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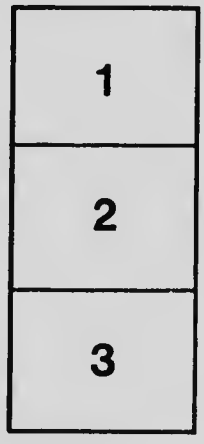

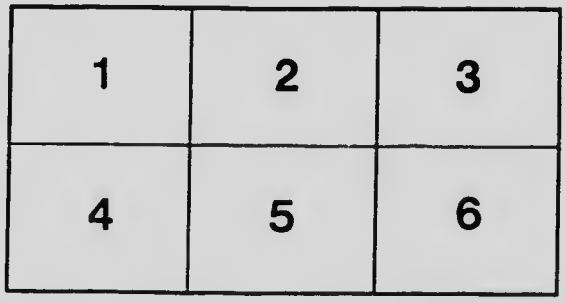

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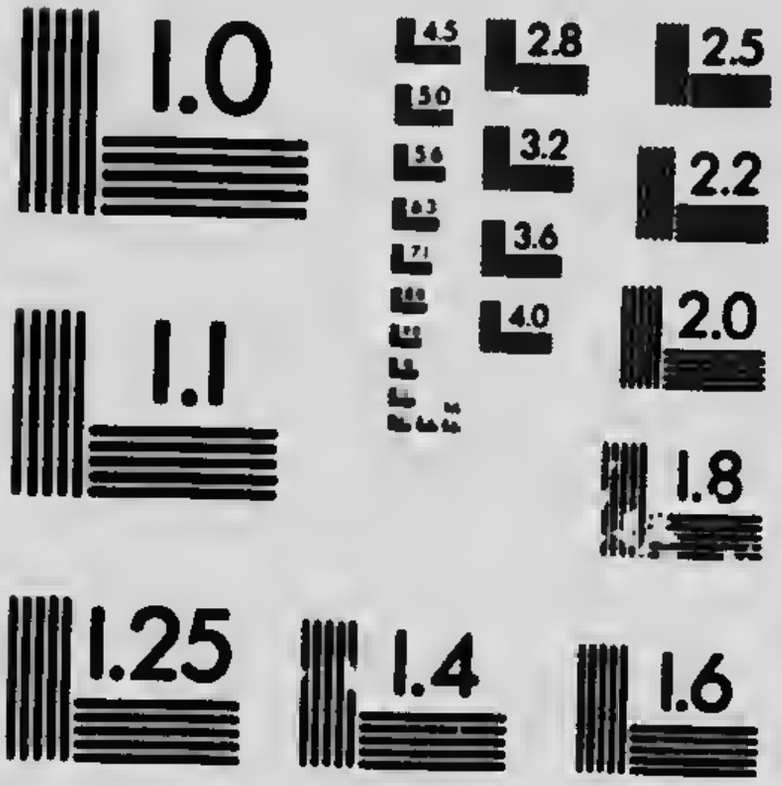

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DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM
OTTAWA, CANADA

RESULTS OBTAINED IN 1907

ON THE

DOMINION EXPERIMENTAL FARMS

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

BY

WILLIAM SAUNDERS, C.M.G., LL.D.
Director of Experimental Farms

AND

CHAS. E. SAUNDERS, Ph. D.
Cerealist

BULLETIN No. 58

DECEMBER, 1907

PUBLISHED BY DIRECTION OF THE HON. SYDNEY A. FISHER,
MINISTER OF AGRICULTURE

To the Honourable

The Minister of Agriculture.

SIR,—I beg to submit herewith, for your approval Bulletin No. 58 of the Experimental Farm series, which has been prepared by the Cerealist, Dr. C. E. Saunders and myself. There are presented in this publication the results of a large number of experiments, which have been conducted at all the experimental farms in your Department during the season of 1907, with spring wheat, durum or macaroni wheat, emmer and spelt, oats, barley, peas, Indian corn, turnips, mangels, carrots, sugar beets and potatoes. The average results are also given of the tests for the past five years of those varieties which have been long under trial.

These test plots are conducted with the object of gaining information as to the relative productiveness of the different sorts and their earliness in ripening. The returns show much variation in the weight of the crops grown and point to the importance of care in the choice of varieties of seed for sowing. It is hoped that these results giving the experience gained under some of the more important climatic variations found in the country, will prove useful to farmers in every part of ada.

I have the honour to be sir,

Your obedient servant.

WM. SAUNDERS,
Director of Experimental Farms.

OTTAWA, December 4th, 1907.

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RESULTS OBTAINED

ON THE

DOMINION EXPERIMENTAL FARMS

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

By William Saunders, C.M.G., LL.D., F.R.S.C., F.L.S., &c.
Director of Experimental Farms

and Chas. E. Saunders, B.A., Ph.D., *Cerealist.*

During the past thirteen years experiments have been conducted on uniform trial plots at each of the older Dominion Experimental Farms for the purpose of gaining information as to the most productive and earliest ripening varieties of grain, fodder corn, field roots and potatoes. In arranging for these plots, the seed has always been supplied at the outset from a common stock. In each case the seed has been sown as early as practicable and, as a rule, all the different varieties of the same crop have been sown on the same day or at most within two or three days, so as to give to all an even start. The land chosen for these plots has been as nearly uniform in character as could be found and before sowing has been brought into a good condition of tilth. In this bulletin, which is the thirteenth of the series, the results of the experiments are presented in a somewhat different form from that of the earlier issues. The establishment of additional experimental farms necessarily disturbs the uniformity of the series of tests, viewed as a whole, and makes it seem desirable to bring together under one heading all the facts relative to each farm rather than to classify the returns under the names of the various crops tested. In this way the peculiarities of the climate and soil of each district will be more clearly displayed and the information presented in a form perhaps more convenient and acceptable to most farmers, who with the increase in the number of experimental farms will in most instances be able to look to one particular farm as fairly representing their own conditions and will naturally feel greater interest in this than in the results obtained in other parts of the Dominion.

The varieties are, as far as possible, arranged in the tables in the order of their average yield for the last five years. Those sorts which have not been grown for five years are arranged in the order of their average yield for the time during which they have been tested. While a five-year period is undoubtedly rather short for reaching any final conclusions, it seems undesirable to lengthen it, since by so doing all recently introduced varieties would be kept too long from taking their place in the tables with the older sorts.

The lists of varieties given do not include all the sorts which are being tested on the experimental farms. Some of the new or less important varieties are omitted here but will be referred to in the annual report of the farms.

In computing the averages for these tables the same five years have been used in each case, except in a few instances where the omission or failure of one of the plots made a blank in the records for that year. These instances are marked with a cross† and the true position in the tables of the varieties so marked is to be regarded as somewhat uncertain.

Cross-bred varieties produced on the experimental farms are marked with an asterisk.*

The yields of most of the crops are expressed in the tables in bushels per acre or tons per acre. The legal bushels in Canada are as follows: wheat 60 lbs., oats 34 lbs., barley 48 lbs., peas 60 lbs., potatoes 60 lbs. The ton contains 2,000 lbs. The yields of emmer and spelt are expressed in pounds per acre.

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONTARIO.

Most of the cereals grown on this farm have given very fair yields during 1907; but some of the early sown sorts have given less than an average crop owing to the unusually wet and late spring. Seeding began about a week later than usual, but was interrupted by unfavourable weather which much delayed the completion of the work. The yield of peas has been above the average. Field roots and Indian corn have given fair returns but potatoes have not done nearly so well as usual.

The plots of grain have been reduced in size at this farm from one fortieth of an acre to one sixtieth. More careful handling is possible with the crop from the smaller plot and it is believed that this reduction in size will cause an increase rather than a decrease in the accuracy of the returns.

The yield per acre of the field roots is calculated from that obtained from one hundredth of an acre, the yield of Indian corn from two rows each 65 feet long, and the yield of potatoes from one row 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) grown at the Central Experimental Farm during 1907 are here reported on. The wheat was sown April 29th, the seed being used at the rate of about one and one half bushels per acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Bishop	31 20	99	38 ..	10	Stanley*	26 8	102	25 ..
2	Herisson Bearded	30 30	105	42 ..	11	White Fife	24 42	108	26 30
3	Pringle's Champlain	30 12	103	38 ..	12	Percy*	24 6	102	20 30
4	Colorado	29 56	102	37 ..		(For less than 5 years)			
5	Preston*	29 14	102	26 30					
6	Huron*	28 12	105	33 ..		Riga* (4 years)	27 25	95	29 ..
7	White Russian	27 44	109	33 ..		Hungarian White (3 years)	35 23	103	35 30
8	Red Fife	26 38	108	29 30					
9	Red Fern	26 34	105	30 30					

The average crop in 1907 of the fourteen varieties of spring wheat on the Central Experimental Farm was 31 bushels 39 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

DURUM OR MACARONI WHEAT.

The results of the test of varieties of durum wheat are published in a separate table, as these wheats possess qualities rather different from those of the ordinary sorts of spring wheat. While it is possible to make good flour from some kinds of durum wheat, such flour is generally unpopular. Furthermore the peculiar character of the kernels necessitates the use of somewhat different methods in the milling of these wheats. They are therefore often looked upon with disfavour by millers.

Farmers who grow any of the varieties should exercise great care to prevent them from becoming mixed with the standard sorts used for flour making.

Four of the varieties of durum wheat grown at Ottawa in 19[illegible] are here reported upon. The seed was sown on May 3rd at the rate of about [illegible] and three-quarter bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Roumanian	39 36	108	50 ..	3	Gooso	32 54	106	50 30
2	Yellow Gharnovka ...	33 14	109	32 30	4	Mahmoudi	24 46	108	35 30

The average crop in 1907 of the four varieties of durum wheat on the Central Experimental Farm was 42 bushels 8 lbs. per acre.

EMMER A. [illegible] SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 10 at the rate of about 120 lbs. to the acre. (This is equal to about four measured bushels.)

Common Emmer is the grain sometimes referred to under the incorrect name of "Spelts".

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Lbs.	Days.	Lbs.		(For five years.)	Lbs.	Days.	Lbs.
1	Red Emmer.....	2,202	111	1,930	3	Common Emmer.	2,128	104	2,520
2	Red Spelt.....	2,162	113	2,190	4	White Spelt.....	2,050	110	2,430

The average crop in 1907 of the four varieties of emmer and spelt on the Central Experimental Farm was 2,272 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

OATS.

Thirty-one of the varieties of oats tested at Ottawa are here mentioned.

