DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
DOMINION EXPERIMENTAL FARMS

EXPERIMENTAL SUB-STATIONS

FORT VERMILION, ALTA.
SALMON ARM, B.C.
BETSIAMITES, QUE.
SWEDE CREEK, YUKON
FORT SMITH, N.W.T.
FORT RESOLUTION, N.W.T.
FORT PROVIDENCE, N.W.T.

REPORT OF THE EXPERIMENTALISTS IN CHARGE

FOR THE YEAR 1925

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

FORT VERMILION, ALTA.

REPORT OF THE SUPERINTENDENT, ROBERT JONES

THE SEASON

After April 15 the snow disappeared quite rapidly and work on the land was begun on April 28. On April 30 the experimental cereal plots were sown, and the vegetable garden and early potatoes were planted. Very favourable weather was experienced in May, but June was hot and dry and as a consequence some of the crops suffered. The effect was particularly noticeable on the meadow and pasture lands. Timely rains toward the end of June and ideal weather during the month of July produced splendid growth. August was a fairly wet month and harvesting operations were delayed. Considerable loss was caused by the continual handling of the grain and garden crops, this frequent handling being necessary in order to prevent sprouting. A heavy rain on August 27 accompanied by a high wind caused some of the grain to lodge quite badly, and sunflowers and corn were broken down. Light showers were experienced in September but the last of the grain was cut during the early part of the month. Threshing was not completed until towards the end of September. Ploughing was possible until October 23. During the growing season there was a frost-free period of ninety-eight days.

TABLE OF METEOROLOGICAL OBSERVATIONS TAKEN AT FORT VERMILION, PEACE RIVER DISTRICT, ALBERTA, FROM APRIL 1, 1925 TO MARCH 31, 1926

Months	Maximum	Minimum	Range	Mean	Highest	Date	Lowest	Date	Rainfall	Snowfall	Total precipitation	No. of days precipitation	Heaviest in 24 hours	Date
	°	°	°	°	°		°		ins.	ins.	ins.		ins.	
April, 1925	49·5	24·0	25·5	36·7	67·2	29	− 5·5	2	0·60	7·8	1·38	5	0·70	20
May	65·9	36·5	29·4	51·2	83·4	17	20·2	9	1·05	.....	1·05	6	0·53	29
June	73·0	41·7	31·3	57·3	89·0	27	31·5	17	0·57	.....	0·57	6	0·25	18
July	76·9	49·4	27·5	63·1	86·0	31	38·5	7	2·50	.....	2·50	6	0·42	2
August	68·6	47·4	21·2	58·0	88·5	1	27·5	22	3·66	.....	3·66	7	2·07	27
September	57·9	32·6	25·3	45·2	86·0	21	19·0	28, 29	0·68	.....	0·68	6	0·32	15
October	38·4	17·7	20·7	28·0	60·0	1	−10·0	28, 29	0·03	2·0	0·23	2	0·20	30
November	18·5	− 2·2	20·8	8·1	37·5	15	−37·0	6	.....	0·5	0·05	2	0·03	19
December	11·8	− 4·6	16·4	3·6	32·5	5	−39·9	26	.....	8·5	0·85	6	0·40	19
January, 1926	11·2	−11·0	22·2	0·1	44·0	11	−46·0	19	.....	6·5	0·65	6	0·20	16
February	14·7	− 6·5	21·2	4·1	34·9	9	−37·5	18	.....	2·8	0·28	5	0·08	26
March	30·6	5·2	25·4	17·9	51·2	19	−13·5	1	.....	0·5	0·05	1	0·05	10
									9·09	28·6	11·95	58		

SOME WEATHER OBSERVATIONS TAKEN AT THE CENTRAL EXPERIMENTAL FARM, OTTAWA, COMPARED WITH THOSE TAKEN AT FORT VERMILION, PEACE RIVER DISTRICT, ALBERTA

——	Mean temp.	Highest temp.	Lowest temp.	Total Precipitation	Heaviest in 24 hours	Total hours sunshine	Average sunshine per day
	°	°	°	ins.	ins.		
April—							
Ottawa	43·5	78·0	−20·0	0·81	0·35	239·3	7·9
Fort Vermilion	36·7	67·2	− 5·5	1·38	0·70	195·5	6·5
May—							
Ottawa	50·7	78·0	−28·0	2·59	0·79	226·1	7·3
Fort Vermilion	51·2	83·4	20·2	1·05	0·53	268·1	8·6
June—							
Ottawa	65·5	93·0	39·0	3·75	0·74	248·0	8·3
Fort Vermilion	57·3	89·0	31·5	0·57	0·25	319·6	10·6
July—							
Ottawa	65·2	86·0	40·0	4·15	1·03	281·0	9·1
Fort Vermilion	63·1	86·0	38·5	2·50	0·42	293·1	9·4

SOME WEATHER OBSERVATIONS TAKEN AT THE CENTRAL EXPERIMENTAL FARM, OTTAWA, COMPARED WITH THOSE TAKEN AT FORT VERMILION, PEACE RIVER DISTRICT, ALBERTA—*Concluded*

—	Mean temp.	Highest temp.	Lowest temp.	Total Precipitation	Heaviest in 24 hours	Total hours sunshine	Average sunshine per day
	°	°	°	ins.	ins.		
August—							
Ottawa	67·6	91·0	41·0	1·04	0·48	284·0	9·2
Fort Vermilion	58·0	88·5	27·5	3·66	2·07	201·2	6·4
September—							
Ottawa	58·2	84·0	29·0	6·12	0·94	155·0	5·2
Fort Vermilion	45·2	86·0	19·0	0·68	0·32	217·2	7·2
October—							
Ottawa	38·9	61·0	11·0	2·49	1·13	113·7	3·7
Fort Vermilion	28·0	60·0	−10·0	0·23	0·20	133·3	4·3
November—							
Ottawa	32·0	55·0	−11·0	3·50	1·53	96·6	3·2
Fort Vermilion	8·1	37·5	−37·0	0·05	0·03	76·1	2·5
December—							
Ottawa	18·4	43·0	−20·0	2·79	1·05	82·7	2·7
Fort Vermilion	3·6	32·5	−39·9	0·85	0·40	21·5	0·6
January—							
Ottawa	13·4	39·0	−24·0	2·41	0·44	65·3	2·1
Fort Vermilion	0·1	44·0	−46·0	0·65	0·20	53·8	1·7
February—							
Ottawa	11·7	37·0	−24·0	2·36	0·62	110·3	3·9
Fort Vermilion	4·1	34·9	−37·5	0·28	0·08	86·9	3·2
March—							
Ottawa	18·9	47·0	−19·0	4·09	0·70	184·0	5·9
Fort Vermilion	17·9	51·2	−13·5	0·05	0·05	185·1	5·9

RECORD OF SUNSHINE AT FORT VERMILION, PEACE RIVER DISTRICT, ALBERTA, FROM APRIL 1, 1925 TO MARCH 31, 1926

Months	Days with sunshine	Days without sunshine	Total hours sunshine	Average sunshine per day
1925				
April	27	3	195·5	6·5
May	29	2	268·1	8·6
June	30	0	319·6	10·6
July	29	2	293·1	9·4
August	24	7	201·2	6·4
September	26	4	217·2	7·2
October	26	5	133·3	4·3
November	19	11	76·1	2·5
December	13	18	21·5	0·6
1926				
January	15	16	53·8	1·7
February	17	11	86·9	3·2
March	26	5	185·1	5·9

ANIMAL HUSBANDRY

SHEEP

The flock of sheep now comprises thirty-four grade Shropshire ewes and the pure-bred ram Instone King B. 43. The lamb crop was fairly good but many were killed by Indian dogs and coyotes. Six young wether lambs born on April 21 and butchered on November 11 averaged 71 pounds per dressed carcass, these weights being a considerable improvement over previous weights obtained from lambs of that age. The spring wool clip averaged nearly 8½ pounds per fleece.

SWINE

The herd of swine consists of the boar Albert Beau, L.E.S. 2-66842, two brood sows, and two young sows the pick of the spring litters. The two brood sows farrowed litters of 10 and 11 respectively on May 15 and all were raised. These spring pigs were killed on November 15, the carcases averaging 105 pounds dressed, while some of the larger barrows dressed 120 pounds.

HORTICULTURE

The past season with its warmth and freedom from any very late spring frosts was quite favourable for all horticultural work. While the moderate amount of precipitation during the principal growing months was not conducive to large yields of fruits and vegetables, the quality of those harvested was very good.

LETTUCE

Several varieties of lettuce were sown on April 30 but the period between the date of seeding and the date of emergence was rather long being partly due to the coolness of the soil and partly to the poor germinating powers of some of the seed. The earliest varieties were Grand Rapids, Salamander and Iceberg which were ready for use on June 10.

RADISHES

Three varieties of radishes, Rosy Gem, Imp. French Breakfast and Early Scarlet were sown on April 30 and were ready for use early in June. Long White Icicle were sown on June 6 and were ready for use on June 18. They were of excellent quality and remained in use until late autumn.

BEETS

The four varieties of beets tested were Crosby Egyptian, Detroit Dark Red, Eclipse, Extra Early. Under ordinary conditions Detroit Dark Red is the most suitable variety for table use, with Crosby Egyptian a close second.

CARROTS

Nantes Half-Long and Early Scarlet Horn were sown on April 30, and Chantenay and Ox-heart on May 4, in drills 20 inches apart, and the plants were thinned to about 1 inch apart. Generally in these northern regions there is a decided advantage in the matured crop from early seeding.

Chantenay, Nantes Half Long and Early Scarlet Horn yielded roots of very good quality, Chantenay has proven one of the best all round carrots for earliness, table use, and for winter storing. Ox-heart produces large roots, but these are of slightly inferior quality to the other varieties.

