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DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA

RESULTS OBTAINED IN 1900

FROM

TRIAL PLOTS OF GRAIN, FODDER CORN, FIELD
ROOTS AND POTATOES

Trial Plots at Experimental Farm, Brandon, Man.

By WM. SAUNDERS, LL.D.,

Director Experimental Farms

BULLETIN No. 36.

DECEMBER, 1900

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To the Honourable

The Minister of Agriculture.

SIR,—I beg to submit for your approval Bulletin No. 36 of the Experimental Farm series, prepared by myself. In this publication there are presented the results of a large number of experiments which have been conducted at all the experimental farms under your department during the season of 1900, with oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots, sugar beets and potatoes, in uniform plots. The average results are also given of five and six years' tests on such plots with varieties of oats, barley, spring wheat and Indian corn, three to six years' with plots of pease, four and five years' with plots of turnips, mangels, carrots and potatoes, and three and four years' experience with sugar beets.

This work of testing varieties is being conducted with the object of gaining information as to their relative productiveness and earliness in ripening. The results show wide variations in the weight of the crops grown and indicate the importance of the exercise of care in the choice of varieties of seed for sowing. It is hoped that the results presented, covering the experience gained under some of the most important climatic variations found in the Dominion, will prove useful to farmers in every part of Canada.

I have the honour to be

Your obedient servant,

WM. SAUNDERS,

Director Experimental Farms.

OTTAWA, 3rd December, 1900.

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RESULTS OBTAINED IN 1900

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

BY WILLIAM SAUNDERS, LL.D., F.R.S.C., F.I.S., &c.

Director Experimental Farms.

For the past five years an annual bulletin has been published, giving the results obtained from the uniform trial plots of grain, fodder corn, field roots and potatoes at each of the Dominion Experimental Farms, with the object of showing the relative productiveness and earliness of the many varieties under test. The average results which have been had with these crops for a series of years are also given. The present issue giving the particulars regarding these trial plots for 1900 is the sixth in the series, and shows an excellent average for most of the crops on the eastern experimental farms at Ottawa and Nappan, and good crops in most cases at Agassiz, B.C. At the Brandon and Indian Head farms on the western plains unfavourable conditions of weather have prevailed. There was a severe drought in the early part of the season, followed by strong winds, and later by unusually heavy and frequent rains. The seeds did not germinate evenly in the dry soil in the spring, the young plants also suffered more or less from spring frosts; later, winds injured the crops in exposed plots, and during the wet weather in harvest time they were further damaged. For these reasons the returns from the farms named are very incomplete, many varieties having proved a failure. To publish such particulars as can be had, in the usual way would give no correct information as to the comparative productiveness of the varieties under test and could only be misleading. On this account the yields of oats, barley, spring wheat and pease at Indian Head are omitted, also the particulars regarding the trial plots of oats, barley and wheat at Brandon. These details as far as they are available will be found in the Annual Report of the Experimental Farms for 1900, and a summary of the range of the crops in each case will be given in this bulletin under the separate headings.

Some varieties of pease suffered from unfavourable weather at Brandon, but the injury was not such as to prevent the details of this crop being given. Mangels have been hurt considerably by bad weather both at Brandon and Indian Head, and the yields of many sorts are light. Carrots have been a complete failure at Indian Head, and the first sowing, owing to drought, failed to germinate at Brandon: the seed of the second sowing was late in starting and the crop is unusually small. Sugar beets at Agassiz were a failure. The weather

was wet and cold for some time after they were sown, and very few of the seeds germinated. Later the few growing plants were so badly injured by cut worm that the plots were ploughed up.

In arranging the experiments reported on in this bulletin the same varieties have been sown at each of the Experimental Farms. The land chosen for the plots has been as nearly uniform in character as possible and the soil was brought by cultivation into a good condition of tilth. The seed has been sown early, and well cleaned and screened before sowing so as to separate the smaller kernels, leaving only the plump and well matured grain. In most cases all the varieties of the same cereal have been sown on the same day, or at most within two or three days, so as to give to all an even start. During the past ten years many new sorts of cereals have been originated on the Experimental Farms, some of these are included in the tests and the names of such are given in each case in the paragraph preceding the table of returns.

In the tables the varieties are placed in the order of their productiveness at the Central Experimental Farm. The number of days required for each sort from sowing to ripening is also added and thus their relative earliness is shown.