The seed was sown on May 2nd and 3rd at the rate of about two bushels per acre, except when the oats were unusually large, in which cases about half a bushel more of seed was used.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Twentieth Century	78 10	100	85 20	18	Danish Island	66 22	103	78 18
2	Lincoln	74 14	102	69 24	19	Pioneer	66 22	101	76 26
3	Banner	74 4	102	86 16	20	Golden Fleece†	66 15	104	75 30
4	White Giant	73 12	102	73 8	21	Golden Giant	65 32	107	71 16
5	Wide Awake	71 24	102	71 16	22	Sensation	65 28	101	76 26
6	Golden Beauty	71 16	102	73 8	23	Bavarian†	65 6	104	69 24
7	Irish Victor	71 8	104	87 12	24	Black Beauty	65 ..	102	75 ..
8	American Triumph	70 28	102	82 32	25	Goldfinder	64 2	104	76 26
9	Abundance	70 14	102	85 20	26	Tartar King	63 32	99	83 28
10	Swedish Select†	70 10	101	85 20	27	Improved Ligowo	63 4	102	73 8
11	Thousand Dollar	69 30	100	79 14	28	Siberian	61 32	103	83 28
12	Milford White*	69 20	101	78 18	29	Columbus†	61 18	101	43 8
13	Improved American	69 ..	103	96 6	30	Joanette	59 6	106	65 10
14	Virginia White	67 12	102	57 12		(For less than 5 years,)			
15	Kendal Black*	67 6	104	79 14					
16	Kendal White*	66 30	103	73 8		Storm King (4 yrs.)	44 19	98	68 28
17	American Beauty	66 28	100	75 30					

The average crop in 1907 of the thirty-one varieties of oats on the Central Experimental Farm was 76 bushels, 5 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley grown at Ottawa in 1907 are here mentioned.

The plots of six-rowed barley were sown on April 26th the seed being used at the rate of about one and three quarter bushels per acre.

The plots of two-rowed barley were sown on April 27th the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years,)	Bu. Lbs.	Days.	Bu. Lbs.
1	Nugent*	55 14	95	46 42	9	Empire*	47 18	94	45 30
2	Albert*	53 18	94	35 30	10	Oderbruch	46 28	95	42 24
3	Stella*	52 26	93	50 30	11	Claude*	45 28	96	35 ..
4	Odessa	51 38	93	54 18	12	Argyle*	44 18	94	25 30
5	Blue Long Head	50 34	94	48 6	13	Yale*	42 38	95	15 30
6	Mensury	50 32	93	33 36	14	Mansfield*	38 2	97	33 6
7	Summit*	50 32	92	40 ..	15	Champion (beardless)	34 4	92	35 ..
8	Trooper*	49 42	91	31 42					

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Central Experimental Farm was 38 bushels, 12 pounds per acre.

Central Experimental Farm, Ottawa, Ontario.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days	Bu. Lbs.
1	Standwell	47 42	99	40 30
2	Canadian Thorpe	47 26	99	48 6
3	Invincible	47 26	100	46 42
4	French Chevalier	46 40	98	27 24
5	Jarvis *	45 10	96	40 30
6	Clifford *	44 44	97	47 24
7	Danish Chevalier	44 38	98	38 6
8	Beaver *	43 22	95	38 6
9	Gordon *	40 46	97	25 30
10	Sidney *	38 18	98	26 42
11	Logan *	36 24	99	32 24
12	Dunham *	36 18	99	34 18
	(For less than 5 years.)			
	Swedish Chevalier (4 years)	52 12	96	54 18

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Central Experimental Farm was 38 bushels 27 lbs. per acre.

PEAS.

Twenty of the varieties of peas grown at Ottawa are here mentioned. The plots were sown on May 8th. The quantity of seed used per acre varied from two to three bushels, depending on the size of the pea.

Number.	Varieties tested.	Average yield.	Average days maturing	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Picton *	36 12	106	43 ..
2	Prussian Blue	36 ..	104	47 ..
3	Victoria *	35 42	110	40 30
4	Golden Vine	35 24	107	34 ..
5	Chancellor	34 58	103	41 30
6	Gregory *	34 48	110	40 ..
7	English Grey	34 44	108	43 ..
8	Prince *	34 4	108	42 ..
9	Mackay *	33 42	107	44 ..
10	Paragon *†	33 42	104	50 30
11	Early Britain	33 22	108	46 30
12	Daniel O'Rourke	32 56	105	42 ..
13	Agnes *	32 46	106	37 30
14	Wisconsin Blue	32 46	106	46 30
15	Archer *	32 16	109	38 ..
16	Prince Albert	31 50	108	41 30
17	Arthur *	31 12	102	43 ..
18	White Marrowfat	30 52	106	43 ..
19	Nelson *	30 26	102	50 30
20	Black-eye Marrowfat	30 18	107	39 30

The average crop in 1907 of the twenty varieties of peas on the Central Experimental Farm was 42 bushels, 40 lbs. per acre.

INDIAN CORN.

Twenty varieties of Indian corn were tested at Ottawa during 1907. They were sown in rows about three feet apart and the plants thinned out to six or eight inches apart in the rows.

Central Experimental Farm, Ottawa, Ontario.

The seed was sown on June 1st and the crop was cut green for ensilage on September 28th.

Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Eureka	23	552	27	120
2	Early Mastodon	22	817	21	900
3	Giant Prolific Ensilage	22	671	23	640
4	Superior Fodder	22	88	22	1,480
5	Red Cob Ensilage	21	900	21	1,230
6	Early Butler	19	1,798	17	430
7	Salzer's All Gold	19	1,490	21	350
8	Mammoth Cuban	18	1,994	15	1,020
9	Selected Leaming	18	1,972	19	390
10	Pride of the North	18	1,554	14	1,480
11	Compton's Early	18	861	16	1,000
12	Longfellow	18	696	16	1,770
13	Clouds Early Yellow	18	608	16	1,000
14	Champion White Pearl	18	25	16	1,110
15	White Cap Yellow Dent	17	848	15	360
16	King Philip	17	628	16	670
17	North Dakota White	16	1,814	14	1,370
18	Angel of Midnight	15	1,218	15	580
	(For less than 5 years.)				
	Wood's Northern Dent (2 yrs.)	18	1,125	21	1,560
	Early Leaming (2 yrs.)	14	875	15	800

The average crop in 1907 of the twenty varieties of Indian corn on the Central Experimental Farm was 18 tons 911 lbs. per acre.

TURNIPS.

Twelve of the varieties of field turnips tested at Ottawa in 1907 are here reported upon. The seed was sown in drills two feet apart and the young plants thinned out to about seven inches apart in the rows. The seed was sown on May 23rd and the roots were pulled Oct. 22nd.

Number.	Varieties tested.	Average yield		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Kangaroo	33	976	32	100
2	Jumbo	33	625	33	300
3	Mammoth Clyde	32	1,807	33	400
4	Good Luck	31	519	35	1,400
5	Hartley's Bronze	30	1,359	34	100
6	Magnum Bonum	30	1,191	33	1,900
7	Perfection Swede	29	1,992	31	400
8	Hall's Westbury	29	3	36	1,500
9	Halewood's Bronze Top	27	1,737	32	1,000
10	Skirvings	27	758	31	800
11	Carter's Elephant	27	449	30	200
12	Bangholm Selected	24	527	28	1,000

The average yield in 1907 of the twelve varieties of turnips on the Central Experimental Farm was 33 tons 142 lbs. per acre.

MANGELS.

Ten sorts of mangels were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about seven inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 21st.

Central Experimental Farm, Ottawa, Ontario.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Prize Mammoth Long Red	36	3	29	200	7	Giant Yellow Globe	28	96	28	1,700
2	Half Sugar White.....	33	1,145	18	300		(For less than 5 years.)				
3	Giant Yellow Intermediate	33	870	30	200		Perfection Mammoth Long Red (1 year)	.....		28	1,600
4	Selected Yellow Globe.....	33	468	30	600		Crimson Champion (1 yr.).	.....		27	1,800
5	Yellow Intermediate.....	32	487	25	1,100		Mammoth Red Inter.(1 yr.)	.....		23	200
6	Gate Post	30	280	31	1,100						

The average yield in 1907 of the ten varieties of mangels on the Central Experimental Farm was 27 tons 680 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about five inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Improved Short White ...	27	758	30	900	4	Ontario Champion	26	602	27	1,100
2	Giant White Vosges.....	26	1,395	27	1,400	5	White Belgian	20	1,425	21	900
3	Mammoth White Intermediate	26	1,085	20	900	6	Half Long Chantenay ...	17	1,865	20	1,900

The average yield in 1907 of the six varieties of carrots on the Central Experimental Farm, was 24 tons, 1,517 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Ottawa in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about five inches apart in the rows. The seed was sown May 23rd and the roots were pulled Oct. 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Wanzleben	24	1,509	20	700	3	Vilmorin's Improved	22	1,871	23	1,200
2	French Very Rich	23	1,611	21	–						

The average yield in 1907, of the three varieties of sugar beets on the Central Experimental Farm was 21 tons 1,300 lbs. per acre.

Central Experimental Farm, Ottawa, Ontario.

POTATOES.

Twenty-eight kinds of potatoes grown at Ottawa are here mentioned.

For planting, the potatoes were cut into pieces with at least three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows.

The potatoes were planted on May 28th and were dug October 15th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Carman No. 1	314	10	184	48	17	Empire State	233	38	125	24
2	Dreer's Standard	299	38	151	48	18	Irish Cobbler	226	10	123	12
3	Canadian Beauty	294	48	149	36	19	Maule's Thoroughbred	225	17	125	24
4	Burnaby Mammoth	283	22	125	24	20	Early Rose	224	50	127	36
5	Late Puritan	280	17	138	36	21	Early White Prize	175	34	140	48
6	Holborn Abundance	279	50	169	24	22	Early Envoy	174	14	107	48
7	Sabean's Elephant	274	34	143	..	23	Bovee	155	19	129	48
8	Everett	263	7	156	12		(For less than five years.)				
9	Rochester Rose	262	41	132	..						
10	State of Maine	261	48	173	48		Dooley (3 years)	241	16	217	48
11	Vick's Extra Early	258	43	143	..		Vermont Gold Coin (3 years)	218	32	169	24
12	Reeves' Rose	252	7	125	24		Morgan Seeding (3 years)	213	24	145	12
13	American Wonder	251	57	140	48		Dalmeny Beauty (2 years)	270	36	327	48
14	Uncle Sam	251	14	112	12		Ashleaf Kidney (2 years)	137	30	123	12
15	Country Gentleman	249	55	187	48						
16	Money Maker	249	2	57	12						

The average crop in 1907 of the 28 varieties of potatoes on the Central Experimental Farm, was 148 bus., 22 lbs. per acre.

EXPERIMENTAL FARM, NAPPAN, N.S.

At the Experimental Farm at Nappan, Nova Scotia, the spring was cold and wet and consequently very backward. The earliest sowing of grain was on May 20th. There was good growing and ripening weather later in the season and notwithstanding much wet weather in September which was detrimental to the hay crop the grain crops were fairly good. Wheat and barley averaged about the same as last year, while oats gave much better returns than in 1906. Indian corn cut green for ensilage owing to unfavourable weather fell considerably short of an average crop. All field roots and potatoes gave liberal returns.

The plots of grain were one-fortieth of an acre. The yield per acre of the Indian corn, field roots and potatoes has been calculated from the crop obtained from two rows each 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) were grown at the Nappan Experimental Farm. The wheat was sown May 20th, the seed being used at the rate of about one and one-half bushels per acre.

Experimental Farm, Nappan, N. S.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Preston*	30 16	109	35 20
2	White Fife	30 16	112	28 20
3	White Russian	29 44	112	36 40
4	Red Fife	29 16	111	23 40
5	Pringle's Champlain	28 ..	108	25 40
6	Red Fern	28 ..	109	40 40
7	Stanley*	27 32	111	28 ..
8	Colorado	25 48	107	23 20
9	Huron*	24 40	110	27 20
10	Herisson Bearded	24 16	108	25 20
11	Percy*	23 52	111	26 40
	(For less than 5 years.)			
	Bishop* (3 yrs.)	29 7	107	22 40
	Hungarian White (3 yrs.)	28 ..	107	26 40
	Riga* (2 yrs)	27 20	107	27 40

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Nappan, N.S., was 28 bushels 26 lbs. per acre.