CAULIFLOWER

Cauliflower are usually a good crop at this Station but this year owing to the dry conditions of the early spring the heads were comparatively small and took longer to mature.

The varieties tested this season were Extra Early Erfurt, and Early Snowball. The seed was sown under glass on April 24 and transplanted to the open ground on May 26. The first Early Snowballs were ready for use on June 27 and the first Early Erfurt was ready two days later.

BRUSSELS SPROUTS

Results this season were slightly better than those obtained in previous years. Only one variety, Paris Market was tested. The seed was sown under glass on April 27 and transplanted to the open ground on May 26. The crop was harvested on September 21 and some fairly well developed sprouts were obtained.

CABBAGE

Eleven varieties were sown in hotbeds on April 24 and were transplanted to the open ground between May 26 and 30, the plants being set out 30 inches apart both ways. Some of the earlier varieties split quite badly when nearing full development. With the more favourable growing conditions in the late summer all varieties developed good sized heads by September 21 on which date the whole crop was harvested.

Among the new varieties tested this season were Golden Acre and New Babyhead. The heads were small but very solid and uniform in size.

Danish Ball-head have kept longer in storage than any of the other late varieties. Copenhagen Market and Danish Round head gave a splendid yield of fine solid heads.

Of the early varieties Early Winnigstadt gave the best results. Select Early Jersey Wakefield and Express Extra Early also did well.

The outside seeding of cabbage was again tested this season with much more satisfactory results than were obtained in former years, but in these northern regions with their short and rather uncertain seasons this method cannot be recommended.

TOMATOES

Fifteen varieties or strains of tomatoes were tested this year. All were started in hotbeds on April 27 and were transplanted to the open ground on June 1.

The plants were set out 3 feet apart each way and were tied to stakes and pruned to either single or double stem and the lateral shoots were removed as they appeared. Owing to the absence of any late spring frosts the results obtained this season were greatly above the average.

TOMATOES—TEST OF VARIETIES

Variety	Date first ripe, fruit picked	Total yield ripe, partly ripe, and green fruit	Remarks
		lbs.	
Alacrity 6·0—3033, Ottawa Seed	Aug. 10	79	
Alacrity 0—4569, Ottawa Seed	" 12	92	
Pink Plant 1·0—3039	" 5	62	The clusters of fruit became very large.
Chalks Jewel 0—710	" 16	78	
Burbank	" 14	47	Fruit very large.
Sparks Earliana	" 18	64	Size medium.
Prosperity	" 17	80	Quite large.
Bonny Best	" 18	86	Quality fine.
Red Canner	" 18	65	Of a fair size.
Alacrity x Earlibell 0—3035	" 14	76	Medium size, quality good.

TOMATOES—TEST OF VARIETIES

Eighteen plants of each of the five following varieties were just pruned, and all trusses of fruit left on. Later a percentage of the foliage was removed, and each stem was tied to an individual stake.

While only a very small percentage of fully ripe fruit was picked from these varieties, the percentage of partly ripe fruit was high, more especially Danish Export, Earliana, and Earliest of All.

TOMATOES—TEST OF VARIETIES

Variety	Yield of ripe, partly ripe, and green fruit	Remarks
	lbs.	
Danish Export	60	The fruit of a medium size, and the quality good.
Earliana	73	Fruit quite large—Very good quality.
Earliest of All	105	Very large size. Quality very good.
Coreless	36	Fruit very small. Only of a fair quality.
Early Detroit	36	Fruit quite small, quality only fair.

GARDEN PEAS

Twelve varieties of garden peas were seeded on May 5. Alaska proved to be the earliest this season, being fit for use on July 4, followed closely by Little Marvel, Gradus and Early Morn on July 8. Owing to the rather dry season the peas were ready for use somewhat earlier than usual, but the period during which they remained fit for use was very much shortened; these same conditions hastened the ripening period of those left for seed.

GARDEN PEAS—TEST OF VARIETIES

Variety	Ready for use	Date Ripe	Yield		Length of vine	Length of pod	Average peas in pod	Remarks
			Green	Ripe				
			lbs.	lbs.	ins.	ins.		
English Wonder	July 13	.....	12	3½	10	2	5	
Stratagem	" 16	July 27	13	3½	14	3	.....	Quality fine.
Laxton Progress	" 13	" 28	11½	4	15	3	6	Quality fine.
Gradus	" 8	" 8	11	2½	20	3½	5	Quality very fine.
Lincoln	" 16	Aug. 24	12	4	14	4	6	Quality fine.
Little Marvel	" 8	" 24	11	3½	14	2½	7	Very good quality.
Alaska	" 4	July 27	12½	3½	18	2	5	Quality very fine.
Advancer	" 13	" 31	15	5	19	3½	6	Fairly good flavour.
Prosperity	" 11	" 31	11½	2½	21	2½	5	Very good seed.
Ey. Morn	" 8	" 31	13	3½	20	2½	4	Excellent seed.
Pioneer	" 11	" 29	14	3½	14	2½	5	Fair flavour, pods small.
American Wonder	" 14	" 31	14	3½	14	3	7	Very good.

GARDEN PEAS—CULTURAL TEST

DISTANCE APART

This experiment was again conducted this season to determine the effect upon earliness, quality and yield, when the seed is planted at different distances apart in the rows. The varieties used in this test were English Wonder and Stratagem. The seed was sown on May 5th in rows 33 feet long, and the distances apart in the rows were 1, 2 and 3 inches. The results obtained show that the distance apart in the row does not make any difference in the earliness or quality, but the wider spaced seeds gave a slightly larger yield.

BEANS

Twelve varieties of string beans were planted on May 6. While Improved Golden Wax and Plentiful French Wax were the first to become fit for use, Wardwell Kidney Wax, Early Red Valentine, and Bountiful Green Bush Wax gave better yields.

BEANS—TEST OF VARIETIES

Variety	Date sown	Date ready for use	Remarks
Davis White Wax	May 6	July 18	Very good.
Bountiful Green Bush	" 6	" 20	Very good.
Plentiful French	" 6	" 17	Very tender.
Challenge Black Wax	" 6	" 17	Very tender.
Refugee	" 6	Aug. 2	Good quality.
Round Red Kidney Wax	" 6	July 21	Good quality.
Wardwell Kidney Wax	" 6	" 18	Somewhat stringy.
Masterpiece	" 6	" 28	Very tender.
Hodson Long Pod	" 6	Aug. 2	Fine and tender.

BEANS—CULTURAL TEST

This test was again conducted with Improved Golden Wax and Stringless Green Pod to determine the effect on relative earliness, quality and yield as a green table vegetable when planted at different distances apart in the rows. The seed was sown on May 6 in rows at 2, 4 and 6 inches apart. There was a space of 30 inches between the rows. No difference was noticed in the earliness resulting from thick or thin seeding, but there was a slight increase in yield from the 2 inch seeding.

WINDSOR OR BROADBEANS

Eleven varieties were sown on May 6 in rows 30 inches apart. Germination was timely and the after-growth very strong. A fairly good yield was obtained from all varieties.

WINDSOR OR BROAD BEANS—VARIETY TEST

Variety	Date sown	Date ready for use
Mammoth Broad Windsor	May 6	July 22
Long Pod Green	" 6	" 22
Taylor Broad	" 6	" 21
Fan or Cluster	" 6	" 24
Green Windsor	" 6	" 22
Beck Green Gem	" 6	" 23
Early Mazagen	" 6	" 23
Sharp Conquerer	" 6	" 22
Giant Four Seeded	" 6	" 22
Harlington	" 6	" 23
Common Windsor	" 6	" 21

PARSNIPS

The seed was sown between May 1 and 5 in drills 20 inches apart. The plants were thinned to about 5 inches apart in the drills on June 19. Germination was good. All varieties were sufficiently advanced to be fit for table use on August 4. The plots were harvested at intervals between September 3 and 16.

PARSNIPS—TEST OF VARIETIES

Variety	Rate of yield per acre	Remarks
	lbs.	
Dobbie Selected	7,680	Size small, quality good.
Student or Guernsey	8,400	Size small, quality fair.
Guernsey	12,000	Size medium, quality fine.
Cooper Champion	21,600	Quality very good.
Hollow Crown	19,200	Quality of the best.

ONIONS

The onion crop was much below the usual high standard, both in size and appearance, and also in keeping qualities. The seed was soaked in luke warm water for 12 hours previous to being sown. Seeding was done between May 1st and 4th in drills 20 inches apart in uniform plots of one-sixtieth acre each. Germination was fairly good. No hand thinning was necessary this season as the onion root maggot was quite prevalent, reducing the yields considerably. The crops were harvested between September 10 and 16.

ONIONS—TEST OF VARIETIES

Variety	Ready for use	Yield from plot	Remarks
		lbs.	
Large Red Wethersfield	June 15	126	Quality medium.
Yellow Globe Danvers	" 17	120	Quality fair.
Giant Yellow Prizetaker	" 18	75	Quality very good.
Extra Early Flat Red	" 15	80	Quality very good.
Yellow Prizetaker	July 11	100	Quality quite good.
White Barletta	June 18	100	Quality quite good.

ONIONS—GROWING FROM SETS

The climate in this region is quite suited to the growing of onion sets and good results have been obtained in the past, but this season the sets were a considerable time in transit and were in poor condition when set out. As a consequence the crop was much below the average both in size and yield. The best results were obtained from Yellow Onion Sets (McDonald) which yielded at the rate of 3,600 pounds per acre of medium sized good quality onions.

