in the spring on winter rye. By using the rye as a cleaning crop and the brome and sweet clover to bind and build up the soil it should soon be possible to introduce corn in the six-year rotation to replace the bare fallow, and by slight adjustments to substitute wheat for the usually less profitable fall rye. A permanent field of alfalfa has been laid down, to be broken up and brought into the three-year rotation when this has run its course. The plots this year yielded unprofitably chiefly on account of the sow thistles. Two plots were ploughed and cultivated respectively, behind the binder in an effort to control these weeds in the plots next year.

The grass and clover as well as the alfalfa all made good catches.

Operations at Plumus

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (−) loss per acre
			$ cts.	$ cts.	$ cts.
Six-year Rotation—					
Marquis	111	5 bush.	2 13 per bush.	1 10 per bush.	5 15
Fallow	.....	.....	12 26 per acre	.....	
Marquis seeded to brome and sweet clover	110	5½ bush.	1 94 per bush.	1 10 per bush.	−4 41
Marquis seeded to brome and sweet clover	110	4½ bush.	2 19 per bush.	1 10 per bush.	−4 90
Marquis cut early	97	3½ bush.	2 79 per bush.	1 10 per bush.	−6·33
Oats, Banner	109	18 bush.	0 64 per bush.	0 35 per bush.	−5 22
Three-year Rotation—					
Oats, Victory	109	24½ bush.	0 43⅓ per bush	0 35 per bush.	−2 06
Corn, N.W.D.	119	6 tons	3 13 per ton	3 00 per ton	−0 78
Marquis seeded to rye grass	111	10½ bush.	1 07 per bush.	1 10 per bush.	−0·31
Demonstration Test Fields—					
Marquis seeded to alfalfa	101	9 bush.	1 24 per bush.	1 10 per bush.	−1 26

PETERSFIELD

Operator, Wm. Michael

Two rotations one of three years and one of six years duration are being established on the new Station, and a plot of alfalfa in rows for seed production sown by the operator in 1924 has also been included in the Illustration field.

Work commenced on April 27 and the preparatory crops were sown on fall ploughed oat land. Owing to the prevalence of wild oats this year the plots had largely to be cut for feed. Wild oats and sow thistles constitute a real menace in this area.

Corn made a fair showing and an estimated yield of 7½ tons of North Western Dent was produced at a cost of $3.36 per ton. The alfalfa in rows was a splendid stand all year but the season appeared unfavourable to seed production and it was apparent that a considerably lighter yield would be secured than was hoped for.

Western rye grass and meadow fescue made good catches when sown with wheat. Sweet clover also came away very well. Part of the clover was inoculated and part not. The inoculated seed gave a much more uniform and a heavier stand than did the seed not inoculated despite the fact that the latter was sown almost twice as thickly as the former.

Of the remaining plots in wheat and oats, part, and in some cases all of these fields had to be cut as green feed. After harvest cultivation was carried out in order to encourage growth of wild oats and to control as far as possible the ever present sow thistle menace.

ARBORG

Operator, M. Shebeski

This Station selected in 1924 is located in one of the better farming centres in the inter-lake area. The soil is a heavy clay loam much of it bush land and none too well drained. Preparatory work included fall ploughing of wheat land in 1924 (some of it in August) and clearing four acres of heavy poplar. Much of the land will never be brought under the plough, being fit only for hay or pasture. The rotation adopted for this Station aims to supply a better quality of winter feeds than the ordinary slough hay and to include as well, occasional cash crops.

The spring was too wet and cold for favourable growth. Many fields in the district were flooded out by excessive rains in June. Except on that part of the plots which had been August ploughed in 1924 sow thistles took possession. Even the newly broken bush land was bad in this respect. One wheat plot had to be cultivated up and treated as a fallow. Oats and barley were left for threshing and the plots ploughed immediately behind the binder. August ploughing apparently controlled the sow thistles in 1924 and the ploughing behind the binder should again test out this new practice which has been advocated in the older sow thistle areas:

OPERATIONS AT ARBORG

Crop	Days maturing	Yield per acre	Cost	Value	Profit or (—) loss per acre
			$ cts.	$ cts.	$ cts.
Five-year Rotation—					
Fallow			13 16		
Marquis fallowed			12 73		
Oats, Banner	108	31 bush.	0 37 per bush.	0 35 per bush.	—0 62
Oats, Banner	105	28 bush.	0 40 per bush.	0 35 per bush.	—1 40
Barley Manchurian	87	25 bush.	0 39 per bush.	0 50 per bush.	2 75

INWOOD

Operator, Wm. Cossette

This Station represents another extreme in soil conditions as found in the inter-lake area the soil is shallow and stony, and a gravelly sub-soil is general throughout the field, coming in many places right to the surface. Sow thistles and couch grass are prevalent in the district.

A five year rotation has been planned for this Station and the preparatory crops were sown on fall ploughed land which had been in pasture the previous year. It was in short a field which the owner intended to let go back, and the pasture consequently consisted chiefly of weeds.