DURUM OR MACARONI WHEAT.

The durum wheats do not usually give very heavy crops in the rather moist climates of Eastern Canada. They are also very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making and should only grow such quantities as they require for feed or to meet special demands.

Four varieties of durum wheat were grown at Nappan. The seed was sown on May 20th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Roumanian	22 8	110	32 ..
2	Goose	20 30	109	24 40
	(For less than 5 years.)			
	Yellow Gharnovka (4 years)	19 10	107	25 20
	Mahmoudi (4 years)	17 10	107	28 ..

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Nappan, N.S., was 27 bushels 30 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 20th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield for 1907.
	(For four years.)	Lbs.	Days.	Lbs.
1	White Spelt	1,950	113	1,800
2	Red Spelt	1,940	113	2,040
3	Common Emmer	1,385	106	1,860
4	Red Emmer	1,110	112	1,280

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Nappan, N.S., was 1,745 lbs. per acre.

Experimental Farm, Nappan, N. S.

OATS.

Thirty-one varieties of oats tested at Nappan are here reported on.
The seed was sown on May 21st at the rate of about 2½ bushels per acre.

Number.	Varieties Tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties Tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Siberian	74 30	107	70 20	18	Golden Giant	64 20	111	77 22
2	Goldfinder	71 22	109	73 18	19	Abundance	64 8	105	72 12
3	Banner	70 24	104	74 4	20	White Giant	63 30	106	60 ..
4	Twentieth Century	70 24	103	67 2	21	Kendal White*	63 20	106	74 24
5	Improved Ligowo	70 20	104	63 18	22	Kendal Black*	62 12	106	72 32
6	Joanette	69 22	103	68 28	23	American Beauty	62 8	106	71 6
7	Swedish Select	69 10	105	62 32	24	Wide Awake	61 14	105	61 6
8	Thousand Dollar	68 24	105	60 ..	25	Tartar King	60 32	103	76 16
9	Golden Fleece	68 20	106	71 26	26	Columbus	60 4	106	65 30
10	Pioneer	68 8	102	68 8	27	Milford White*	58 ..	106	74 4
11	Lincoln	68 4	105	61 26	28	Irish Victor	55 22	105	60 20
12	Improved American	67 30	106	75 10	29	American Triumph	54 4	111	63 18
13	Sensation	67 6	104	62 12		(For less than 5 years.)			
14	Bavarian	66 16	105	67 2					
15	Black Beauty	65 26	103	71 26		Storm King (4 yrs)	54 9	102	65 30
16	Golden Beauty	65 10	105	71 26		Virginia White (2 yrs)	58 8	104	68 8
17	Danish Island	65 2	106	67 22					

The average crop in 1907 of the thirty one varieties of oats on the Experimental Farm at Nappan, N.S., was 68 bushels 16 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed, grown at Nappan in 1907 are here mentioned.

These plots were all sown on May 22nd the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Mensury	48 24	95	41 32	10	Nugent*	40 4	97	35 ..
2	Empire*	45 40	96	49 40	11	Yale*	40 ..	97	33 16
3	Oderbruch	45 20	93	37 24	12	Mansfield*	38 20	97	38 20
4	Albert*	44 16	94	34 8	13	Claude*	38 12	94	31 32
5	Stella*	44 16	99	38 16	14	Champion	35 40	92	27 24
6	Trooper*	43 12	94	33 16		(For less than 5 years.)			
7	Odessa	43 12	93	35 40					
8	Argyle*	41 12	95	40 ..		Blue Long Head (2 yr).	38 16	99	36 32
9	Summit*	40 20	99	28 16					

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Nappan N.S. was 35 bushels 24 lbs. per acre.

Experimental Farm, Nappan, N. S.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Danish Chevalier	54 36	98	56 32	10	Gordon*	35 4	98	36 32
2	French Chevalier	50 36	98	58 16	11	Sidney*	33 40	98	29 8
3	Beaver*	46 34	97	46 32	12	Jarvis*	32 4	98	25 40
4	Logan*	40 32	98	42 22		(For less than 5 yrs).			
5	Dunham*	40 28	98	45 ..					
6	Clifford*	39 34	98	43 16					
7	Invincible	39 2	99	34 8		Swedish Chevalier (3 years)	40 47	101	47 24
8	Canadian Thorpe	37 8	99	44 8					
9	Standwell	35 36	99	40 ..					

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Nappan N. S. was 42 bushels 12 lbs. per acre.

PEAS.

Twenty varieties of peas were grown at Nappan as at the other farms. The quantity of seed used being from 2 to 3 bushels per acre depending on the size of the pea. These were harvested and left in the field in bundles to dry and on October 8th, they were exposed to a rain storm with a violent wind which mixed the varieties so badly that it was impossible to separate them so as to preserve their identity. Under the circumstances it has been thought best to introduce the table of last year which gives the average of the crops of peas for the five years, ending with 1906, also the crop of that year.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1906.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1906.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Archer*	30 52	113	18 40	11	Mackay*	26 40	113	19 20
2	Prince Albert	30 36	112	29 20	12	Black-eye Marrowfat	26 40	113	20 ..
3	Agnes*	30 8	112	16 40	13	Daniel O'Rourke	26 28	110	19 ..
4	Nelson*	29 36	111	18 40	14	Paragon*	26 16	111	35 20
5	Chancellor	29 24	109	18 ..	15	Golden Vine	25 52	110	22 ..
6	White Marrowfat	29 ..	111	24 ..	16	Prince*	25 52	113	30 ..
7	Arthur*	28 40	109	17 20	17	Early Britain	25 12	109	28 .
8	Gregory*	28 ..	114	26 ..	18	Picton*	24 44	112	20 ..
9	Victoria*	26 48	117	28 40	19	Wisconsin Blue	24 24	112	22 40
10	English Grey	26 48	112	14 40	20	Prussian Blue	23 ..	110	19 ..

The average crop in 1906 of the 20 varieties of peas, on the Experimental Farm at Nappan, was 22 bushels 22 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Nappan during 1907. They were sown in rows about three feet apart and the plants thinned out to six to eight inches apart in the rows.

Experimental Farm, Nappan, N. S.

The seed was sown on June 14th and the crop was c t green for ensilage on October 23rd.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Eureka	19	1,820	13	730	14	Champion White Pearl	15	1,790	11	1,430
2	Red Cob Ensilage	19	16	11	1,870	15	Mammoth Cuban	15	1,780	12	750
3	Early Mastodon	18	1,840	12	1,300	16	Clond's Early Yellow	15	988	8	1,600
4	Salzer's All Gold	18	1,334	12	1,850	17	North Dakota White	15	712	9	1,910
5	Giant Prolific Ensilage	18	850	13	950	18	White Cap Yellow Dent	14	1,810	8	1,820
6	Longfellow	17	1,702	11	1,650		(For less than 5 years.)				
7	Superior Fodder	17	320	10	900						
8	Angel of Midnight	17	194	9	1,580		Early Leaming (2 years)	17	100	11	1,650
9	Selected Leaming	16	1,770	10	570		Early Longfellow (2 years)	16	65	13	180
10	Pride of the North	16	1,330	8	1,600		Wood's Northern Dent (2 years.)	13	950	10	1,450
11	Early Butler	16	1,000	11	550						
12	Compton's Early	16	824	9	1,030						
13	King Philip	16	748	10	570						

The average crop in 1907 of the twenty one varieties of Indian corn on the Experimental Farm at Nappan was 11 tons 283 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips tested at Nappan in 1907 are here reported upon. The seed was sown in drills two feet apart and the young plants thinned out to about 10 or 12 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on November 9th.

Number.	Varieties tested.	Average Yield.		Yield in 1907.		Number.	Varieties tested.	Average Yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Perfection Swede	37	1,344	29	575	7	Halewood's Bronze Top	35	302	30	60
2	Magnum Bonum	36	1,420	29	80	8	Hall's Westbury	34	1,847	32	1,175
3	Jumbo	36	1,270	30	225	9	Carter's Elephant	34	873	31	1,525
4	Good Luck	36	765	34	1,465	10	Mammoth Clyde	34	136	26	1,295
5	Kangaroo	36	642	31	1,855	11	Skirvings	33	1,046	28	100
6	Hartley's Bronze	35	449	28	265	12	Bangholm Selected	32	1,355	26	635

The average yield in 1907 of the twelve varieties of turnips on the Experimental Farm at Nappan, N.S., was 29 tons 1,771 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Nappan in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 or 12 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on October 26th.

Experimental Farm, Nappan, N. S.

Number.	Varieties tested.	Average Yield.	Yield in 1907.	Varieties tested.	Average Yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.	(For less than 5 years.)	Tons. Lbs.	Tons. Lbs.
1	Yellow Intermediate	33 124	36 1,425	Mamm. Red Intermediate (1 year)	26 1,295	26 1,295
2	Giant Yellow Intermediate	32 468	38 1,385	Crimson Champion (1 year)	26 800	26 800
3	Half Sugar White	29 1,895	31 1,525	Perfection Mamm. Long Red (1 year)	25 1,480	25 1,480
4	Prize Mamm. Long Red	29 1,019	32 1,175			
5	Selected Yellow Globe	28 1,303	28 925			
6	Giant Yellow Globe	27 1,505	27 450			
7	Gate Post	25 704	36 600			

The average yield in 1907 of the ten varieties of mangels on the Experimenta' Farm at Nappan, N.S., was 28 tons 1,059 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Nappan in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on June 15th and the roots were pulled on October 26th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
		Tons. Lbs.	Tons. Lbs.			Tons. Lbs.	Tons. Lbs.
1	Ontario Champion	19 423	17 815	4	Half Long Chantenay	17 73	16 505
2	Giant White Vosges	18 780	15 30	5	White Belgian	16 1,823	14 50
3	Mamm. White Intermediate	18 452	14 1,700	6	Improved Short White	16 906	16 835

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Nappan, N.S., was 15 tons 1,322 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Nappan in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on June 1st and the roots were pulled on October 26th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Wanzleben	17 900	15 195	3	French Very Rich	14 1,516	12 1,575
2	Vilmorin's Improved	17 276	13 730				

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Nappan, N.S., was 13 tons 1,500 lbs. per acre.

Experimental Farm, Nappan, N.S.

POTATOES.

Twenty-eight kinds of potatoes grown at Nappan are here mentioned.

For planting, the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being planted about a foot apart in the rows.

The potatoes were planted on June 3rd and were dug October 9th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Vick's Extra Early	474	19	532	24	17	Country Gentleman	334	24	367	24
2	Rochester Rose	432	58	576	24	18	American Wonder	325	36	396	..
3	Everett	388	58	561	..	19	Uncle Sam	322	5	299	12
4	Late Puritan	383	14	484	..	20	Bovee	311	58	393	36
5	Empire State	369	10	418	..	21	Dreer's Standard	299	12	349	48
6	Holborn Abundance	368	43	490	36	22	Early Rose	298	19	358	36
7	Carman No. 1	365	12	470	48	23	Reeve's Rose	279	50	374	..
8	Burnaby Mammoth	363	53	455	24						
9	State of Maine	362	17	323	24		(For less than five years.)				
10	Canadian Beauty	357	58	479	36						
11	Irish Cobbler	354	53	301	24		Vermont Gold Coin (3 yrs.)	519	56	543	24
12	Money Maker	350	53	407	..		Dooley (3 yrs.)	435	36	473	..
13	Early White Prize	342	46	433	24		Morgan Seedling (3 yrs.)	404	48	433	24
14	Early Envoy	342	46	341	..		Ashleaf Kidney (3 yrs.)	398	12	409	12
15	Maule's Thoroughbred	336	10	396	..		Dalmeny Beauty (2 yrs.)	307	54	334	12
16	Sabean's Elephant	334	50	363	..						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Nappan, N.S., was 416 bushels 58 lbs. per acre.