SPINACH

Two varieties, New Zealand and Victoria, were sown on April 30. The former failed to germinate but the Victoria variety made very rapid and strong growth and was ready for use on June 9.

SWISS CHARD

Two varieties, Lucullus and White Silver, were sown on April 30. Germination was good and growth was quite rapid. Both varieties were ready for use on June 8. White Silver was slightly the better variety.

SALSIFY

The seed of two varieties, Long White and Mammoth Sandwich Island, was sown on April 30 in drills. The plants were thinned to two inches apart on July 18. Both varieties were ready for use on August 4 but the Long White variety gave by far the better yield.

KOHL RABI

This is quite a good vegetable, if used in the early stages of growth. The flavour is much milder than that of summer turnips. Only one variety, Early White Vienna, was tested this year. The seed was sown on May 4 and the plants were thinned to 8 inches apart on July 3. They were ready for use on July 22.

CHINESE CABBAGE

This variety of cabbage usually becomes fit for use much earlier than any other variety. The seed was sown on May 1 and they were ready for use on June 21. They remain fit for use for about three weeks, before blooming. During the blooming period the bees work them quite freely.

SUMMER TURNIPS

Four varieties, Golden Ball, Early Snowball, Strap Leaf and Yellow Tankard, were sown on May 13 in rows 33 feet long and 20 inches apart. The plants were thinned to 8 inches apart on June 19, they made good growth and Golden Ball and Early Snowball were ready for table use on June 25, and Red Top Strap Leaf and Yellow Tankard a few days later. Early Snowball and Red Top Strap Leaf gave very much higher yields than the other two varieties. As none of these varieties of turnips are good keepers they were fed to the stock as dug.

CUCUMBERS

The following varieties were tested this year, Davis Perfect, Prolific, Giant Pera, Early Russian, and Improved Long Green. They were planted on May 13 in hills 6 feet apart each way. They were thinned out to about four or five plants to each hill when the frames were removed on June 15. The first blooms appeared on July 4 and the first cucumbers, of the Improved Long Green variety, were picked on July 23. This variety also gave the largest yield and the largest fruit. Prolific was a close second.

CITRONS

Three hills each of red seeded, and Colorado or green seeded varieties were planted on May 13. When harvested on August 23 the red seeded variety yielded 23 fruit weighing 94 pounds, and the green seeded variety yielded 9 fruit weighing 45 pounds.

MARROWS AND SQUASH

Marrow and squash were planted on May 13 in hills 8 feet apart each way. The following table gives the results obtained:—

MARROW AND SQUASH—TEST OF VARIETIES

Variety	Ready for use	Date harvested	Number of fruit	Total weight
				lbs.
English Vegetable Marrow	Aug. 5	Aug. 23	36	216
Long White Bush Marrow	" 5	" 23	25	162
Golden Hubbard Squash	" 5	" 23	10	60

PUMPKINS

Three varieties, Small Sugar, Connecticut Field, and King of the Mammoths, were seeded under frames in hills 8 feet apart each way on May 13. The frames were not removed until all danger of frost was past. Harvesting took

place on August 23. The Connecticut gave much the larger yield, 62 very large fruit weighing 1,116 pounds. The Small Sugar variety yielded 34 fine fruit weighing 204 pounds while King of the Mammoths gave 8 fair sized fruit weighing 120 pounds.

CELERY

The seed of six varieties was sown in small boxes on May 13. These boxes were placed in a window with a sunny exposure. Germination and growth were slow and they were not transplanted to the open until June 15. The plants were then set out at intervals of 8 inches in single shallow trenches 12 feet long and 6 feet apart, and were earthed up at frequent intervals during the season. All the plants were well watered throughout the whole of the growing season and a crop of excellent quality was harvested on October 6. The plants were dug with as much soil adhering to the roots as possible, they were then taken to the cellar and set in fairly deep boxes which were filled with soil, and lightly watered. It was found that the later varieties blanched well under these conditions, and the celery was in fine fresh condition when used later.

CELERY—TEST OF VARIETIES

Variety	Weight of 12 plants
	lbs.
Golden Self Blanching	13
French Success	15¼
White Plume	17
Giant Pascal	20
Golden Yellow	16
Celeriac, Large Red	11

RHUBARB

The following varieties were tested this season, in the new plantation which was started in 1923, Victoria (from the old plantation), Victoria (Ottawa), Ruby Red Seedling O-45, Victoria (Lethbridge) and St. Martin.

Owing to the dryness of the spring the growth was slightly checked, but with the more favourable growing conditions of the early summer an abundance of fairly large stalks developed, and a fair yield from the different varieties was obtained throughout the season from May 23 to September 20.

ASPARAGUS

Conover Colossal, one of the standard varieties which grows to large size and is of excellent quality, this season gave an average yield of 8 pounds from a 24-foot row.

POTATOES

Five varieties of potatoes were tested this year on fairly rich dark loam. Owing to the rather dry conditions the potato crop throughout the district was rather light. However, on the Experimental Station yields of as high as 432 bushels to the acre were obtained on manured land that had grown a crop of wheat, oats, and barley in 1924.

Planting was done between May 1 and 5. The seed was sown 6 inches deep and 13 inches apart in the rows. The latter were 4 feet apart. This wide spacing would not be necessary on more favourable land such as well manured summer-fallow, as the potato crop is often used as a summer-fallow substitute, or as a cleaning crop to be followed the next season by another cereal crop. Planting the seed 6 inches deep permits of several harrowings without injury to the plants, and should a frost be anticipated when the plants

are breaking through the soil, they can be harrowed and lightly covered as a protection, very often a necessary precaution in this region.

Cultivation was sufficient throughout the growing season to keep down all weeds. The precipitation in the latter part of July and the many timely showers during August stimulated growth and fair yields were obtained.

No disease or blight was in evidence this season, and all varieties were quite free from common scab.

The earliest variety, Rochester Rose, were fit for use on July 21, while the latest variety, Carman No. 1, were ready for use on July 26. On these dates the tubers were of medium size.

The potato crop was dug on September 12 and the following table shows the results obtained:—

POTATOES—TEST OF VARIETIES

Name of Variety	Stage of Maturity	Yield per acre		Total yield per acre
		Marketable	Unmarketable	
		bush.	bush.	bush.
Rochester Rose	Fully matured	211	25	236
Gold Coin	Fully matured	230	10	240
Irish Cobbler	Fully matured	330	30	360
Carman No. 1	Fairly well matured	244	20	264
King Edward	Fully matured	397	35	432

TABLE CORN

Thirteen varieties or strains of table corn were tested this season in uniform test plots of one-sixtieth of an acre on land that had grown a crop of potatoes the previous season. The seed was planted on May 14 in hills 2½ feet apart each way. Owing to the very early frost of August the growing period was considerably shortened. All varieties were harvested on August 25.

While the growth of the plants was quite rank, and a fair crop of fodder was obtained, Pickanniny, Howes Alberta Flint, and 60-day Make Good were the only varieties which became fit for table use this season and only the first two named reached maturity.

TABLE CORN—TEST OF VARIETIES

Variety	Date in tassel	Date ready for table use	Yield of of fully matured cobs from plot	Height of plants
			lbs.	inches
Pickaninny 8-10/22	July 7	Aug. 13	120	34
Howes Alberta Flint	" 7	" 12	175	42
Howes Alberta Flint X Pickaninny	" 7	" 14	25	36
Howes Alberta Flint (our own seed)	" 7	" 12	126	42

TABLE CORN—CULTURAL TEST

The object of this experiment was to determine the advisability of removing or pruning the lateral stalks or shoots. Seeding was done on May 14, and the two varieties tested were Pickaninny and Howes Alberta Flint. The suckers were removed as they appeared on one half of each plot while on the other half they were allowed to grow. Much better results were obtained from the suckered plants than from the unsuckered plants, both as to earliness in the dates they became fit for table use and also in the dates of reaching maturity. There was also a much larger yield of cobs.

ORNAMENTAL GARDENING

PERENNIALS

With the moisture from the winter's snow the plants in the perennial flower border made an early start, and fair growth was made before the very dry weather of the late spring set in, so that the different varieties made a very good showing again this season, and bloomed quite as early as in more favourable seasons. Many remained in bloom until the severe frost in October. The following list gives the varieties and dates of blooming.

PERENNIALS—TEST OF VARIETIES

Name of Variety	Date in bloom
Aquilegia, Columbine	June 16
Achillea, The Pearl	" 18
Arabis, Rock Cress	" 20
Dianthus, Heddewigii	" 29
Delphinium, Larkspur. Various colours	July 10
Daisy, Shasta	" 6
Gas Plant, Dictamus Fraxinella	" 3
Lychnis	" 4
Phlox, Perennial	June 19
Pansies, 1924 plants	May 22
Poppies, Iceland	" 28
Sweet William	July 20
Gaillardia, 1924 plants	June 24
Hollyhocks	July 30
Peonies, 3 Delicta, White	" 2
Peonies, Many Red, McDonald's Superb Peony Mixture	" 12

DAHLIAS

Name of Variety	Date in bloom	Remarks
J. H. Jackson	July 24	Many fine blooms.
Flambeau	" 22	Very fine blooms.
Attraction	" 26	Quite large blooms.
Artis	" 23	Very compact, and fine.
Delice	" 8	Many large blooms.
Creation	Aug. 3	Very large deep red.
Bianca	" 3	Quite large blooms.
Jubilee	July 31	Medium sized blooms.
Kalif	Aug. 6	Very fine blooms.
King of the Autumn	" 10	Very fine, bronze amber.

BULBS

A collection of Cannas (Express) were set out in a mass bed on May 15. These came into bloom on August 7th and made an excellent display.