Corn was practically a failure at this point owing to the sow thistle infestation. Sweet clover, western rye grass and meadow fescue as well as alfalfa, sown with nurse crops, all made indifferent catches and in August appeared as very thin stands of a sickly yellow colour.

Marquis wheat yielding 12¼ bushels per acre and costing ·93 cents per bushel to produce, left a profit of $2 per acre. Registered Banner oats yielded 31½ bushels per acre and cost ·46 cents to produce, leaving an acre profit of $3.72.

The regular rotation will be established in 1926. Wheat is not included for this point as the district is not particularly well suited to wheat growing. Forage for winter feed and oats and barley for cash crops is the aim of the work at this Station.

STE. ROSE DU LAC

Operator, Jos. Fitzmaurice

This Station was selected in 1924 to take the place of two outlying Stations which had been operated for one year but which on account of their distance from St. Rose were found to be inadequate to the needs of the district.

Preparatory crops this year suffered severly from spring flooding and later from rust. On account of the cold, wet spring corn was a complete failure.

Sow thistles were present but were not the determining factor in crop production on the Illustration field. The land had been well cultivated and fallowed in 1924 so that these weeds were kept fairly well in check this year. Sow thistles, however, have invaded the whole district and will doubtless constitute a major problem in the rotation work planned for this Station. In view of the fact that many fields of wheat after fallow were this year worthless for threshing it would appear inadvisable to stress wheat growing on the rotation plots at least until these have become well established.

MAGNET

Operator, A. Preston

This Station has now operated for two seasons under rather unsuitable conditions. Flooding of the land each spring has greatly delayed the work of seeding. On this account too it has not been possible to get the seed bed into good condition on the various plots. Excessive rains in June this year further adversely affected the growth of the different crops with the result that sow thistles made altogether too much headway for the grains or corn to overcome. Grasses sown in 1924 yielded indifferently owing to a large portion of these plots being under water so long this spring. For this reason the costs of production have not been attempted for this point.

CO-OPERATIVE EXPERIMENTS ALONG THE LINE OF THE HUDSON BAY RAILROAD

In an effort to determine the productive power of different soils in that area served by the Hudson Bay Railway, rod-row work with cereals, vegetables, grasses, clovers, etc., was carried out at Hudson Bay Junction, Mile 185 and Mile 137. The availability of soils was the chief factor determining the locations adopted. Settlement along the line is centred around three or four well defined points and at present it is only possible to conduct work of this nature at these centres.

The season was quite favourable to plant growth and while the seeding was done rather late in the season,—actually on May 25—the comparatively long days of these northern latitudes brought the majority of the crops to maturity before frost damage occurred. Marquis wheat at Mile 185 was one of the exceptions. This variety was not harvested until September 15, at which time it had suffered from frost. This however was not unexpected as a May 25th seeding would certainly be considered late even for prairie conditions.

MILE 185, HUDSON BAY RAILWAY

Co-operator, George Cowan

The soil at this point may be described as a medium silt-clay loam containing a fairly large proportion of fine sand. Fires which at some time have swept through this area have to some extent injured the organic content of the soil but have also destroyed the timber making it more easily possible to clear small areas for cultivation.

The plot used this year was previously in garden stuff. It had been dug by hand and left for some time this spring without further working down with the result that the top soil was very dry and not in good tilth. Consequently germination itself was dependent on early rains as it was not possible to sow to the moisture.

Four varieties of wheat, four of oats, and two of barley in addition to three of peas and small plots of grasses and clovers constituted the work attempted. The yields of the grains in bushels per acre, or on an acre basis are given below.

Wheat	Garnet	40·05	bush. per acre
	Marquis	35·0	"
	Prelude	32·0	"
	Ruby	29·6	"
Oats	Banner	73·5	"
	Daubeney	70·8	"
	Gold Rain	66·1	"
	Alaska	54·7	"
Barley	Albert	30·8	"
	O.A.C. No. 21	39·7	"

Prelude was ready for cutting on August 29, and showed considerable red rust infection on the lower straw and sheath. Ruby and Garnet were almost mature requiring perhaps four or five days more to thoroughly ripen. Marquis was much later, it being estimated that ten days would be required if this variety was to ripen. Marquis was finally cut on September 15 at which time it had suffered some frost damage.

Alaska oats were cut on August 29. Daubeney was practically mature but Banner and Gold Rain were later by about ten days. Banner was finally cut on September 15 at the same time as the Marquis wheat.

Albert barley was cut on August 26. O.A.C. No. 21 was nearly ready for cutting on August 29. This variety was on the outside of the plot and was visibly affected by the encroaching grass. A higher yield of O.A.C. No. 21 would be more representative of its actual capacity.

Western rye grass, brome, sweet clover (white) and red clover all made excellent catches. Sweet clover sown by the operator in 1924 attained a height of over five feet and was a much photographed plot when the Port Nelson tourist party passed that way at the end of August.