EXPERIMENTAL FARM, BRANDON, MANITOBA.

At the Experimental Farm at Brandon, the spring work was much delayed by cold and wet weather. The first spring wheat was not sown until the 9th of May, which was several weeks later than usual. Oats were not sown until May 20th, and barley May 27th. Notwithstanding this lateness in seeding, the crops under the influence of more favourable weather made rapid progress and matured before serious frost. The trial plots of wheat gave an average of 38 bush. 8 lbs. per acre, oats 114 bush. 24 lbs., six-rowed barley 64 bush. 1 lb. and two-rowed barley 63 bush. 17 lbs. per acre. Indian corn and field roots have given about an average crop and potatoes a yield above the average.

The plots of grain were one-twentieth of an acre each. The yield per acre of the Indian corn and field roots has been calculated from the crop obtained from two rows each 66 feet long. In the case of potatoes one row 66 feet long has been used.

Experimental Farm, Brandon, Man.

SPRING WHEAT

Fourteen varieties of spring wheat (exclusive of the durum wheats) grown at the Brandon Experimental Farm, are here reported on. The wheat was sown May 9th and 10th—the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Red Fife	38 4	123	44 ..	10	Colorado	29 24	123	34 40
2	Preston*	38 2	123	37 30	11	Red Fern	28 40	123	28 50
3	Huron*	37 52	123	39 30		(For less than 5 years.)			
4	White Fife	36 50	126	42 40					
5	Pringle's Champlain	35 24	121	37 20		Bishop* (3 years)	38 27	118	38 10
6	Stanley*	34 2	121	39 ..		Hungarian White (3 years)	36 40	124	36 30
7	Percy*	34 ..	122	36 20		Riga* (2 years)	37 15	113	39 40
8	White Russian	33 36	121	40 20					
9	Herisson Bearded	33 4	123	39 12					

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Brandon, Man., was 38 bushels 8 lbs. per acre.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making and should only grow such quantities as they require for feed, or to meet special demands.

Four varieties of durum wheat were grown at Brandon. The seed was sown on May 10th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.	(For less than 5 yrs.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Goose	49 52	128	44 20	Yellow Gharnovka (4 years)	48 25	126	39 40
2	Roumanian	48 ..	127	45 40	Mahmoudi (4 years)	44 10	127	39 ..

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Brandon, Man. was [illegible] 10 lbs. per acre.

Experimental Farm, Brandon, Man.

EMMER AND SPELT.

Two varieties of emmer and two of spelt are here reported upon. The seed was sown on May 10th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Average yield,	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For four years.)	Lbs.	Days.	Lbs.		(For four years.)	Lbs.	Days.	Lbs.
1	Common Emmer.....	3,405	126	2,820	3	Red Emmer.....	2,552	130	1,930
2	Red Spelt.....	2,655	129	1,940	4	White Spelt.....	1,995	129	1,720

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Brandon, Man., was 2,103 lbs. per acre.

OATS.

Thirty one of the varieties of oats tested at Brandon are here reported on. The seed was sown on May 20th at the rate of about two bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Improved American..	119 28	110	125 ..	18	Irish Victor.....	107 8	108	110 30
2	Golden Giant	117 12	115	126 6	19	Black Beauty.....	104 18	108	114 14
3	Banner	116 4	111	128 28	20	Twentieth Century...	102 30	109	104 4
4	Danish Island.....	116 ..	111	130 ..	21	Kendal White*. ...	102 20	110	104 24
5	White Giant	115 30	110	126 26	22	Joanette.....	102 6	111	127 2
6	Golden Beauty.....	115 20	111	125 20	23	Pioneer	100 2	108	96 16
7	Abundance.....	113 20	111	110 20	24	Tartar King	99 30	107	90 20
8	Lincoln.....	113 2	110	122 2	25	Kendal Black*.....	96 30	114	122 2
9	Siberian	112 4	112	115 20	26	Sensation.....	96 16	109	109 24
10	Wide Awake.....	111 28	112	104 14	27	Improved Ligowo....	94 16	108	105 20
11	Columbus.....	110 32	110	122 2	28	Milford White*... .	90 26	112	109 14
12	American Triumph...	110 28	112	116 26	29	Swedish Select.	85 ..	107	99 4
13	Goldfinder.....	110 18	112	127 32		(For less than 5 years.)			
14	Bavarian	110 18	111	119 4					
15	Golden Fleece.	109 32	108	121 16					
16	American Beauty.....	108 30	109	100 30		Storm King (4 yrs.). .	99 7	109	111 6
17	Thousand Dollar.. ...	108 26	109	109 14		Virginia White (2 yrs.)	102 32	105	117 32

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm at Brandon was 114 bushels 24 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley were grown at Brandon in 1907. These plots were all sown on May 27th the seed being used at the rate of about two bushels per acre.

Experimental Farm, Brandon, Man.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Odessa	64 40	88	71 12
2	Yale*	64 18	90	65 20
3	Mensury	63 40	90	63 36
4	Mansfield*	62 16	91	67 24
5	Summit*	61 12	92	71 12
6	Empire*	60 30	91	70 20
7	Claude*	60 24	90	75 20
8	Odenbruch	60 ..	88	81 12
9	Nugent*	60 ..	90	54 8
10	Argyle*	58 24	91	33 26
11	Albert*	57 20	89	59 28
12	Stella*	56 32	91	63 16
13	Trooper*	53 20	91	50 30
14	Champion	37 10	85	35 ..
	(For less than 5 years.)			
	Blue Long Head 3 yrs.	65 33	92	67 44

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Brandon, Man., was 64 bushels 1 lb. per acre.

TWO ROWED BARLEY.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Jarvis*	57 36	91	72 4
2	Standwell	56 16	95	79 8
3	Gordon*	53 40	93	48 6
4	Danish Chevalier	53 8	95	70 20
5	French Chevalier	52 16	95	67 44
6	Dunham*	52 4	92	59 28
7	Canadian Thorpe	51 44	93	71 42
8	Clifford*	51 44	92	71 8
9	Sidney*	51 24	91	64 8
10	Invincible	50 28	93	52 34
11	Logan*	50 4	93	59 28
12	Beaver*	46 26	93	45 ..
	(For less than 3 years.)			
	Swedish Chevalier, 3 yrs	62 37	95	78 36

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Brandon, Man., was 63 bushels 17 lbs. per acre.

Experimental Farm, Brandon, Man.

PEAS.

Twenty varieties of peas were grown at Brandon in 1907. These plots were sown on May 15th, the quantity of seed used being from 2 to 3 bushels per acre depending on the size of the pea.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Mackay *	55 28	130	46 20	11	Wisconsin Blue	47 8	126	40 20
2	Early Britain	54 14	127	39 50	12	Black eye Marrowfat.	46 48	128	37 20
3	Victoria *	51 6	129	46 10	13	Chancellor	46 28	118	46 .
4	Arthur *	50 8	124	38 20	14	Archer *	45 58	133	38 20
5	Gregory *	49 56	129	48 20	15	Daniel O'Rourke	45 54	129	41 30
6	Picton *	49 46	129	43 40	16	Nelson *	45 48	126	46 20
7	Paragon * †	49 38	125	43 10	17	White Marrowfat	45 40	131	27 ..
8	Golden Vine	49 22	126	41 20	18	Prince Albert	44 28	133	39 40
9	Prince *	48 36	132	44 ..	19	Prussian Blue	44 22	123	36 50
10	English Grey	48 24	131	39 20	20	Agnes *	40 8	129	24 40

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Brandon, Man., was 40 bushels 25 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Brandon during 1907. They were sown in rows about three feet apart and the plants thinned out to 6 to 8 inches apart in the rows.

The seed was sown on June 6th, and the crop was cut green for ensilage on September 10th. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Longfellow	21 1,468	20 1,778	14	Early Mastodon	18 366	19 214
2	Superior Fodder	20 1,950	17 452	15	White Cap Yellow Dent	17 1,270	17 56
3	Eureka	20 1,444	17 848	16	Cloud's Early Yellow	17 492	18 234
4	Angel of Midnight	20 944	20 510	17	Selected Leaming	17 294	20 788
5	Compton's Early	20 313	19 412	18	Mammoth Cuban	16 155	13 1,720
6	North Dakota White	19 1,376	20 1,382				
7	King Philip	19 1,059	21 966		(For less than five years.)		
8	Early Butler	19 861	19 16				
9	Champion White Pearl	19 610	15 690		Early Leaming (2 yrs.)	18 828	20 1,184
10	Salzer's All Gold	19 254	20 1,580		Wood's Northern Dent (2 years)	18 399	21 174
11	Giant Prolific Ensilage	19 108	18 1,422		Early Longfellow (2 yrs.)	16 835	14 1,502
12	Red Cob Ensilage	18 1,528	13 334				
13	Pride of the North	18 524	17 254				

The average crop in 1907 of the twenty-one varieties of Indian corn on the Experimental Farm at Brandon, Man., was 18 tons 786 lbs. per acre.

Experimental Farm, Brandon, Man.

TURNIPS.

Twelve varieties of field turnips were tested at Brandon in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled October 28th.

Number.	Varieties tested.	Average Yield.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Good Luck	32 838	26 1,856	7	Bangholm Selected	29 1,822	25 1,216
2	Hall's Westbury	31 1,307	33 1,848	8	Carter's Elephant	29 1,136	26 1,328
3	Magnum Bonum	31 410	28 496	9	Jumbo	28 1,605	24 840
4	Perfection Swede	30 34	34 904	10	Skirvings	28 1,394	32 1,208
5	Hartley's Bronze	29 1,875	25 952	11	Halewood's Bronze Top	28 1,341	31 40
6	Mammoth Clyde	29 1,822	32 1,736	12	Kangaroo	26 1,434	24 1,632

The average yield in 1907 of the twelve varieties of turnips on the Experimental Farm at Brandon, Man., was 28 tons 1,838 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Brandon in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 23rd.

Number.	Varieties tested.	Average Yield.	Yield in 1907.	Varieties tested.	Average Yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.	(For less than 5 years.)	Tons. Lbs.	Tons. Lbs.
1	Prize Mamm. Long Red	32 1,578	27 1,704	Perfection Mamm. Long Red (1 year)	24 840	24 840
2	Half Sugar White	31 1,307	24 576	Crimson Champion (1 year)	20 128	20 128
3	Yellow Intermediate	30 1,987	23 992	Mamm. Red Intermediate (1 year)	17 1,640	17 1,640
4	Gate Post	30 826	26 536			
5	Selected Yellow Globe	28 74	22 1,408			
6	Giant Yellow Intermediate	27 437	23 1,520			
7	Giant Yellow Globe	25 794	19 16			

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Brandon, Man., was 22 tons 1,936 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Brandon in 1907. The seed was sown in drills, two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 29th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Improved Short White	26 888	24 400	4	Mamm. White Intermediate	22 528	20 700
2	Ontario Champion	24 1,280	20 480	5	White Belgian	20 1,052	15 1,960
3	Giant White Vosges	22 1,232	18 960	6	Half Long Chantenay	18 80	15 800

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Brandon, Man., was 19 tons 207 lbs per acre.