A new collection of gladioli were also set out in the border on May 15 and while they did not come into bloom until late summer the many different colours made a fine showing.

Another addition which has added much to the attractiveness of the perennial border is a collection of *Zilium tigrinum splendens* (Tiger Lily).

ANNUALS

A large number of the more tender varieties of annual flowers were seeded in hot beds on April 27 and were transplanted to the open ground between May 26 and June 2.

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The hardier varieties were sown directly in the open ground at intervals between May 9 and 24. Some of those that were sown on May 9 were in bloom on June 18 and from that date throughout the summer the flower garden was a continuous attraction to the many visitors to the Station.

ANNUALS—TEST OF VARIETIES

Name of Variety	Date in bloom
Asters—	
Crego Giant White	July 26
Vick Crimson King	" 26
Late Branching	" 28
White Perfection, Summerland seed	" 20
Rose Rochester	" 24
Vick Perfection, upright shell pink	" 28
Giant Comet, Rose	" 26
Antirrhinum—	
Sutton Intermediate Victory	July 22
Sutton Bright Crimson	" 24
Balsam, Camellia Flowered	" 10
Celosia, Ostrich Plume, crimson	" 15
Calliopsis, Tom Thumb Beauty	" 30
Dahlia, double mixed	Aug. 8
Kenilworth Ivy, potted and bloomed in office	June 25
Lobelia, Sutton Basket	July 2
Nicotiana, Sanderea	" 12
Phlox—	
Sutton Crimson White Eye	July 15
Mixed, many colours	" 15
Sensitive Plant, these made fine growth, and were quite attractive	
Verbena, Hybrida Mammoth, choice mixed	" 28
Zinnia, Achievement	" 15

ANNUALS SOWN IN THE OPEN GROUND

Name of Variety	Date in bloom
Adonis, Autumnalis	Aug. 3
Arctotis Grandis, C.E.F. seed	July 8
Bartonia Aurea	June 22
Clarkia, Salmon Queen	July 18
Candytuft, purple	" 2
Calendula Officinalis Meteor, golden yellow	" 12
Cosmos, new early flowering	" 12
Dianthus, seedling	June 29
Datura, Golden Queen	July 25
Dew Plant, Mesembryanthemum	" 27
Dimorphotheca, Aurantiaca	" 15
Eschscholtzia, California Poppy, Carmine King	" 4
Gypsophila, our own seed	June 28
Godetia, Lady Satin Rose	July 28
Jacobaea, Elegans double	" 30
Lupins, annual mixed	June 22
Linaria, our own seed	" 28
Lavatera, Rosea Splendens	July 30
Malope, Grandiflora	" 28
Mignonette, Giant White Spiral	" 3
Mignonette, Red Giant	" 3
Nasturtium, Dwarf, Empress of India	" 12
Nasturtium, Queen of Tom Thumbs	" 14
Nasturtium, Lobbs Climbing	" 12
Poppies, Shirley	June 28
Poppies, Peony flowered, mixed	" 30
Salvia, Scarlet Queen	July 4
Schizanthus	June 28
Sweet Sultan, mixed	July 22
Scabiosa, large flowering double	" 30
Salpiglossis, Giant Emperor	" 18
Sweet Peas, Steele Briggs Best Mixture	" 22
Sweet Peas, Cupid mixed	" 22
Sweet Peas, McDonald, Spencer Hybrid mixture	" 29

A collection of vines consisting of canary bird-vine, cobaea scandens, cypress vine, and ipomaea made a very fine showing.

Wild cucumber vines planted very thickly around the pergola made a very dense growth and were quite attractive.

Kochia sown in clumps and in rows as a background for the cupid sweet peas made a splendid display.

SWEET PEAS

Many varieties of Croslands sweet peas were sown on May 15, each variety being sown in an individual round bed. Owing to the drought in the early spring they were considerably later coming into bloom than in former years, but with the more favourable weather of the late summer they bloomed profusely and made an excellent display throughout the balance of the season and until the late autumn.

SWEET PEAS—TEST OF VARIETIES

Name of Variety	Colour	Date of bloom
Mrs. Tom Jones	Blue	Aug. 1
Charity	Crimson	" 1
Powerscourt	Lavender	July 28
Glory	Cerise crimson	" 29
King Mauve	Rosy mauve	" 29
Ravenswing	Maroon	" 31
Brilliant	Cerise	" 29
Hawlmark Pink Imp	Rose pink	" 29
Matchless	Yellow cream	Aug. 1
Jack Cornwall, V.C	Navy blue	July 28
Faerie Queen	Cream pink fleshed	" 29
Picture	Cream pink	" 27
Advance	Rose pink	" 26
Royal purple	Rich purple	" 28
Novelty, Antonia Dolores	Cerise	" 28
Joan Ryder	Pure white	" 27
Youth	White ground with coloured edges	" 28
Royal Scot	Brilliant cerise scarlet	Aug. 2
Finest Mixed Waved	Many colours	July 27

ROSES

Owing to the severity of the winter of 1924-25 many of the imported varieties of roses were entirely winter killed, but the Ophelia, Tausendschon, and Queen Alexandra, although killed back considerably, recovered later and produced some blooms in the late summer.

A number of the older established bushes of Japanese roses which appear to be very hardy and survive the severe winters of this locality, again produced an abundance of fine large blooms lasting from June 30 until the late autumn.

ORNAMENTAL TREES AND SHRUBS

The common lilacs were in full bloom on June 9, while other varieties came into bloom on June 14th.

The different strains of Caragana were in full bloom on June 2 and some of the unthinned bushes have attained a height of ten to twelve feet.

The spruce trees in the windbreak that surrounds the shrubbery have now grown quite thick and have reached a good height. They add greatly to the appearance of the grounds, and also hold the snow which affords winter protection, and a very considerable additional quantity of moisture. This windbreak gives fair protection to the fruits and flowers and other tender plants within the enclosure, from the sweeping winds of the summer.

SMALL FRUITS.

RASPBERRIES

The following new varieties have been added: Newman No. 23, St. Regis Everbearing, and Cumberland (black), but owing to the late arrival of these plants and their being set out at the driest part of the spring, growth was rather slow, consequently it was rather late in the season before any fruit set. However, some very fine large specimens were picked from each variety, but the total yield was low.

STRAWBERRIES

Several new varieties were added in the spring, including Dr. Burrill, Progressive (everbearing), Senator Dunlap, Glen Mary, Brandywine, and Parsons Beauty.

Unfortunately they were a considerable time in transit and arrived in poor condition. This, combined with the dry weather, resulted in a low yield.

GOOSEBERRIES

The few bushes in the older plantation were so severely winter killed that it was necessary to prune them back almost to the ground. The only variety that showed any degree of hardiness is Pale Red O-1208 from which a fair amount of large fruit of good quality was picked.

The following new importations were set out in the spring: Downing, Houghton, Red Jacket and Mabel, but by autumn none of these varieties showed any sign of life. It has been found almost impossible to get seedlings that are shipped in from any great distance to grow.

CURRANTS

The different varieties of currants in the newer plantation came through the winter in splendid condition. They do not suffer to any great extent from the spring droughts, as the amount of snow that drifts in and around the bushes during the winter provides ample moisture for good growth in the spring, and to tide over the short dry period of most seasons. The plantation is in a more favourable location than the other fruit plantation as regards snow moisture.

All varieties of red, white and black currants yielded a good crop of fine large fruit.

The bushes in the old plantation are still thriving to a certain extent, but while the fruit picked this season was of fair quality, the yields were light. This was probably due to the heavy pruning in the autumn of 1924, the rather dry location in which the plantation is situated, and the insect pests which were particularly bad this season. The bushes were sprayed twice during the spring with a home-made nicotine solution which was very effective. In using such a solution care should be taken that it is not too strong or the leaves may be injured by being burned. For a slight attack of aphis, two sprayings of a solution composed of one pound of any inferior leaf tobacco well boiled, and mixed with about 20 gallons of water would probably overcome the pest for the season.

During the past two seasons heavy losses in the currant crop have been caused by the currant fruitworm or fly, and it is proving difficult to check with the means at hand. These pests thrive on the native currants and gooseberries but they have now spread to the cultivated bushes.

SASKATOON BERRIES

The hedge of Saskatoon berries located in the older part of the shrubbery again made an excellent showing both as an ornamental hedge when in bloom, and as a fruit producer. They came into bloom on May 27 and by July 12 the bushes were a mass of ripe fruit and many quarts were picked. It was the heaviest crop for many years.

CEREALS

The season of 1925 on the whole was quite favourable for the production of all cereal crops. With the ample moisture from the previous winter's snow germination was timely and the percentage high. Weather conditions were particularly favourable in July and all cereals filled exceptionally well. Harvesting was delayed by rain in August. The stooks had to be handled frequently to prevent sprouting and a slight loss was sustained from this cause. Threshing was not completed until towards the end of September.

SPRING WHEAT

Twenty varieties were tested this year. They were sown on April 29th and 30th in one-sixtieth acre plots, on land which had grown a crop of corn the previous season. Barnyard manure had been applied for the corn crop, but none was added for the spring wheat. The land was ploughed in the autumn of 1924 and put in shape for the cereal crop by the use of the spring tooth and smoothing harrows, and was rolled just previous to being seeded. The results obtained are presented in the following table.