In comparing the results of any one single year with another the relative position in point of productiveness occupied by varieties will often vary, either from lack of uniformity in the soil or from some other cause, but the average experience gained by the continuance of these tests for a series of years affords much more satisfactory evidence on this subject. In the second part of this bulletin particulars are given drawn from experience gained during the past six years at all the Experimental Farms which should be of much value to Canadian farmers.

TRIAL PLOTS OF OATS.

Fifty-nine varieties of oats have been tested during the season of 1900. These include twelve cross-bred sorts which have been originated at the Experimental Farms, namely, Cromwell, Holland, Olive, Oxford, Pense, Miller, Brandon, Milford, King, Kendal, Master, and Russell. The size of the plots on which these oats were sown was one-fortieth of an acre each at Ottawa, Ont., Nappan, N.S., and Agassiz, B.C. The quantity of seed sown of each variety was in the proportion of two bushels per acre and the dates of sowing were as follows: At Ottawa, May 4th; Nappan, May 17th; and at Agassiz, April 16th.

Particulars as to the character of the land in each case, also the preparation and treatment it has had, will be found in the Annual Report of the Experimental Farms for 1900.

For reasons submitted on page 5 no returns are given in the appended table from the branch farms at Brandon and Indian Head. The plots of oats at Brandon varied in yield from 71 bushels 16 lbs. to 9 bushels 4 lbs. per acre. At Indian Head reports are available for 9 plots only out of 59, these have given from 76 bushels 16 lbs. to 32 bushels 12 lbs. per acre.

UNIFORM TEST PLOTS OF OATS.

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.		Nappan, N.S.	
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.
1	Holstein Prolific.....	82	18 91	26 58	28 77	24	102	104	118	108			
2	White Giant.....	78	8 62	12 46	6 62	9	102	116	114	111			
3	Black Beauty.....	76	16 95	10 58	28 76	29	104	100	111	105			
4	Hazlett's Seizure.....	74	24 76	16 50	30 67	12	104	105	118	109			
5	Oderbruch.....	73	32 75	10 53	28 67	23	103	103	113	106			
6	California Prolific Blk	72	32 76	16 53	18 67	22	108	102	118	109			
7	Joanette.....	70	20 91	26 43	18 66	21	112	100	119	110			
8	Early Blossom.....	70	20 85	30 56	16 70	33	105	102	115	107			
9	Golden Tartarian.....	69	14 68	8 48	18 62	2	110	116	118	115			
10	Golden Giant.....	68	28 84	24 57	12 70	10	110	105	120	112			
11	American Beauty.....	68	8 70	20 50	.. 62	32	102	102	120	108			
12	Cromwell.....	68	8 87	2 54	4 69	27	102	116	114	111			
13	Holland.....	68	8 68	8 53	8 63	8	110	100	118	109			
14	Olive.....	67	22 67	2 51	16 63	2	105	105	116	109			
15	Buckbee's Illinois.....	67	2 90	20 50	10 69	12	101	103	119	108			
16	Oxford.....	65	30 62	12 38	28 55	23	102	110	119	110			
17	Bavarian.....	65	10 87	2 47	32 66	26	110	103	118	110			
18	Prolific Blk. Tartarian	64	24 67	2 52	12 61	13	108	102	118	109			
19	Banner.....	64	4 74	4 52	22 63	21	101	100	118	107			
20	Wide Awake.....	63	18 88	8 41	18 64	15	106	105	119	110			
21	Mennonite.....	63	8 74	4 54	24 64	1	107	105	113	108			
22	Improved Ligowo.....	62	12 74	4 52	12 62	31	102	102	114	106			
23	Wallis.....	62	12 92	32 43	18 66	9	104	105	118	109			
24	Early Archangel.....	61	7 76	16 45	20 61	3	102	98	118	106			
25	White Schonen.....	61	6 82	12 49	14 64	11	104	100	114	106			
26	Early Golden Prolific	61	6 80	.. 55	20 65	20	105	103	113	107			
27	Flying Scotchman.....	61	6 75	10 51	16 62	22	99	104	113	105			
28	Pense.....	61	6 72	32 46	16 60	7	105	104	120	110			
29	Impd. Ligowo, Imp.....	60	.. 77	22 49	24 62	15	102	102	114	106			
30	New Zealand.....	60	.. 67	2 50	30 59	11	113	116	119	116			
31	Prolific Blk. Tartarian Imp.....	59	14 70	20 59	14 63	5	108	102	118	109			
32	California Prol. Blk. Imp.....	59	14 85	30 56	6 67	5	108	103	118	110			
33	American Triumph.....	58	28 70	20 53	18 60	33	107	103	118	109			
34	Abundance.....	58	8 68	8 52	22 59	24	110	102	118	110			
35	Danish Island.....	58	8 90	20 37	22 62	5	105	98	115	106			
36	Thousand Dollar.....	58	8 84	24 58	8 67	2	101	102	113	105			
37	Columbus.....	57	22 62	12 57	12 59	4	102	105	113	107			
38	Abyssinia.....	57	22 69	18 57	22 61	21	104	102	118	108			
39	Early Maine.....	57	2 85	30 49	4 64	1	102	105	119	109			
40	Miller.....	56	16 60	.. 45	30 54	4	104	104	118	109			
41	Newmarket.....	56	16 83	18 40	.. 60	..	103	105	118	109			
42	Brandon.....	55	10 76	16 43	18 58	15	110	103	116	110			
43	Lincoln.....	55	10 89	14 53	8 65	33	103	106	116	108			
44	Golden Beauty.....	54	4 94	4 45	30 64	24	112	105	120	112			
45	Rosedale.....	54	4 80	.. 50	20 61	19	102	103	120	108			
46	Milford.....	52	32 68	8 48	28 56	25	105	105	119	110			