Experimental Farm, Brandon, Man.

SUGAR BEETS.

Three varieties of sugar beets were tested at Brandon in 1907. The seed was sown in drills, two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd and the roots were pulled on October 23rd.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Wanzleben	22 141	18 1,224	3	French Very Rich	17 690	13 1,984
2	Vilmorin's Improved	17 1,851	18 696				

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Brandon, Man., was 16 tons 1,968 lbs. per acre.

POTATOES.

Twenty-eight kinds of potatoes grown at Brandon in 1907 are here mentioned.

For planting the potatoes were cut into pieces with two or three eyes in each and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on May 23rd and were dug on October 10 h and 12th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Bus. Lbs.	Bus. Lbs.		(For five years.)	Bus. Lbs.	Bus. Lbs.
1	Late Puritan	572 22	509 40	17	Everett	431 56	454 40
2	State of Maine	563 12	550 ..	18	Early Envoy	419 50	544 30
3	Uncle Sam	562 50	533 30	19	Early White Prize	397 6	460 10
4	Dreer's Standard	549 26	361 10	20	Vick's Extra Early	372 54	394 10
5	Money Maker	548 10	489 30	21	Early Rose	370 20	390 30
6	American Wonder	545 36	403 20	22	Bovee	368 8	220 ..
7	Empire State	523 14	485 50	23	Rochester Rose	358 14	339 10
8	Sabean's Elephant	519 34	445 30				
9	Maule's Thoroughbred	512 14	460 10		(For less than 5 years.)		
10	Holborn Abundance	506 ..	495 ..				
11	Canadian Beauty	503 4	392 20				
12	Country Gentleman	502 20	425 20		Morgan Seedling (3 years)	532 17	423 30
13	Reeves' Rose	499 24	421 40		Vermont Gold Coin (3 yrs)	521 53	447 20
14	Irish Cobbler	477 2	438 10		Dooley (3 years)	377 40	366 40
15	Carman No. 1	470 48	421 40		Ashleaf Kidney (2 years)	383 10	425 20
16	Burnaby Mammoth	437 4	352 ..		Dalmeny Beauty (2 yrs.)	320 50	330 ..

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Brandon, Man., was 427 bus., 53 lbs. per acre.

EXPERIMENTAL FARM, INDIAN HEAD, SASK.

The unfavourable character of the season has resulted in injury to the wheat grown at Indian Head. The cold and backward weather made seeding very late, and low temperatures and wet weather during the ripening period interfered seriously with the rapid progress towards maturity, which grain in that district usually makes. There

were slight frosts on the nights of August 3rd and August 21st, when the standard thermometer at the Experimental Farm registered 35 F. and 33 F. respectively. Some slight injury was done to a few of the more tender flowers and vegetables but no harm was done to the grain. On September 12th two degrees of frost were registered and on September 21st three degrees. Prior to this heavy rains had fallen and low temperatures prevailed so that for two weeks the grain scarcely made any progress in ripening. The frost of the 12th was preceded by a rain of 20 hours during which 1·25 inches fell. This frost under such conditions no doubt did considerable injury which was further aggravated by the frost of the 21st when the temperature fell below freezing early in the evening and continued low all night.

With such an experience it is surprising that more serious injury was not done. The crop of the plots of spring wheat averaged 19 bush. 7 lbs. per acre as compared with 42 bush. 4 lbs. in 1906, and the effect of the frost could be plainly seen on most of the varieties. They have however a high percentage of germinating power, the 14 varieties under trial averaging 85 per cent, showing that they would make fair seed. The 31 varieties of oats under test this year gave a remarkably high average crop 110 bush. 20 lbs. per acre. The crops of barley both six-rowed and two rowed were excellent, and exceeded the average of last year by over six bushels per acre, while peas gave an average increase of about 5 bushels. With very few exceptions the germination of these numerous varieties is high and the weights per bushel show that the grain has been well matured. The weather was unsuitable for Indian corn and there was an average falling off in that crop of nearly 4 tons per acre. An average increase in field roots and potatoes however compensated for this.

The plots of grain were one-twentieth of an acre each. The yield per acre of the Indian corn and field roots has been calculated from the crop obtained from two rows each 66 feet long. In the case of potatoes one row 132 feet long has been used.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) have been grown at the Indian Head Experimental Farm. The wheat was sown on May 6th, the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days	Bu. Lbs.
1	Red Fern	39 39	133	15 40	10	Colorado	32 30	131	25 20
2	Preston*	37 58	130	23 20	11	Herisson Bearded	30 27	136	19 ..
3	Stanley*	37 23	130	19 40					
4	White Fife	36 49	137	17 20		(For less than 5 years.)			
5	Percy*	36 27	130	21 40					
6	Huron*	36 25	130	21 .		Bishop* 3 years	36 47	130	23 20
7	Red Fife	34 59	137	12 ..		Hungarian White 3 years	23 47	133	13 20
8	White Russian	33 56	134	15 20		Riga* 2 years	26 30	124	17 40
9	Pringle's Champlain	32 37	133	23 ..					

The average crop in 1907 of the fourteen varieties of spring wheat on the Experimental Farm at Indian Head, Sask., was 19 bushels 7 lbs. per acre.

Experimental Farm, Indian Head, Sask.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with most millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts for flour making, and should only grow such quantities as they require for feed or to meet special demands.

Four varieties of durum wheat were grown at the Indian Head farm in 1907. The seed was sown May 7th at the rate of about one and three quarter bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For less than 5 years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Goose	43 27	135	31 40		Yellow Gharnovka (4 yrs.).....	43 55	135	29 20
2	Roumanian..... ..	42 50	136	31 ..		Mahmoudi (4 yrs.)....	42 22	135	25 40

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Indian Head, Sask., was 29 bushels 25 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt were tested here. The seed was sown on May 13th at the rate of about 120 lbs. to the acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For four years.)	Lbs.	Days	Lbs.		(For four years.)	Lbs.	Days.	Lbs.
1	Common Emmer....	2,820	129	2,020	3	White Spelt	2,295	131	1,560
2	Red Spelt	2,735	130	2,200	4	Red Emmer..... ...	2,215	131	1,320

The average crop in 1907 of the four varieties of emmer and spelt on the Experimental Farm at Indian Head, Sask., was 1,775 lbs. per acre.

OATS.

Thirty-one of the varieties of oats tested at Indian Head are here reported upon. The seed was sown on May 14th at the rate of about two bushels to the acre.

Experimental Farm, Indian Head, Sask.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Banner	121 18	120	122 32
2	Golden Beauty	113 7	120	121 6
3	Goldfinder	113 2	124	112 32
4	Kendal White*	111 22	122	116 16
5	Irish Victor	111 10	121	119 14
6	Columbus	111 9	121	127 22
7	Bavarian	110 14	120	117 22
8	Danish Island	108 32	118	123 8
9	White Giant	108 31	118	104 4
10	American Triumph	108 22	121	105 20
11	Golden Giant	107 32	125	105 16
12	Improved Ligowo	107 23	118	122 2
13	Improved American	107 3	121	117 2
14	Golden Fleece	106 17	122	112 12
15	Twentieth Century	105 28	119	115 ..
16	Swedish Select	105 ..	119	127 22
17	Sensation	104 9	120	127 32
18	Lincoln	103 14	121	106 16
19	Milford White*	103 10	123	98 8
20	Pioneer	102 31	120	103 18
21	Abundance	101 18	118	102 12
22	Thousand Dollar	101 18	118	120 ..
23	American Beauty	101 3	119	103 18
24	Wide Awake	100 33	118	101 16
25	Joanette	99 20	124	93 8
26	Siberian	97 29	124	108 28
27	Tartar King	97 25	120	108 18
28	Kendal Black*	97 22	124	82 12
29	Black Beauty	92 4	120	92 32
	(For less than 5 years.)			
	Storm King (4 years)	92 32	121	88 8
	Virginia White (2 yrs.)	99 4	123	110 20

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm at Indian Head, Sask., was 110 bushels 20 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley grown at Indian Head are here reported upon. These plots were all sown on May 14th and 15th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Claude*	63 34	105	65 30
2	Mansfield*	63 3	102	72 14
3	Yale*	62 6	106	67 4
4	Nugent*	61 10	105	55 30
5	Mensury	61 2	103	61 2
6	Odessa	60 32	103	41 32
7	Stella*	60 23	105	52 4
8	Oderbruch	59 31	101	68 26
9	Empire*	59 26	104	66 22
10	Argyle*	59 18	102	65 30
11	Trooper*	59 13	103	58 46
12	Summit*	55 24	105	42 44
13	Albert*	51 34	102	51 12
14	Champion	42 19	98	47 24
	(For less than 5 years.)			
	Blue Long Head (3 yrs.)	74 31	103	86 2

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Indian Head, Sask., was 60 bushels 9 lbs. per acre.

TWO ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Invincible	65 10	111	54 28	10	Logan*	52 3	104	56 12
2	Standwell	64 17	110	59 8	11	French Chevalier	51 26	112	36 12
3	Danish Chevalier	59 38	112	58 16	12	Dunham*	45 29	107	48 16
4	Gordon*	57 7	105	54 28		(For less than 5 years).			
5	Canadian Thorpe	56 18	107	51 32					
6	Jarvis*	54 19	105	61 2					
7	Beaver*	54 9	111	51 32		Swedish Chevalier (3 years)	53 40	110	54 28
8	Sidney*	53 24	103	50 30					
9	Clifford*	52 40	104	53 36					

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Indian Head, Sask., was 53 bushels 7 lbs. per acre.

PEAS.

Twenty of the varieties of peas grown at Indian Head are here reported upon. These plots were sown on May 20th, the quantity of seed used being from two to three bushels per acre depending on the size of the pea.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Early Britain	53 38	119	51 ..	11	Archer*	49 10	121	40 ..
2	Prussian Blue	52 54	118	47 40	12	Paragon*†	48 48	118	43 20
3	Golden Vine	51 42	116	48 .	13	Gregory*	48 18	121	45 40
4	Chancellor	51 22	116	51 40	14	Prince*	46 14	119	38 .
5	Black Eye Marrowfat	51 10	122	48 40	15	Wisconsin Blue	46 2	121	37 20
6	Daniel O'Rourke	51 6	116	49 20	16	Nelson*	45 46	118	38 20
7	English Grey	51 2	119	45 ..	17	Arthur*	44 18	117	36 ..
8	Mackay*	50 54	122	47 20	18	White Marrowfat	43 42	119	33 ..
9	Picton*	49 34	118	38 40	19	Prince Albert	43 10	120	38 20
10	Agnes*	49 30	118	43 40	20	Victoria*	40 54	120	39 40

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Indian Head, Sask., was 43 bushels 2 lbs. per acre.

INDIAN CORN.

Twenty-one varieties of Indian corn were tested at Indian Head in 1907. The seed was sown in rows about three feet apart, and the plants thinned out to 6 to 8 inches apart in the rows.