SPRING WHEAT—VARIETY AND STRAIN TEST

Variety	Average number of days maturing	Average height	Strength of straw on scale of 10 points	Yield per acre
		inches		bush.
Marquis	104	39	10	42
Red Fife, Ottawa 17	108	38	10	45
Marquis, Ottawa 15	104	38	10	48
Red Bobs	103	37	10	43
Bishop, Ottawa 8	107	42	8	51
Huron, Ottawa 3	104	42	8	49
Reward, Ottawa 928	96	39	10	39
Ruby, Ottawa 623	96	42	10	41
Prelude, Ottawa 135	91	40	10	38
Kitchener	105	40	10	42
Garnet, Ottawa 652	98	42	10	44
Club	103	42	7	35
Kubanka	107	53	6	37

Seven varieties of wheat were tested at this Station for the University of Alberta for the purpose of determining the influence of environment, chiefly upon quality, the grain when harvested being sent to the University for special study. The land, treatment, and cultivation were identical with that used in the spring wheat variety and strain test.

RESULTS FROM INFLUENCE OF ENVIRONMENT TEST

Variety	Average number of days maturing	Average height	Strength of straw on scale of 10 points	Yield per acre
		inches		bush.
III Renfrew	106	41	10	53
Red Fife	108	40	10	48
Red Bobs 222	110	41	10	47
Marquis	106	43	10	54
Huron	103	41	10	49
Ruby	95	41	10	43
Kubanka	106	44	8	40
Duplicate plots—				
III Renfrew	106	46	10	51
Red Bobs 222	101	42	10	45

WINTER WHEAT

Two varieties of winter wheat, Kharkov, and O.A.C. 104 were sown on August 22, 1924, and a fair growth was made before freeze up. However, these plots were completely killed, and the land was reploughed and sown to annual fodders.

OATS

Oats were an exceptionally good crop this year, and were harvested in splendid condition. The seed was sown on April 30th and May 1st at the rate of 2¾ bushels per acre for the following varieties: Banner, Victory, Gold Rain, and Leader, and at the rate of 2 bushels per acre for Liberty 0-480 and Laurel 0-477 both hulless varieties, and at the rate of 1¾ bushels per acre for the early varieties Alaska, Daubeney, and Eighty-Day. The following table shows the results obtained.

OATS—TEST OF VARIETIES

Variety	Average number of days maturing	Average height	Strength of straw on scale of 10 points	Yield per acre
		inches		bush. lb.
Leader	98	44	10	120 00
Gold Rain	97	43	10	116 16
Victory	98	41	10	107 22
Banner, O. 49	95	48	10	105 30
Laurel, O. 477	93	38	10	90 10
Liberty, O. 480	91	47	10	82 32
Alaska	88	41	10	95 00
Eighty-Day	84	39	10	93 00
Daubeney	86	40	10	90 00

EARLY EMMER OR SPELTZ

The seed was sown on April 30th on sunflower land. Germination was good. This variety of grain is noted for its ability to withstand comparatively dry conditions. Its growth this season under such conditions was remarkable. It produced a heavy growth of straw and a large yield of very fine quality grain. It is recommended for districts with a limited rainfall during the summer months, and with its thick husk it can withstand a number of degrees of frost in the autumn without being greatly damaged.

BARLEY

Eleven varieties or strains of barley—eight 6 rowed, and three 2 rowed—were tested this season. All varieties were sown in one-sixtieth acre plots on May 2, with the exception of Black Barley which was sown on May 6, and Success which was sown on May 16. The land had grown a crop of sunflowers the previous season. While the Success barley is a very early variety and may give as good a yield as Chinese, Manchurian, or O.A.C. 21 it cannot compare with either of these three last named varieties for quality or feeding value. The Hulless White except for its tendency to lodge, is an excellent variety from a feeding standpoint, whether cut green as hay, or threshed for grain, as its freedom from beards and hulls makes it quite palatable for all classes of stock. It is also better suited to dry conditions than most of the other varieties, the heads do not break off so readily nor are they so liable to shatter.

BARLEY—TEST OF VARIETIES

Variety—Six-rowed	Average number of days maturing	Average height	Strength of straw on scale of 10 points	Yield per acre
		inches		bush. lb.
Manchurian, O. 50	86	41	9	68 36
O.A.C. No. 21	86	42	10	60 00
Bark	110	36	7	63 36
Hulless White	89	37	6	58 36
Chinese, O. 60	87	48	7	73 36
Albert, O. 54	81	41	10	42 24
Success	82	40	7	73 36
Black Barley	77	34	10	36 12
Two-rowed Varieties				
Duckbill, O. 57	93	41	10	57 24
Charlottetown, O. 80	96	32	8	58 38
Alberta Beardless	96	46	8	55 00

FLAX

Three varieties were tested this season on land which had grown a crop of sunflowers the previous year. North Dakota, Wilt Resistant No. 52, and Premost No. 25 were seeded on May 4, and Fibre Flax on May 6. There were no late spring frosts and the crops made good growth. The seed stem was much longer than usual and there were a larger number of branches. The yield was comparatively high and the quality of the grain was good.

FLAX—TEST OF VARIETIES

Variety	Average number of days maturing	Average height	Strength of Straw on scale of 10 pts.	Yield per acre
		inches		bush. lbs.
N.D. Wilt Resistant 0–52	105	29	10	34 16
New Premost 0–25	105	28	10	32 8
Fibre Flax	83	33	10	20 20

BUCKWHEAT

Two varieties, Japanese and Silverhull, were sown on May 18 in uniform test plots of one-sixtieth acre each. The land had grown a crop of sunflowers the previous season. As a frost was anticipated both varieties were harvested on August 18. On that date the Japanese was fully matured, and yielded at the rate of 45 bushels to the acre. There was a small percentage of immature kernels in the Silverhull variety which were lost in the fanning, reducing the yield to 36 bushels 12 pounds per acre.

WINTER RYE

Five varieties were sown on August 22, 1924, at the rate of 1½ bushels to the acre. The crops made a strong growth during the autumn and went into winter in good condition. A small portion of the crop was winter-killed but sufficient plants were left to make a good stand. Good growth was made during the spring and summer and the tillering was very heavy. By harvest time the straw had reached a height of 56 to 65 inches, with heads in proportion and a heavy crop of both straw and grain was harvested.

WINTER RYE—TEST OF VARIETIES

Variety	Strength of Straw on scale of 10 points	Yield per acre	
		bush.	lb.s
North Dakota, 0-959	10	50	20
Saskatoon	10	52	18
Mammoth White	6	47	8
Rosen	8	43	52
Common	6	42	48

FIELD PLOT OF WINTER RYE

A field of winter rye comprising eleven acres was sown on August 12, 1924. The land was inclined to be gravelly. Twenty wagon loads of manure per acre were applied previous to its being ploughed in June, and was kept thoroughly cultivated during the balance of the season until sown. In the autumn after the rye had made a good strong growth the field was heavily pastured by all classes of live stock. By the time the freeze up set in the crop had been eaten down very closely, so close indeed that it seemed probable that the field would have to be re-sown in the spring with some other variety of cereal. However, on May 15 a stand of 75 per cent showed up and made very good growth during the season.

On June 28 six acres were cut for hay for the farm work horses, and yielded 1¾ tons of good palatable feed. The late summer rains produced a second growth which was cut on September 1 and gave a further yield of three-quarters of a ton per acre.

The remaining 5 acres were left for grain and were cut on August 6. The straw reached a height of 54 inches and the heads were a good length. The crop was threshed on September 20th and yielded 31 bushels of fine quality grain per acre.

SPRING RYE

Only one variety of spring rye was tested this season. It was sown on April 30 on land that had grown a crop of sunflowers in 1924. Germination was good and the growth of straw was quite rank. The crop matured in 102 days and yielded at the rate of 51½ bushels per acre.

FIELD PEAS—TEST OF VARIETIES

During the past season seven varieties of field peas were tested in uniform test plots of one-sixtieth of an acre. The land used for this experiment was that on which fodder corn had been grown the previous season. The seed was sown on April 30, and May 1, at the rate of two bushels per acre for the smaller varieties, and two and a half bushels per acre for the large seeded varieties.

Of the seven varieties White Albertan was the earliest, coming to maturity ninety days from date of seeding, Chancellor in ninety-one days, and Early White Saskatchewan, in ninety-three days, with Arthur 0-18 next in order.

Any variety to be suitable for this district must combine early maturity with the small-seeded characteristics plus reasonable productivity. Of all the varieties tested at this Station, the four above mentioned combine these different characteristics to a greater extent than any of the others under test.

The results obtained this season are presented in the following table.

FIELD PEAS—TEST OF VARIETIES

Variety	Date sown	Average number of days to mature	Average length of vines	Yield
			inches	bush.
Arthur, 0–18	May 1	101	72	39
Prussian Blue	April 30	102	56	40
Chancellor, 0–26	" 30	91	48	36
Empire	" 30	102	58	37
Alberly Blue	May 1	101	72	42
Sack 625	April 30	93	35	27
White Albertan	" 30	90	35	29

FIELD BEANS—TEST OF VARIETIES

While fair results have been produced with these crops at this Station in previous years, injury from frost in August, and other unfavourable weather conditions of the autumn played havoc with this season's test.

The four varieties tested were planted in duplicate plots of one-sixtieth of an acre. Seeding was done on May 16, the seed being planted in hills 2½ feet apart each way, five seeds in each hill. The plots were pulled on August 22, but owing to the prevailing unfavourable weather conditions during the latter part of August, and the early part of September, and after much handling, the crops were not threshed until September 26. Of the four varieties tested only the very earliest produced a crop of fully matured seed, as follows:—

Norwegian, 0–710 ..... 19 bushels per acre.
Navy, 0–711 ..... 8 " "
Beauty, 0–712 ..... 14 " "
Petite, 0–709—Was completely ruined by the August frost.