The plots of peas were outstanding. Chancellor, Arthur and McKay varieties all podded exceptionally well and matured in the order given. Turnips became wormy late in the season and carrots did not do as well as some privately sown varieties owing to the conditions of soil. Irish Cobbler potatoes outyielded the Green Mountain variety. Mangels and beets up to three inches in diameter were observed on August 29.

In order to get information and results over a period of years it is proposed to continue this work. A larger area of ground has been prepared by the operator and an expansion of the work will thus be possible. This year certain varieties of grains and in fact varieties in all the work had to be left unsown on account of shortage of ground.

MILE 137, HUDSON BAY RAILWAY

Co-operator, R. Davidson

The soil at this point is similar to that found at Mile 185. Both are in the "clay belt." Both soils are burnt-over timber land. Both are similar in colour and texture. At Mile 137 the plot was placed on new breaking which had been well prepared and cleared of roots the previous year.

Seeding of the different varieties was done by the operator on May 25. At that time the ice was not entirely removed from the lakes nearby but it was rapidly disappearing. Plenty of ground was available at this point for all the work, so that six varieties of wheat, oats and barley were sown in addition to the full complement of grass, clover and vegetable seeds supplied.

The grain was grown in rod-rows 7 inches apart. Yields of the different varieties are given in the following table.

Wheat	Garnet	64·3	bush. per acre
	Bishop	64·3	"
	Marquis	62·8	"
	Ruby	53·5	"
	Early Triumph	47·8	"
	Prelude	46·3	"
Oats	Legacy	125·2	"
	Victory	118·2	"
	Banner	117·0	"
	Gold Rain	90·5	"
	Daubeney	79·4	"
	Alaska	68·5	"
Barley	O.A.C. No. 21	106·4	"
	Chinese	102·2	"
	Early Chevalier	98·9	"
	Charlottetown	95·4	"
	Duckbill	87·5	"
	Albert	28·5	"

Garnet and Bishop outyielded the other wheats. Yields at this point are higher than at Mile 185, due largely to the fact that the land here was new "breaking" and in somewhat better condition particularly at the time of seeding. The season too was particularly favourable to crop production, it being held by residents that they had received the maximum of sunshine and rain during the summer. Prelude was ready to cut on August 29 and Ruby and Garnet were not far behind. All wheat varieties were harvested on September 4. Red rust was again plainly observed on Prelude and traces of it could be seen on other varieties.

As in wheats, the yields of oats are high. Alaska was badly shelled on August 29 through wind and bird damage. The other varieties were in the

same relative position with respect to maturity as at Mile 185, Banner and Gold Rain being latest and Legacy just a day or two earlier. All oat varieties, however, were in a more advanced stage of maturity at this point than at Mile 183. They were finally harvested on September 5. The delay was occasioned by the desire on the part of all concerned to leave the plots until after the tourist party had an opportunity to see the standing crops.

The barley varieties were all heavy yielders with the exception of Albert. At the time of inspection they were all more or less lodged. The grain was nearing the firm dough stage and the straw was ripe. These varieties could have been cut a day or two earlier with possible beneficial results. Albert in fact had already been harvested.

All grasses and clovers did well. Western rye grass attained a height of 15 inches and was partially headed. Brome made an equally good stand, as did also sweet clover, alsike clover and red clover. The test for these crops will come next season after they have survived the winter.

Vegetables were promising the latter part of August. Potatoes were a good crop as were mangels and turnips. Carrots up to two inches in diameter were common and beets up to three inches were perhaps slightly above the average but nevertheless present. The root crop was just beginning to grow properly by the latter part of August.

It is intended to continue with the work here another year. Plenty of land is available ready for the work. The results attained this year while very promising cannot be taken as final. Indeed they should not be taken for more than they are worth considering that they represent but one year's efforts in crop production experiments on a small scale in a new northern country.

HUDSON BAY JUNCTION

At this point the co-operator already had the majority of his cultivated land in crop. Consequently there was little choice in the selection of a suitable site for the plot work. In keeping the grains away from the buildings to protect from stock and chicken damage they were placed on ground which afterwards became flooded by the heavy June rains. Consequently the results at harvest time in no wise indicate the true possibilities of the district in respect to its productive power.

All the vegetables except potatoes which were also submerged in June, made good progress. Grass and clover stands are all reported to be in good condition for next year. Stands of western rye grass 15 inches high and partially headed indicate the growth made by the various hay crops, in the seeding down year.

At the Junction, settlement consists largely of soldier settlers on new land. The acreage cultivated on each farm is comparatively small, varying from five acres to over one hundred. The production of feeds for their stock is their chief objective at the present time. Wheat growing has scarcely been tested.

At the Pas some attempts at farming have recently been made and dairying is developing. Garden products seem to excel in soils adjacent to the village. Wheat—Marquis—has been ripened on a lot in the town, which graded two northern. Production of garden stuff, however, would seem to be the logical practice to adopt for the immediate future.

OTTAWA: Printed by F. A. ACLAND, Printer to the King's Most Excellent Majesty, 1926.