Experimental Farm, Indian Head, Sask.

The seed was sown on May 29th and the crop was cut green for ensilage on September 21st. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. lbs.	Tons. lbs.		(For five years.)	Tons. lbs.	Tons. lbs.
1	Angel of Midnight	18 58	13 1,170	14	White Cap Yellow Dent	12 1,190	7 300
2	Eureka	16 1,000	12 200	15	Early Butler	12 750	9 1,250
3	North Dakota White	16 10	13 400	16	Early Mastodon	12 244	4 1,900
4	Compton's Early	15 1,680	13 400	17	Mammoth Cuban	11 484	7 300
5	Salzer's All Gold	15 1,020	11 ...	18	Cloud's Early Yellow	10 1,824	8 1,820
6	King Philip	14 1,216	11 1,650		(For less than five years.)		
7	Longfellow	14 534	11 ...				
8	Giant Prolific Ensilage	14 336	12 1,850		Early Longfellow (2 years)	13 675	12 1,300
9	Red Cob Ensilage	14 160	12 1,300		Early Leaming (2 years)	11 1,320	11 770
10	Pride of the North	13 1,500	5 780		Wood's Northern Dent (2 years)	10 845	10 350
11	Champion White Pearl	13 422	6 430				
12	Superior Fodder	13 224	6 1,200				
13	Selected Leaming	12 1,692	9 700				

The average crop in 1907 of the twenty-one varieties of Indian corn on the Experimental Farm at Indian Head, was 10 tons, 99 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Indian Head in 1907. The seed was sown in drills two and a half feet apart, and the young plants thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 27th, and the roots were pulled on October 9th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons Lbs.	Tons Lbs.		(For five years.)	Tons Lbs.	Tons Lbs.
1	Hartley's Bronze	25 1,657	31 832	7	Bangholm Selected	23 402	22 1,012
2	Hall's Westbury	25 1,063	25 28	8	Carter's Elephant	22 1,670	21 768
3	Halewood's Bronze Top	25 81	25 1,084	9	Mammoth Clyde	22 780	27 1,440
4	Perfection Swede	24 1,947	23 1,124	10	Jumbo	22 77	20 1,448
5	Skirvings	24 1,255	25 424	11	Magnum Bonum	21 1,622	20 260
6	Good Luck	23 1,184	28 1,288	12	Kangaroo	19 1,685	21 1,956

The average yield in 1907, of the twelve varieties of turnips on the Experimental Farm at Indian Head, Sask., was 24 tons 972 lbs. per acre.

MANGELS.

Ten varieties of Mangels were tested at Indian Head in 1907. The seed was sown in drills two and a half feet apart and the young plants were thinned out to 10 to 12

inches apart in the rows. The seed was sown May 27th and the roots were pulled on September 30th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Giant Yellow Intermediate	26	904	19	412	7	Gate Post	20	1,882	14	1,040
2	Half Sugar White	25	640	18	828		(For less than 5 years.)				
3	Selected Yellow Globe	24	836	13	1,192		Crimson Champion (1 yr.)	16	1,132	16	1,132
4	Giant Yellow Globe	24	606	17	188		Mamm. Red Inter. (1 yr.)	16	736	16	736
5	Yellow Intermediate	23	76	10	1,120		Perfection Mamm. Long Red (1 year)	16	208	16	208
6	Prize Mamm. Long Red	22	676	18	36						

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Indian Head, Sask., was 16 tons 89 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Indian Head in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 22nd, and the roots were pulled on October 11th. One of the varieties sown, the Mammoth White Intermediate did not germinate.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Ontario Champion	15	324	12	552		The Mammoth White Intermediate carrot was also sown but failed to germinate.				
2	Half Long Chantenay	13	330	12	1,608						
3	Improved Short White	12	1,802	13	268						
4	Giant White Vosges	12	1,432	6	1,992						
5	White Belgian	11	1,390	6	1,200						

The average yield in 1907 of the five varieties of carrots on the Experimental Farm at Indian Head, Sask., was 10 tons 722 lbs. per acre.

SUGAR BEETS.

Three varieties of Sugar beets were tested at Indian Head in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 27th, and the roots were pulled on October 10th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons	Lbs.	Tons	Lbs.		(For five years.)	Tons	Lbs.	Tons	Lbs.
1	Vilmorin's Improved	14	1,116	13	400	3	Wanzleben	13	1,625	11	704
2	French Very Rich	13	1,834	11	1,364						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Indian Head, Sask., was 12 tons, 156 lbs. per acre.

Experimental Farm, Indian Head, Sask.

POTATOES.

Twenty-eight kinds of potatoes were grown at Indian Head in 1907. For planting, the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart and about a foot apart in the rows. The potatoes were planted on May 23rd and were dug on September 30th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Bus.	Lbs.	Bus.	Lbs.		(For five years.)	Bus.	Lbs.	Bus.	Lbs.
1	Uncle Sam	423	31	385	..	16	Canadian Beauty	386	53	363	..
2	Carman No. 1	432	49	466	24	17	State of Maine	379	24	248	36
3	Burnaby Mammoth	427	..	411	24	18	Early Envoy	371	39	378	24
4	Late Puritan	425	15	323	24	19	Early White Prize	361	13	369	48
5	Reeves' Rose	419	32	415	48	20	Maule's Thoroughbred	361	37	167	12
6	American Wonder	418	34	371	48	21	Irish Cobbler	342	42	294	48
7	Country Gentleman	417	11	345	24	22	Early Rose	331	16	275	..
8	Empire State	415	18	409	12	23	Bovee	304	28	308	..
9	Rochester Rose	415	13	334	24		(For less than five years.)				
10	Sabean's Elephant	408	27	319	..		Vermont Gold Coin..3 years	459	16	391	36
11	Everett	408	21	411	24		Morgan Seedling...3 years	366	52	323	24
12	Dreer's Standard	397	37	321	12		Dooley .....3 years	260	32	149	36
13	Moneymaker	393	34	308	..		Ashleaf Kidney.....2 years	428	46	486	12
14	Vick's Extra Early	391	43	327	48		Dalmeny Beauty....2 years	320	57	235	24
15	Holborn Abundance	389	21	336	36						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Indian Head, Sask., was 338 bushels 10 lbs. per acre.

EXPERIMENTAL FARM, AGASSIZ, B.C.

At the Experimental Farm at Agassiz the sowing of grain in 1907, was delayed for the reason that the weather during the early months was wet and cold. Hot weather during June, July and the first half of August hastened the ripening of the crops and the results were fully up to the average. The usual plots of spring wheat were not sown this year owing to the continued ravages of the wheat midge *Diplosis tritici*. By thus ceasing to grow wheat for a season we hope to be able to get rid of this insect pest and to resume the cultivation of the trial plots of wheat next year as usual.

The 31 varieties of oats have given an average crop of 66 bushels 16 lbs. per acre. The crops of barley are above the average while those of Indian corn and field roots are well up to the average. Potatoes have given excellent yields averaging 474 bush. 25 lbs. per acre.

The plots of grain occupied one-fortieth of an acre each. The yield of Indian corn has been calculated from the weight obtained from two rows each 66 feet long, cut green for ensilage; and the returns given for the field roots have been computed from a similar area.

Experimental Farm, Agassiz, B.C.

SPRING WHEAT.

The spring wheat plots, also the plots of durum wheat and of emmer and spelt at the Experimental Farm at Agassiz were so much injured by the wheat midge *Diplosis tritici* as to make the tests for 1906 as to the relative productiveness of the varieties of no value. In 1907 with the object of getting rid of this insect the plots of wheat were discontinued. Under the circumstances it is thought best to give here the average yields on the plots for the five years ending 1905.

Number.	Varieties tested.	Average Yield.		Number.	Varieties tested.	Average Yield.	
	(For five years ending 1905.)	Bu.	Lbs.		(For five years ending 1905.)	Bu.	Lbs.
1	Stanley*	35	14	7	Percy*	31	53
2	Colorado	34	14	8	Red Fern	30	27
3	White Russian	33	27	9	Huron*	30	26
4	Red Fife	33	9	10	Herisson Bearded	30	17
5	White Fife	32	47	11	Pringle's Champlain	28	52
6	Preston*	32	39				

DURUM OR MACARONI WHEAT.

Number.	Varieties tested.	Average Yield.		Average days maturing.	Varieties tested.	Average Yield.		Average days maturing.
	(For 5 years ending 1905.)	Bu.	Lbs.	Days.	(For 2 years ending 1905.)	Bu.	Lbs.	Days.
1	Roumanian	33	36	120	Mahmoudi	19	20	117
2	Goose	32	50	115	Yellow Gharnovka	18	..	117

EMMER AND SPELT.

In this instance the yield is expressed in pounds per acre, the grain being of course weighed with the husk adhering.

Number.	Varieties tested.	Average yield.	Average days maturing.	Number.	Varieties tested.	Average yield.	Average days maturing.
	(For two years ending 1905.)	Lbs.	Days.		(For two years ending 1905.)	Lbs.	Days.
1	Common Emmer	1,880	117	3	Red Emmer	1,650	117
2	White Spelt	1,775	117	4	Red Spelt	1,545	117

Experimental Farm, Agassiz, B. C.

OATS.

Thirty one varieties of oats tested at Agassiz are here reported upon. The seed was sown on April 19th at the rate of about two bushels to the acre.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Abundance	74 8	114	84 22	18	Joanette	61 29	112	66 ..
2	Golden Fleece	72 32	114	67 22	19	Thousand Dollar	61 28	116	71 4
3	Danish Island	69 12	117	91 6	20	Swedish Select	61 21	113	71 26
4	Milford White*	68 28	114	70 32	21	Kendal Black*	61 9	115	68 16
5	Siberian	67 32	114	61 8	22	Banner	60 26	114	60 30
6	Tartar King	67 18	112	66 12	23	Columbus	60 24	115	65 14
7	White Giant	67 10	115	76 26	24	Golden Giant	60 17	118	78 4
8	Kendal White*	67 9	116	66 32	25	American Triumph	59 14	113	57 24
9	Irish Victor	66 21	114	84 8	26	Pioneer	59 14	113	57 4
10	Bavarian	65 27	116	50 33	27	Wide Awake	59 8	116	68 10
11	Goldfinder	65 20	115	64 32	28	Twentieth Century	55 19	113	59 28
12	Improved American	65 1	115	63 12	29	Golden Beauty	52 3	115	59 18
13	American Beauty	63 22	115	81 26		(For less than 5 years.)			
14	Sensation	63 16	114	62 26					
15	Black Beauty	63 ..	112	56 26		Storm King (4 years)	55 29	109	54 2
16	Improved Ligowo	62 10	114	58 30		Virginia White (2 yrs)	65 4	108	58 16
17	Lincoln	62 ..	115	51 22					

The average crop in 1907 of the thirty-one varieties of oats tested on the Experimental Farm at Agassiz was 66 bushels, 16 lbs. per acre.

BARLEY.