FORAGE CROPS

GRASSES, ALFALFA AND CLOVER MIXTURES

The low yields of hay obtained this season from the grasses and legumes were very disappointing. The principal factor in this partial failure has been the abnormally dry springs and early summers that have been experienced during the years in which the forage crops experiments have been underway. Another serious handicap has been the very high percentage of winter killing each year. It was particularly bad after the severe winter of 1924-25 when more high winds than usual were experienced. A large portion of the grass lands were wind-swept throughout the winter, and as a result there was little or no snow left to provide spring moisture. It is also often the case that these exposed spots are driest in the autmun.

After the hay crop was harvested in 1924 a portion of the land was given an application of 10 wagon loads of barnyard manure per acre, it was then lightly disced and run over with the smoothing harrows. As this land was left slightly rough with the manure only partly covered, it held the snow better than the area that did not receive this treatment. The plots so treated were the only ones that produced a crop this year.

In the different experiments with grass mixtures, the injury from winter killing was most marked in the meadow fescue, red top, and Kentucky blue grass, while the winter killing of timothy was only very slight. Brome grass and western rye seem to be hardy enough to withstand the severe winters and yielded a full crop this season. Results obtained during the course of these experiments indicate that only the hardiest drought resistent varieties should be grown in these northern regions.

So far annual cereal crops grown for fodder have produced a greater tonnage than almost any of the perennial hay crops, as these latter require more moisture earlier in the season than cereal crops do.

GRASSES AND ALFALFA MIXTURES

Varieties	Yield per acre		Remarks on 1925 stand
	tons.	lbs.	
Alfalfa	1	560	100%
Alfalfa and timothy	1	480	50% alfalfa—50% timothy.
Alfalfa and western Rye	1	960	35% alfalfa—65% western rye.
Alfalfa and meadow fescue	1	160	80% alfalfa—20% M. fescue.
Alfalfa, timothy, western rye, meadow fescue.	1	640	50% alfalfa, 30% timothy, 20%, western rye, meadow fescue—out.
Alfalfa, timothy, western rye, meadow fescue, kentucky blue, red top	1	880	Alfalfa, 50%, timothy, 15%, western rye, 35%, meadow fescue, out, Kentucky blue out, and red top out.

GRASSES, RED CLOVER AND ALSIKE MIXTURES

Varieties	Per cent of grasses and clovers in crops harvested	Yield	Remarks
Red clover and alsike			The yield on this plot was made up of the following volunteer varieties: western rye 85%, red top 5%, meadow fescue 10%.
Red clover	Out	1 ton 80 lbs.	The yield from this plot was made up entirely of timothy.
Alsike Timothy	Out 100%	1 ton 160 lbs.	
Red clover	Out		
Alsike	10%		
Western rye	85%	1 ton 720 lbs.	
Red clover	Out		The clovers and meadow fescue were entirely missing from this plot. The yield obtained was from a volunteer crop of western rye.
Alsike	Out		
Meadow fescue	Out		
Western rye	90%	1 ton	
Red clover	Out		
Alsike	Out		
Timothy	50%		
Western rye	50%		
*Meadow fescue	Out	1,840 lbs.	
Red clover	Out		
Alsike	Out		
Timothy	30%		
Western rye	55%		
Meadow fescue	5%		
Kentucky blue	Out		
Red top	Out	1,480 lbs.	

GRASSES AND RED CLOVER MIXTURES

Plot No.	Varieties	Per cent of grasses and clovers in crops harvested	Yield	Remarks
No. 1	Red clover			Totally winter killed. Ploughed out.
No. 2	Red clover			The clover completely winter killed.
	Timothy			The timothy very patchy. Ploughed out.
No. 3	Red clover			The clover killed out.
	Western rye	75%	1,840 lbs.	The crop from this plot consisted entirely of western rye.
No. 4	Red clover	Out		
	Meadow fescue	50%	640 lbs.	
No. 5	Red clover	Out		
	Timothy	40%		
	Western rye	60%		
	Meadow fescue	Out	1 ton 560 lbs.	
No. 6	Red clover	Out		
	Timothy	20%		
	Western rye	70%		
	Meadow fescue	10%	1 ton 960 lbs.	

The varieties Kentucky blue grass and red top, have disappeared entirely from this mixture.

DUPLICATE GRASS PLOTS, STRAIGHT VARIETIES

As these duplicate grass plots are situated in a slightly lower part of the grounds, into which the snow from the wind-swept portion blew, they were well protected and received a greater benefit from the snow moisture than did the original plots of the same varieties that were situated on the higher land from which the snow was blown by the winds. These original plots presented a very patchy appearance in the spring, and were reploughed later.

DUPLICATE GRASS PLOTS

Plot No.	Varieties	Spring stand	Height when cut	Yield per acre		Per cent stand when cut
			inches	tons	lbs.	
1	Timothy	85%	37	1	1,600	100%
2	Kentucky blue	70%	38	1	400	85%
3	Meadow fescue	65%	40	1	160	80%
4	Red top	50%	30		1,800	70%
5	Brome grass	100%	42	1	1,840	100%
6	Western rye	100%	43	1	1,360	100%
7	Tall oat grass	35%	42		1,200	50%
8	Orchard grass	Completely killed out.				
9	Alfalfa	85%	28	1	520	95%

A large plot one-tenth of an acre of alfalfa and timothy mixture was cut on July 18, the percentage of stand of each variety, height when cut, and yield are given in table below.

Owing to the dryness of the season no second cutting was possible.

ALFALFA AND TIMOTHY MIXTURE

Variety	Spring stand	Height when cut	Yield per acre		Per cent stand when cut
		inches	tons	lbs.	
Alfalfa	30%	32	.....		40%
Timothy	50%	38	1	800	60%

THE NEWER GRASS LANDS

The new piece of land that was taken into the experimental area for grass experiments, was sown this season with all varieties of grasses, alfalfa and clover that were on hand, but owing to the rather slow germination of the seed, and the dryness of the early part of the season, the weeds again became quite prevalent, in spite of the cultivation that had been given this piece of land in the previous season. After careful consideration, it was decided to try another method to overcome these weeds, by the use of a smothering crop. The land was reploughed and seeded down heavily to beardless barley, which was cut as green feed. This checked the growth of weeds considerably. After the crop had been taken off the land was again ploughed, and given an application of barnyard manure at the rate of twelve wagon loads per acre, and it is intended to put this land into a hoed crop of potatoes, corn, sunflowers and beans, during the season of 1926. This will, it is hoped, entirely eradicate any weeds that may still be on the land, and it will then be in a proper state of cultivation for a series of grass experiments the following year.

ANNUAL HAY CROPS

TESTS FOR YIELDS AND SUITABILITY OF GRAIN VARIETIES

The falling off in the yields of native hay during the past two seasons, due partly to the lack of moisture, and greatly to the continual cutting over the same area which tends to kill out these native grasses, demonstrated the importance of the different annual hay crops. In fact the annual forage crops considerably eased the feed shortage that was experienced during the past two winters.

This season a series of plots were sown to crops suitable for the production of feed the same season as sown, the tests being conducted with grains, both straight and in mixtures. The land had grown a root crop the previous season, was fall ploughed and thoroughly cultivated in preparation for the spring seeding. As the land had been manured for the root crop, no manure was applied for the forage crop this season. Notwithstanding the small amount of precipitation in the spring these crops made an excellent start, and with the more abundant rainfall in the late summer there was a heavy growth which had a tendency to make the crops slow in maturing.

TEST OF VARIETIES OF OATS FOR HAY

Four of the heaviest strawed varieties of oats were included in this test. The seed was sown on May 27 at the rate of three bushels per acre. In the following table it will be noted that the dates of cutting vary. This was done in order to have each variety as nearly as possible at the same stage of maturity when harvested.

OATS

Name of Variety	Date cut	Height	Stage of maturity	Yield per acre green weight	
		inches		tons	lb.
Banner	Aug. 1	54	Firm dough...	8	1,100
Gold Rain	" 4	55	" ..	8	560
Victory	" 7	57	" ..	8	1,640
Leader	" 10	60	" ..	8	1,880

All the above varieties of oats are suitable for the production of hay. Leader gave the highest yield on account of the straw being a little coarser and it is also a little leafier than the other varieties. However, there is less wastage from the other finer strawed varieties which are also slightly superior from a feeding standpoint.

TEST OF VARIETIES OF PEAS AND OATS FOR HAY

Five combinations of different varieties of peas and oats were seeded on May 27 at the rate of 1½ bushels of each variety per acre, with the exception of hulless oats which were seeded at the rate of 1¾ bushels with 1½ bushels of peas per acre. The crops were harvested on August 7. The results obtained are presented in the following table.

PEAS AND OATS FOR HAY

Varieties	Height of Plants		Stage of Maturity when cut		Yields per acre, green	
	Oats	Peas	Oats	Peas		
	inches	inches			tons	lb.
Arthur peas with banner oats	46	36	Firm dough.	Firm	11	1,880
Chancellor peas with Victory oats	48	37	" "	Hard	11	1,280
Empire peas with Leader oats	50	39	" "	Soft	11	1,940
Prussian peas with Liberty O. 480 oats	39	25	" "	Quite soft	9	300
Alberby blue peas with Lauren O. 477 oats	41	32	Quite firm	Firm	9	—

TEST OF VARIETIES OF MILLETS AND OTHER ANNUAL GRASSES

The different varieties were seeded on May 4 at the rate of 20 lbs. per acre, and were harvested on August 19 with the following results:—

MILLETS AND ANNUAL GRASSES

Varieties	Height of plants when cut	Yields per acre green weight	
	inches	tons	lb.
Japanese	44	10	1,900
Hog millet	61	13	1,420
Common millet	42	8	1,400
Golden millet	45	9	1,800
Hungarian	43	10	1,000
Siberian	46	9	1,080
Sudan grass	56	5	800
Canary grass	42	6	1,200

The results obtained from the Sudan grass this season, were very much below the average, due to the fact that the first date of seeding, May 4, is rather early for this variety of grass. It failed to germinate and was again seeded on May 18, with slightly better results, but still the plants were quite thin on the plot, with a stand of only 75 per cent at harvest. As the Sudan grass is a sub-tropical plant, it should not be sown in the spring until the conditions are favourable for quick germination and growth, and in the fall it has been noticed that this crop is less affected by a slight frost, than the grains or corn, due no doubt to its lower moisture content in its advanced stage of growth. It has also been found that the Sudan grass, due to its coarseness, does not make as palatable a feed as either the oats or millet, but will make very good silage.

FIELD ROOTS

The land on which the variety tests of roots were conducted this season had grown a crop of corn, peas and beans the previous season. It was manured at the rate of fifteen wagon loads per acre in the fall of 1923, for the 1924 crops, and a light application of ten loads of barnyard manure per acre was applied in the autumn of 1924 for the crops of 1925.

The land was put in readiness for the seed in the spring of 1925, with the liberal use of the spring-tooth and smoothing harrows. Just previous to seeding the land was gone over with a horse roller. All the root crops are seeded on level ground in order to take advantage of the early spring moisture.

SUGAR BEETS

Seven varieties of sugar beets were sown on May 6, in uniform test plots of one-sixtieth of an acre in drills 24 inches apart. The plants were thinned to 8 inches apart in drills on June 15, and the crops were harvested on September 10.

SUGAR BEETS—TEST OF VARIETIES

Variety	Yield per acre	
	tons	lb.
Klein Wanzleben	15	420
Waterloo	14	1,160
Sidney	15	240
Kitchener	15	1,860
Vilmorins Improved	16	580
Horning True Sugar	17	200
Henning and Harving	16	1,480

Wohanka sugar beets were seeded along with the other varieties on May 6, but failed to germinate. They were reseeded on May 20 and again failed to germinate.

MANGELS

Eight varieties of mangels were tested this season.

As a result of the hot dry spell in June all the root crops were slightly below the average in yields, but the roots were of a very good quality.

The seed was sown on May 5, in plots one-sixtieth of an acre, the drills being 24 inches apart. The plants were thinned to 8 inches apart in the drills on June 17, and the roots were harvested on September 5.

MANGELS—TEST OF VARIETIES

Varieties	Yield per acre	
	tons	lb.
Royal Giant Sugar	23	800
Yellow Globe	24	600
Yellow Intermediate	22	100
Giant Yellow Intermediate	26	200
Giant White Sugar	26	1,100
Golden Fleshed Tankard	23	1,700
Danish Studstrup	25	40
Mammoth Long Red	27	900

FIELD CARROTS

Eight varieties and strains of field carrots were tested this season.

The seed was sown on May 12, but owing to the coolness of the soil, germination was rather slow. The plants were thinned to 4 inches apart in the drills on June 20.

The roots were harvested on September 14, and while the yields were not large, the roots were of a fine uniform size, and of a very good quality.

FIELD CARROTS—TEST OF VARIETIES

Varieties	Yield per acre	
	tons	lb.
White Belgian (Bruce)	14	1,700
Danish Champion	15	1,500
Long Orange (Bruce seed)	13	1,900
Mammoth Int., Smooth White	16	40
Large White Vosges	16	400
Half Long White	15	600
Giant White Belgian (Ewing)	16	1,120
Yellow Belgian (Ewing seed)	16	1,840

SWEDE TURNIPS

Swede turnips were sown on land which had grown a crop of beans, both garden and field varieties, the previous season. Fifteen wagon loads of barnyard manure per acre were applied in the fall of 1924 after the crops had been harvested, the land being ploughed during the autumn. In the spring of 1925 the land was thoroughly cultivated in preparation for the seed and was in splendid tilth when the crops were sown on May 16. The seed was sown in uniform test plots of one-sixtieth of an acre, in drills 24 inches apart. Germination was quite rapid, and the percentage high. The plants were thinned to 10 inches apart in the drills on June 17 and the after-growth was very good with a 100 per cent stand.

The roots were harvested on September 5, and were very uniform in size and quite smooth and free from rootlets, and of a much superior quality than usually obtained.

The following table shows the varieties tested and the yields obtained:—

SWEDE TURNIPS—TEST OF VARIETIES

Varieties	Yield per acre	
	tons	lb.
Bangholm (Nappan seed)	23	200
Bangholm (Wm. Ewing seed)	23	1,100
Breadstone	23	1,880
Good Luck	24	60
Jumbo	24	1,500
Selected Purple Top	24	1,740
Ditmars Swede	25	1,120
Canadian Gem	25	640

FALL TURNIPS

Eight varieties and strains of fall turnips were tested this season. They were sown on land on which a crop of peas had grown the previous season, with the same amount of fertilizer per acre added, and with the same preparation and cultivation of the land as that given for the swede turnips.

The seed was sown on May 18, in plots of one-sixtieth of an acre. The drills were 24 inches apart, and the plants were thinned to 10 inches apart on June 17.

The roots were harvested on September 2, and as the varieties tested are not noted for their keeping qualities they were fed during the autumn to all classes of stock.

FALL TURNIPS—TEST OF VARIETIES

Varieties	Yield per acre	
	tons	lb.
Pomeranian White Globe	21	900
Aberdeen Purple Top	24	1,200
Green Top Yellow, Aberdeen	20	500
Greystone	23	1,040
White Globe	26	500
Early Six Weeks	29	800
Red Paragon	23	1,280
Hardy Green Round	22	1,360

ENSILAGE

FIELD CORN

The land used for growing field corn had grown a crop of wheat the previous season. After the wheat crop had been removed barnyard manure was applied at the rate of fifteen wagon loads per acre just previous to ploughing. Before seeding, the land was well worked over with a spring tooth harrow. Ten varieties were planted on May 11 in hills 3 feet apart each way. A severe frost on August 22 stopped all further growth, and the crop was cut on August 24 and placed in large stooks, remaining so until August 31. During the time the corn remained in the stooks the outside bundles became quite dry; this lessened the total green weight considerably, but as the corn was mixed with more succulent crops in the silo no material damage resulted nor was the feed value lowered.

FIELD CORN—TEST OF VARIETIES

Varieties	Height in inches	Yield of green weight per acre	
	inches	tons	lb.
Quebec Yellow No. 28	84	19	1,750
Longfellow I.O. (Duke seed)	82	17	500
Comptons Early I.O. (Duke seed)	80	16	1,150
North Western Dent (McKenzie seed)	56	15	—
Twitchell's Pride (Fredericton)	72	15	1,920
N. Western Dent (N. Dakota Seed Co.)	69	15	1,710
N. Western Red Dent (N. Dakota Seed Co.)	72	16	1,750
Rustlers White Dent (Steele Briggs)	75	16	940
Yellow Fodder (Steele Briggs)	72	18	240
Burr Leaming (Carter seed)	75	17	1,490

All seed with the exception of Rustlers White Dent and Yellow Fodder, were supplied by the Forage Crops Division, Ottawa.

SUNFLOWERS

Twelve varieties and strains of sunflowers were tested this season. The seed was sown in duplicate plots 1/60 of an acre between May 9 and 18, and harvested between August 28 and 31. The land had been summerfallowed the

previous season and barnyard manure was applied in the spring of 1924 at the rate of 15 large wagon loads per acre. The land was kept thoroughly cultivated during the balance of the season.

With the view to making a comparison of the same varieties as to earliness and productiveness when thinned and unthinned, one set of plots were thinned to 8 inches apart while a duplicate series of plots were left unthinned. The results will be found in the tables following:—

SUNFLOWERS—TEST OF VARIETIES

Variety	Height	Maturity	Yield per acre			
			Plants 8 in. apart in rows		Unthinned rows	
	inches		tons	lb.	tons	lb.
No. 1. Mammoth Russian C.P.R. seed.	78	100 p.c. in bloom	21	1,200	31	1,000
No. 2. Mammoth Russian (McDonald seed).	96	50 p.c. in bloom	28	760	36	1,800
No. 3. Manchurian (C.P.R. seed).	78	100 p.c. in bloom	22	160	36	600
No. 4. Manchurian (McKenzie seed).	78	100 p.c. in bloom, soft dough	22	1,360	33	1,800
No. 5. Manchurian (Steele Briggs seed).	84	100 p.c. in bloom, soft dough	21	360	33	1,200
No. 6. Russian Giant (Dakota Seed Co).	99	35 p.c. in bloom, very soft dough.	24	—	36	—
No. 7. Mennonite (Rosthern E. F. seed).	48	100 p.c. in bloom, 25 p.c. fully matured.	15	1,800	18	840
No. 8. Manteca	72	100 p.c. in bloom, in firm dough.	18	1,200	26	200
No. 9. Black seeded (C.P.R. Seed)	72	75 p.c. had reached maturity	25	1,000	27	1,800
No. 10. Ottawa 76 (C.E.F. Seed)	72	50 p.c. ripe, 50 p.c. firm dough	22	160	32	200
No. 11. Mixed (C.P.R. seed)	78	25 p.c. in bloom, the seed heads small.	21	1,440	26	200
No. 12. Mixed (Our own seed)	84	25 p.c. ripe, 75 p.c. in firm dough	34	400	34	400

SALMON ARM, B.C.

REPORT OF THE SUPERINTENDENT, THOS. A. SHARPE

The past year was one of the most unsatisfactory since this Station was established. Owing to lack of rain, the ground was so dry that much of the seed sown did not germinate, and practically all crops were a failure.

Field corn did not show above the ground until 20 days after it was planted, and then only a few feeble spears appeared. The crop was late and poor but a few good ears were produced and these were saved for seed.