Fifteen sorts of six-rowed barley and thirteen sorts of two-rowed barley were grown at Agassiz in 1907. These plots were all sown on April 18th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Mensury	58 4	102	45 10	10	Nugent*	49 10	106	38 16
2	Empire*	55 4	104	55 ..	11	Champion	47 32	99	41 32
3	Albert*	52 28	104	50 40	12	Trooper*	47 24	108	48 26
4	Argyle*	52 4	104	40 ..	13	Oderbruch	47 24	108	43 26
5	Claude*	50 36	102	42 44	14	Summit*	45 12	108	42 24
6	Odessa	50 30	101	42 4		(For less than 5 years.)			
7	Stella*	50 28	108	39 8					
8	Mansfield*	50 14	105	50 10		Blue Long Head (3 yrs)	41 8	104	40 ..
9	Yale*	49 20	106	54 40					

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Agassiz, B.C., was 44 bushels 47 lbs per acre.

Experimental Farm, Agassiz, B. C.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Standwell	53 24	111	57 24	10	Gordon*	47 12	108	47 24
2	Sidney*	52 24	111	52 24	11	Jarvis*	44 20	110	40 48
3	Dunham*	52 2	109	56 12	12	Logan*	44 16	109	39 28
4	Canadian Thorpe	51 38	109	48 36		(For less than 5 years.)			
5	Beaver*	51 18	110	42 34		Swedish Chevalier (3 years)	45 37	108	42 24
6	French Chevalier	50 28	111	41 32					
7	Danish Chevalier	50 24	111	53 16					
8	Invincible	49 20	110	48 16					
9	Clifford*	47 24	109	42 44					

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Agassiz, B.C., was 47 bushels 13 lbs. per acre.

PEAS.

Twenty varieties of peas were grown at Agassiz in 1907. These plots were sown on April 18th the quantity of seed sown varying from two to three bushels per acre depending on the size of the pea, of the smaller sized peas two bushels are usually sufficient while the larger sorts require three bushels.

Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.	Number.	Varieties tested.	Average Yield.	Average days maturing.	Yield in 1907.
	(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.		(For five years.)	Bu. Lbs.	Days.	Bu. Lbs.
1	Early Britain	45 6	110	47 10	11	Prince*	38 22	118	43 40
2	White Marrowfat	43 44	117	42 10	12	Gregory*	37 38	114	43 ..
3	English Grey	42 4	114	41 20	13	Archer*	37 16	116	47 20
4	Chancellor	41 12	116	52 ..	14	Prince Albert	37 16	116	40 40
5	Arthur*	39 58	116	46 50	15	Black eye Marrowfat	36 50	117	46 20
6	Golden Vine	39 38	115	48 ..	16	Picton*	36 36	118	42 ..
7	Wisconsin Blue	38 56	114	46 40	17	Daniel O'Rourke	36 14	110	34 ..
8	Victoria*	38 52	118	36 ..	18	Paragon*	36 .	119	44 ..
	Mackay*	38 40	116	40 ..	19	Agnes*	35 40	118	43 20
	Nelson*	38 36	116	50 .	20	Prussian Blue	33 26	113	36 20

The average crop in 1907 of the twenty varieties of peas on the Experimental Farm at Agassiz, B.C., was 43 bushels 33 lbs. per acre.

INDIAN CORN.

Eighteen varieties of Indian corn were tested at Agassiz in 1907. Two varieties tested at the other Experimental Farms, Early Learning and Early Longfellow did not reach Agassiz in time for sowing. The seed was sown in rows about three feet apart, and the plants thinned out to 6 to 8 inches in the rows.

Experimental Farm, Agassiz, B. C.

The seed was sown on May 25th, and the crop was cut green for ensilage on October 12th. This crop needs frequent cultivation throughout the summer to produce the best results.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. lbs.	Tons. lbs.		(For five years.)	Tons. lbs.	Tons. lbs.
1	Pride of the North.....	21 1,492	16 780	10	White Cap Yellow Dent..	16 1,704	15 580
2	Giant Prolific Ensilage...	19 1,160	17 100	11	Angel of Midnight..	16 1,110	14 900
3	Superior Fodder.....	19 919	14 820	12	Eureka	16 952	22 200
4	Red Cob Ensilage.....	19 698	11 330	13	Early Mastodon.....	16 470	16 1,020
5	Compton's Early	19 539	17 1,200	14	King Philip	15 1,020	16 1,080
6	Mammoth Cuban	18 564	11 1,210	15	North Dakota White.....	15 756	11 440
7	Salzer's All Gol	17 1,842	11 1,320	16	Cloud's Early Yellow. .	14 1,994	18 1,620
8	Champion Wh earl. .	17 628	17 320	17	Longfellow.....	14 1,502	13 1,280
9	Early Butler..	16 1,880	11 1,760	18	Selected Leaming.....	13 928	14 1,480

The average crop in 1907 of the eighteen varieties of Indian corn tested on the Experimental Farm at Agassiz, was 15 tons 114 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Agassiz in 1907. The seed was sown in drills two and a half feet apart and the young plants were thinned out to about 10 to 12 inches apart in the rows. The seed was sown on May 17th, and the roots were pulled on November 7th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Perfection Swede..... ..	25 461	14 776	7	Jumbo.....	24 193	18 1,752
2	Halewood's Bronze Top....	25 1,809	13 1,984	8	Hall's Westbury.....	23 596	15 1,680
3	Carter's Elephant.....	25 1,879	15 1,614	9	Magnum Bonum	23 398	15 360
4	Bangholm Selected..... ..	24 1,666	17 [illegible]	10	Kangaroo.....	23 253	15 1,416
5	Skirvings.....	24 708	14 [illegible]	11	Mammoth Clyde.....	22 946	17 1,772
6	Good Luck	24 220	13 [illegible]	12	Hartley's Bronze.... ..	21 1,247	16 76

The average yield in 1907 of the twelve varieties of turnips tested on the Experimental Farm at Agassiz, B. C., was 15 tons 1,526 lbs. per acre.

Experimental Farm, Agassiz, B. C.

MANGELS.

Ten varieties of mangels were tested at Agassiz in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown May 1st, and the roots were pulled November 7th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For less than five years.)	Tons. Lbs.	Tons. Lbs.
1	Half Sugar White.....	23 1,791	25 160		Perfection Mammoth Long Red (1 year)..... ..	23 520	23 520
2	Yellow Intermediate.....	22 1,515	13 400		Crimson Champion (1 year).	14 512	14 512
3	Giant Yellow Globe.	22 1,115	15 1,284		Mammoth Red Intermediate (1 year).....	12 1,212	12 1,212
4	Selected Yellow Globe.....	22 524	18 960				
5	Giant Yellow Intermediate.	21 1,225	22 1,352				
6	Prize Mamm. Long Red...	19 1,809	18 1,356				
7	Gate Post.....	19 1,593	19 1,336				

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Agassiz, B. C., was 18 tons 709 lbs. per acre.

CARROTS.

Six varieties of field carrots were tested at Agassiz in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about four or five inches apart in the rows. The seed was sown on May 1st, and the roots were pulled on November 7th.

Number.	Varieties tested.	Average yield.	Yield in 1907.	Number.	Varieties tested.	Average yield.	Yield in 1907.
	(For five years.)	Tons. Lbs.	Tons. Lbs.		(For five years.)	Tons. Lbs.	Tons. Lbs.
1	Giant White Vosges .. .	29 681	36 1,524	4	Mam. White Intermediate.	24 1,894	23 596
2	Ontario Champion	25 1,209	39 1,936	5	White Belgian..... . ..	23 1,738	31 832
3	Improved Short White....	25 396	30 1,644	6	Half Long Chantenay	19 727	24 1,500

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Agassiz, B. C., was 31 tons 339 lbs. per acre.

Experimental Farm, Agassiz, B. C.

SUGAR BEETS.

Three varieties of sugar beets were tested at Agassiz in 1907. The seed was sown in drills two feet apart, and the young plants thinned out to about four or five inches apart in the rows. The seed was sown on May 1st, and the roots were pulled on November 7th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield. in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Wanzleben	17	1,858	12	585	3	French Very Rich	16	1 013	11	935
2	Vilmorin's Improved	17	1,241	16	340						

The average yield in 1907 of the three varieties of sugar beets on the Experimental Farm at Agassiz, B.C., was 13 tons, 620 lbs. per acre.

POTATOES.

Twenty-eight kinds of potatoes were grown at Agassiz in 1907. For planting the potatoes were cut into pieces with two or three eyes in each, and these pieces were planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on May 14th, and were dug on September 24th.

Number.	Varieties tested.	Average yield.		Yield in 1907.		Number.	Varieties tested.	Average yield.		Yield in 1907.	
	(For five years.)	Tons.	Lbs.	Tons.	Lbs.		(For five years.)	Tons.	Lbs.	Tons.	Lbs.
1	Late Puritan	511	17	552	12	17	Burnaby Mammoth	355	1	475	12
2	Dreer's Standard	481	48	510	24	18	Maule's Thoroughbred	351	7	316	48
3	Uncle Sam	469	55	558	48	19	Irish Cobbler	345	50	396	..
4	American Wonder	467	47	444	24	20	Vick's Extra Early	342	19	378	24
5	Rochester Rose	453	50	523	36	21	Canadian Beauty	290	24	389	24
6	Empire State	439	47	545	36	22	Money Maker	282	55	316	48
7	Country Gentleman	439	26	523	36	23	Early Envoy	263	47	435	36
8	Sabean's Elephant	431	16	554	24		(For less than 5 years.)				
9	State of Maine	429	26	492	48						
10	Carman No. 1	420	16	479	36		Vermont Gold Coin (3 years)	544	8	554	24
11	Holborn Abundance	414	29	563	12		Morgan Seedling (3 years)	475	48	598	24
12	Reeve's Rose	403	42	453	12		Dooley (3 years)	456	8	444	24
13	Early Rose	391	56	598	24		Ashleaf Kidney (2 years)	463	6	431	12
14	Early White Prize	361	41	541	12		Dalmeny Beauty (2 years)	305	48	334	24
15	Everett	360	58	457	36						
16	Bovee	357	43	413	36						

The average crop in 1907 of the twenty-eight varieties of potatoes on the Experimental Farm at Agassiz, B.C., was 474 bus., 25 lbs. per acre.

EXPERIMENTAL FARM, LACOMBE, ALBERTA.

The site for an Experimental Farm for Northern Alberta at Lacombe, was chosen last year, but possession of the land was not obtained early enough in the season to permit of a complete series of trial plots being provided for, such as are sown from year to year at the older established experimental farms. No time however was lost in securing and forwarding such material as could be procured so as to make the series of plots as complete as was practicable. This being the first year that these trial plots have been sown at Lacombe, the results of 1907 only can be given.

The season was unfavourable, the spring cold and backward and the summer short. Frost occurred on the nights of August 10th and 21st, which injured the corn so that it shrivelled up and was ploughed under. The plots of peas also were badly injured so that their yields could not be determined. All varieties of wheat were more or less frosted and the later sorts were deficient in weight and low in vitality. Nevertheless the fourteen varieties under trial gave an average yield of 21 bush. 51 lbs. per acre.

Oats gave a good crop, the average yield of the thirty-one sorts tested was 86 bush. 31 lbs. per acre and eight of these were above the standard in weight.

The 15 varieties of six-rowed barley averaged 57 bush. 26 lbs. per acre and the 13 varieties of two rowed barley averaged 39 bush. 39 lbs. per acre. The field roots also did well. Fifteen varieties of turnips averaged 18 tons 642 lbs. per acre. Ten sorts of mangels 25 tons 799 lbs., six of carrots, 16 tons 1,479 lbs. and three of sugar beets 16 tons 1,264 lbs. per acre. Only 14 varieties of potatoes were tried and these were planted unusually late. They also suffered somewhat from frost, but their average yield was 152 bush. 58 lbs. per acre. In such an unusual season when some varieties failed to ripen completely it was impossible to determine accurately in every case the number of days from sowing to ripening hence this item of information is here omitted.

The plots of grain were one sixtieth of an acre each. The yield per acre of the field roots has been calculated from the crop obtained from two rows each 66 feet long.

SPRING WHEAT.

Fourteen varieties of spring wheat (exclusive of the durum wheats) have been grown at the Lacombe Experimental Farm in 1907. The wheat was sown on May 1st, the seed being used at the rate of about one and one-half bushels per acre.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.			(For one year.)	Bu. Lbs.	Lbs.	
1	Percy*	31 ..	52	67	8	Hungarian White	20 ..	47	42
2	Bishop*	33 ..	51	76	9	Pringle's Champlain	18 ..	46	51
3	Stanley*	31 ..	47	50	10	Huron*	17 30	47	87
4	Preston*	29 ..	49	65	11	Herisson Bearded	17 ..	48½	47
5	Colorado	25 ..	49	60	12	Red Fern	15 ..	42	15
6	Downy Riga*	23 30	55½	71	13	White Fife	13 ..	37¼	9
7	White Russian	21 ..	42	34	14	Red Fife	9 ..	38½	9

The average crop in 1907 of the fourteen varieties of wheat on the Experimental Farm at Lacombe, Alta., was 21 bushels 51 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

DURUM OR MACARONI WHEAT.

While the durum wheats average usually heavier crops in the Canadian Northwest than they do in Eastern Canada, they are very unpopular with millers. Farmers who grow any of these varieties should exercise great care to prevent them from becoming mixed with the standard sorts, and should only grow such quantities as they require for feed, or to meet special demands.

Four varieties of durum wheat were grown on the Experimental Farm at Lacombe. The seed was sown on May 1st at the rate of about 105 lbs. per acre.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.	Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.			(For one year.)	Bu. Lbs.	Lbs.	
1	Yellow Gharnovka ...	24 ..	44½	3	3	Roumanian	20 ..	45½	31
2	Goose	23 ..	45	51	4	Mahmoudi.	20 ..	40	24

The average crop in 1907 of the four varieties of durum wheat on the Experimental Farm at Lacombe, Alta., was 21 bushels 45 lbs. per acre.

EMMER AND SPELT.

Two varieties of emmer and two of spelt were tested at Lacombe. The seed was sown on May 1st, at the rate of about 120 lbs. per acre. Common emmer is the grain sometimes referred to under the incorrect name of "Speltz."

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year.)	Lbs.		(For one year.)	Lbs.
1	Common Emmer.....	1,200	3	White Spelt.....	840
2	Red Spelt...	1,020	4	Red Emmer	540

The average crop in 1907 of the four varieties of Emmer and Spelt on the Experimental Farm at Lacombe, Alta, was 900 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

OATS.

Thirty-one varieties of oats were tested at Lacombe. The seed was sown on May 3rd and 4th, at the rate of about two bushels per acre.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.	
1	Pioneer	110 10	35	50
2	Golden Beauty	109 14	33½	31
3	Danish Island	107 22	30	53
4	Storm King	98 28	35	23
5	White Giant	95 10	32½	58
6	Tartar King	92 22	34	42
7	Banner	92 22	35	40
8	Swedish Select	92 22	34½	49
9	Sensation	92 22	35½	57
10	Irish Victor	91 26	35	58
11	Black Beauty	90 ..	32½	53
12	American Triumph	89 4	30½	43
13	Bavarian	88 8	33	43
14	Improved American	88 8	31½	45
15	Siberian	87 12	29	41
16	Virginia White	87 12	37	67
17	Twentieth Century	85 20	29	46
18	Wide Awake	84 24	33½	50
19	American Beauty	83 28	32	54
20	Improved Ligowo	83 28	32	64
21	Abundance	83 28	33	62
22	Thousand Dollar	82 32	33	52
23	Goldfinder	81 6	31	37
24	Milford White*	81 6	33	38
25	Kerr's Black*	81 6	37½	80
26	Golden Fleece	77 22	32	41
27	Lincoln	75 30	32	44
28	Kendal White*	73 8	32	57
29	Columbus	70 20	31	47
30	Golden Giant	60 ..	27½	16
31	Joanette	49 14	30	66

The average crop in 1907 of the thirty-one varieties of oats on the Experimental Farm at Lacombe, Alta., was 86 bus., 31 lbs. per acre.

BARLEY.

Fifteen sorts of six rowed barley and thirteen sorts of two rowed barley were tested at Lacombe. These plots were all sown on May 10th, the seed being used at the rate of about two bushels per acre.

SIX-ROWED BARLEY.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.	
1	Nugent*	72 24	44½	92
2	Mensury	72 24	44	96
3	Oderbruch	70 ..	43½	89
4	Mansfield*	68 36	46½	76
5	Stella*	65 ..	43	93
6	Claude*	60 .	42	95
7	Summit*	57 24	44	91
8	Odessa	56 42	40½	69
9	Blue Long Head	53 36	42	75
10	Empire*	51 12	44	92
11	Albert*	48 36	46	83
12	Champion	48 36	38	74
13	Yale*	47 24	45	71
14	Argyle*	47 24	47	80
15	Trooper*	42 24	47½	96

The average crop in 1907 of the fifteen varieties of six-rowed barley on the Experimental Farm at Lacombe, Alta., was 57 bus., 26 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

TWO-ROWED BARLEY.

Number.	Varieties tested.	Yield in 1907.	Weight per bushel.	Percentage of germination.
	(For one year.)	Bu. Lbs.	Lbs.	
1	Clifford*	50 ..	49¼	95
2	French Chevalier	46 12	44½	77
3	Gordon*	45 ..	47⅛	91
4	Canadian Thorpe	45 ..	41	58
5	Dunham*	43 36	48	89
6	Logan*	42 24	44½	92
7	Standwell	40 ..	40½	70
8	Sidney*	38 16	46	85
9	Invincible	37 24	42½	72
10	Beaver*	36 42	46	88
11	Danish Chevalier	32 24	42	82
12	Jarvis*	31 12	46	94
13	Swedish Chevalier	28 36	36½	71

The average crop in 1907 of the thirteen varieties of two-rowed barley on the Experimental Farm at Lacombe, Alta., was 39 bus., 39 lbs. per acre.

TURNIPS.

Twelve varieties of field turnips were tested at Lacombe in 1907. The seed was sown in drills two feet apart, and the young plants were thinned out to about 10 to 12 inches apart in the rows. The seed was sown on June 10th and the roots were pulled on October 23rd.

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year only.)	Tons. Lbs.		(For one year only.)	Tons. Lbs.
1	Hartley's Bronze Top	26 800	7	Jumbo	19 16
2	Good Luck	22 1,408	8	Halewood's Bronze Top	17 848
3	Kangaroo	22 1,408	9	Perfection Swede	14 1,024
4	Skirvings	22 352	10	Bangholm Selected	11 232
5	Mammoth Clyde	22 352	11	Magnum Bonum	11 16
6	Hall's Westbury	20 1,184	12	Carter's Elephant	10 64

The average crop in 1907 of the fifteen varieties of turnips on the Experimental Farm at Lacombe, Alta., was 18 tons 642 lbs. per acre.

MANGELS.

Ten varieties of mangels were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to 10 to 12 inches apart in the rows. The seed was sown on May 29th, and the roots were pulled on October 21st.

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year.)	Tons. Lbs.		(For one year.)	Tons. Lbs.
1	Giant Yellow Intermediate	32 1,528	6	Mammoth Red Intermediate	22 1,936
2	Giant Yellow Globe	28 1,552	7	Selected Yellow Globe	22 1,408
3	Half Sugar White	28 1,552	8	Prize Mammoth Long Red	20 1,184
4	Yellow Intermediate	28 1,024	9	Crimson Champion	20 1,184
5	Gate Post	28 1,024	10	Perfection Mammoth Long Red	19 1,600

The average yield in 1907 of the ten varieties of mangels on the Experimental Farm at Lacombe, Alta., was 25 tons 799 lbs. per acre.

Experimental Farm, Lacombe, Alberta.

CARROTS.

Six varieties of field carrots were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants were thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 29th, and the roots were pulled on October 22nd.

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year.)	Tons. Lbs.		(For one year.)	Tons. Lbs.
1	Improved Short White	26 744	4	Half Long Chantenay	14 1,568
2	Ontario Champion	16 680	5	White Belgian	14 982
3	Giant White Vosges	16 680	6	Mamm. White Intermediate	12 222

The average yield in 1907 of the six varieties of carrots on the Experimental Farm at Lacombe, Alta., was 16 tons 1,479 lbs. per acre.

SUGAR BEETS.

Three varieties of sugar beets were tested at Lacombe in 1907. The seed was sown in drills two feet apart and the young plants thinned out to about 4 or 5 inches apart in the rows. The seed was sown on May 29th, and the roots were dug on October 21st

Number.	Varieties tested.	Yield in 1907.	Number.	Varieties tested.	Yield in 1907.
	(For one year.)	Tons. Lbs.		(For one year.)	Tons. Lbs.
1	Wanzleben	18 960	3	Vilmorin's Improved	15 1,152
2	French Very Rich	15 1,680			

The average crop in 1907 of the three varieties of sugar beets on the Experimental Farm at Lacombe Alta. was 16 tons 1,264 lbs. per acre.

POTATOES.

Fourteen varieties only of potatoes were grown at Lacombe in 1907. For planting, the potatoes were cut into pieces with two or three eyes in each and these pieces were

planted in rows two and a half feet apart, the sets being placed about a foot apart in the rows. The potatoes were planted on June 15th and were dug on October 10th.

Number.	Varieties tested.	Yield in 1907.		Number.	Varieties tested.	Yield in 1907.	
	(For one year.)	Bus.	Lbs.		(For one year.)	Bus.	Lbs.
1	Early Envoy	220	34	8	Early Rose	149	46
2	Country Gentleman	215	7	9	Holborn Abundance	139	15
3	Everett	197	11	10	Canadian Beauty	117	55
4	Lovee	178	45	11	Burnaby Mammoth	116	4
5	State of Maine	178	37	12	American Wonder	113	19
6	Vermont Gold Coin	178	37	13	Ashleaf Kidney	86	36
7	Dreer's Standard	175	24	14	Dalmeny Beauty	74	16

The average crop in 1907 of the fourteen varieties of potatoes on the Experimental Farm at Lacombe, Alta., was 152 bushels, 58 lbs. per acre.

SUMMARY.

The results obtained from the uniform trial plots as given in this bulletin show that there are marked differences in the relative productiveness of varieties even when grown side by side under similar conditions. The results of the average crops obtained for five years indicate also that the tendency to productiveness is in many instances persistent, manifesting itself under varying conditions of soil and climate to a remarkable degree. The establishment of such facts point to the importance of farmers choosing for seed those varieties which give the heaviest crops, so that farming in Canada may thus be made more profitable.

During the past year the number of varieties under test has been further reduced by dropping some of those which have failed to come up to the high standard required. This reduction in the number tested will serve to give greater prominence to those varieties of the highest excellence.