Garden corn was planted in hills but the growth was very slow and feeble and the few cobs that were produced were short and of poor quality. All other garden crops were a complete failure.

Field roots, like other crops suffered from a lack of moisture, in nearly all cases the seed failed to germinate.

In order to produce humus and nitrogen, in which the bench lands are very lacking, soja beans are sown between the rows of apple trees, and ploughed under. This year the crop was poor, the stalks being small with a poor stand of leaves, and but few pods ripened. However, a small quantity of seed was saved in the hope that with a more favourable season better results might be obtained.

—	Temperature		Snow	Rain	Sunshine	
	High	Low				
			inches	inches	hr.	min.
January	49	3	40¾	.....	40	18
February	52	17	15¼	·59	55	36
March	54	21	2½	·36	118	—
April	79	29	.....	·47	190	36
May	88	35	.....	·66	262	12
June	99	39	.....	·92	253	48
July	97	47	.....	·16	321	36
August	94	41	.....	1·10	186	18
September	80	35	.....	·41	172	18
October	66	26	4¼	·27	137	24
November	59	19	¾	·60	63	36
December	45	26	25¼	·52	12	−06
Total	.....	.....	88½	5·06	1,813	48

SWEDE CREEK, YUKON TERRITORY

Seeding was begun on May 9 but after that date the weather was cold and backward. A flood on May 14 inundated the test plots on the bottom land and necessitated their being reseeded. It was June 15 before this land was ready to work and as this was too late for grain the land was seeded to oats for hay yielding 3 tons of cured hay per acre. Drought during the latter part of July and early August affected the yield of grain on the bench lands.

The following meteorological records for the year 1925 give temperature, precipitation and sunshine.

Months	Temperature Fahrenheit				Precipitation			Sunshine	
	Maximum	Date	Minimum	Date	Rain	Snow	Total	Hours	Minutes
January	1	5	−66	28	.....	4¾	0·48	16	36
February	12	28	−59	1	.....	6¾	0·68	80	.....
March	36	23	−39	14	.....	8¾	0·87	139	.....
April	47	28	− 7	1	.....	2½	0·25	220	.....
May	69	28	23	4	0·74	.....	0·74	270	42
June	82	12	39	7	0·85	.....	0·85	265	54
July	90	24	38	9	1·52	.....	1·52	313	54
August	75	18	26	25	1·31	.....	1·31	189	36
September	66	21	23	30	2·00	.....	2·00	121	42
October	58	18	−4	27	0·85	.....	0·85	79	30
November	33	7	−16	2	.....	7½	0·75	6	36
December	21	27	−39	6–7	.....	9¼	0·92	0	.....

CEREALS

The area devoted to field tests of grains is situated on bench land where soil improvement is being carried on, consisting of the ploughing under of green crops. A 3-year rotation is being followed, namely, hoed crop, grain, hay with aftermath ploughed under. Barnyard manure is scarce but where it has been applied the yields have been noticeably higher than on unmanured land.

WHEAT

One acre of Marquis wheat seeded on dry land on May 13, matured in 88 days and yielded 20 bushels of extra good quality, while another acre of Marquis wheat seeded on damper ground on May 19 yielded 24 bushels of only feed

quality. It seems probable that if the acre of damp land had been seeded with an earlier maturing variety it would have yielded fully as much good quality grain as the acre of dry land.

OATS

Three acres of Victory oats seeded on May 9 matured in 91 days and yielded 130 bushels of excellent quality.

BARLEY

Chinese barley seeded on May 15 yielded 26 bushels to the acre while Manchurian white hulless yielded only 18 bushels, and Success 24 bushels to the acre. The yields were affected by drought.

FORAGE CROPS

The seven acres devoted to grain were seeded with a mixture of timothy, alsike, and red clover which at the time of harvesting grain did not look very promising, but later with the fall rains improved wonderfully. A further three-quarters of an acre was seeded to alfalfa. This crop seeded in former years has always withstood winter conditions very well and has given a fair growth the following year. However, while many seed pods form they do not ripen.

SOIL IMPROVEMENT

One-half acre seeded with rye and buckwheat gave a fair growth and was ploughed under on August 19.

Three acres seeded with sweet clover produced a heavy growth after the fall rains and was also ploughed under.

HOED CROPS

Hoed crops were grown on 2 acres of timothy sod, one-half acre of which received a light dressing of barnyard manure and was ploughed down in August. The balance received no manure but was all ploughed under, and in the spring was planted to potatoes between May 20-26. The method of planting and cultivation was uniform over the whole two acres. The area which had been manured withstood the drought better and yielded at the rate of 6 tons per acre while the unmanured area yielded only 2 tons per acre.

Another plot which was spring ploughed was planted with potatoes on May 16. The drills were ploughed and the seed dropped and covered with about 2 inches of fine earth. Ten days later they were given an application of stable manure in the drills, and were then covered with earth. The yield from this plot was double that of an unmanured plot which in all other respects had received similar treatment.

One-quarter acre each of Danish Queen and Monarch swede turnips were planted on May 19. Although in the early stages growth was very slow, the favourable weather in September resulted in a fair yield of excellent quality.

HORTICULTURE

Beets, onions, carrots and garden peas were washed out by the flood on May 14 but were replanted on May 29.

Crosby's Egyptian, Detroit red turnip and Detroit dark red turnip beets were all ready for use on August 2, Crosby's Egyptian giving the best results.

Extra Select Red Wethersfield onions gave better results than Extra Flat Red Wethersfield and White Barletta.

Carrots owing to their being planted late were not a good crop. Garden peas planted on May 29 were ready for use on August 6, but corn was a failure.

The following varieties of cabbage were planted: Danish Ball-head, Early Winnigstadt, Copenhagen Market and Extra Early Express, the last two named being the best for main crop. Danish Ball-head are excellent keepers but being a late variety they do not head every season.

Early Snowball and Extra Early Erfurt cauliflower both did very well, being ready for use on August 9.

FORT RESOLUTION, N.W,T.

By April 25 practically all the snow had disappeared from the fields and work was started on the hot beds outdoors. Ploughing was begun on May 12 and the first potatoes were planted on May 18. The garden was planted between May 18 and 25 and oats were sown during the last week in May. June was remarkable for the heat and drought but as there was an abundance of moisture in the ground crops did not suffer to any great extent. Light rains fell during the latter part of July and these were very beneficial to the crops. September was a cool month with occasional rains which delayed harvesting somewhat. On the whole the season of 1925 was a very successful one.

CEREALS AND FORAGE CROPS

As usual an abundant hay crop was harvested along the shore of the Great Slave river, for the winter feeding of cattle. The hay crop on the meadows at the Station was not as good as usual, the yield being rather light. It consisted of western rye, brome grass, timothy, and red top. The poor yield of meadow hay was not due to lack of moisture nor poverty of the soil but was apparently due to the fact that the land was not ploughed deep enough to enable the frozen understrata to thaw out thoroughly.

Banner oats yielded well but there was a fairly large percentage of carbonized ears.

Corn was grown for the first time with very encouraging results.

VEGETABLES

The potato crop was exceptionally good both as to yield and the size of the tubers.

Turnips and cabbage plants were attacked by root worms but these were effectively combated with a mixture of "Calcarsen."

Carrots suffered somewhat from the drought but many grew to an enormous size.

Tomatoes and cucumbers which have never before been known to mature in this region were a decided success this year.

Cauliflower, swiss chard, beans, beets, parsnips, celery, lettuce and radishes also did well. Onions were the only crop that failed.

By the third week in July there was an abundance of bloom in the flower garden. Among the varieties grown were Lavateria, stocks, asters, ganditias, forget-me-not, poppies, petunias, evening-stars, everlastings, pansies, daisies and lions teeth. The perennials were all in bloom about June 10.

FORT PROVIDENCE, N.W.T.

The season of 1925 was not favourable to crops as the needed rain arrived too late. The success of certain crops such as carrots, cabbages and turnips is due solely to the artificial watering which was practised on a fairly large scale.

POTATOES

The land was well ploughed, and had been well manured the previous fall. Germination was fairly good and the plants appeared practically everywhere at normal time, but very hot weather was experienced during the whole month of June, and not a drop of rain fell. As a result many potato plants dried off and disappeared, but others withstood the drought, no doubt because the set planted was larger and sustained the sprout. Rain set in during the last days of July and everything became green again after a few days.

As usual, the tubers were dug out about September 15. Some of the tubers reached a fine size, but they seem to contain too much water and it is a question if they will keep as well as the remainder until spring.

GARDEN CROPS

White and red carrots, long and short, reached a fairly fine size. A few red Chantenay carrots weighed one pound.

A few cabbages, mainly of the Copenhagen Market variety, weighed 8, 9, and 10 pounds.

Gem Toronto lettuce, also succeeded well.

Turnips and rutabagas were larger and weighed more than was expected, considering the unfavourable season.

For the first time, a few corn plants succeeded and reached a reasonable size.

WHEAT AND BARLEY

No barley or wheat was sown this year because these crops, especially the latter, failed to ripen for several years in succession.

OATS

The oat crop was slightly below the average owing to the drought and, later, the clouds of birds which pecked at and destroyed the heads. Part of these oats which could not mature were cut as green feed for stock.

HAY

The hay fed to the 30 head of cattle wintered in the stable was cut in a fairly large natural meadow some 4 miles distant from the Station. Sufficient was obtained to supply the needs of the stock during the whole winter and early spring.

POULTRY

One hundred and thirty-five hens and 450 chickens were wintered and produced 995 dozen eggs. Oats form part of the poultry feed but wheat and other grains required are brought in from outside.

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