UNIFORM TEST PLOTS OF OATS—*Concluded.*

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.		Nappan, N.S.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.
47	Salines.....	51	26	74	4	50	..	58	21	113	109	118	113
48	Sensation.....	51	26	72	32	42	4	55	21	102	99	113	105
49	White Russian.....	51	26	75	10	48	18	58	18	105	102	113	107
50	Early Gothland.....	51	26	69	18	45	30	55	25	102	99	114	105
51	Siberian.....	50	20	70	20	51	6	57	15	108	103	119	110
52	King.....	50	20	62	12	42	18	51	28	106	103	118	109
53	Improved American..	50	20	80	..	51	14	61	23	105	103	116	108
54	Bonanza.....	50	20	88	8	42	18	60	15	98	102	115	105
55	Kendal.....	48	8	87	2	55	20	63	21	111	104	119	111
56	Master.....	42	12	79	20	51	16	54	27	104	105	120	110
57	Black Mesdag.....	41	6	5	8	54	24	61	13	101	92	112	102
58	Russell.....	41	6	63	18	43	18	49	14	105	110	119	111
59	Cream Egyptian.....	35	30	76	16	46	16	52	32	108	98	120	109

The twelve varieties of oats which have produced the largest crops during 1900 at the three experimental farms are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Holstein Prolific.....	82	18	7. Joannette.....	70	20
2. White Giant.....	78	8	8. Early Blossom.....	70	20
3. Black Beauty.....	76	16	9. Golden Tartarian.....	69	14
4. Hazlett's Seizure.....	74	24	10. Golden Giant.....	68	28
5. Oderbruch.....	73	32	11. American Beauty.....	68	8
6. California Prolific Black	72	32	12. Cromwell.....	68	8

An average crop of 72 bushels 30 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Black Beauty.....	95	10	7. Buckbee's Illinois.....	90	20
2. Golden Beauty.....	94	4	8. Lincoln.....	89	11
3. Wallis.....	92	32	9. Black Mesdag.....	88	8
4. Holstein Prolific.....	91	26	10. Wide Awake.....	88	8
5. Joannette.....	91	26	11. Bonanza.....	88	8
6. Danish Island.....	90	20	12. Bavarian.....	87	2

An average crop of 90 bushels 23 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Prol. Blk. Tartarian.....	59	14	7. Golden Giant.....	57	12
2. Holstein Prolific.....	58	28	8. Early Blossom.....	56	16
3. Black Beauty.....	58	28	9. California Prol. Black.	56	6
4. Thousand Dollar.....	58	8	10. Kendal.....	55	20
5. Abyssinia.....	57	22	11. Early Golden Prolific..	55	20
6. Columbus.....	57	12	12. Mennonite.....	54	24

An average crop of 57 bushels 6 lbs. per acre.

The twelve varieties which have produced the largest crops in 1900 taking the average results obtained on the three experimental farms are :

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Holstein Prolific.....	77	24	7. Oderbruch.....	67	23
2. Black Beauty.....	76	29	8. California Prolific, Blk.	67	22
3. Early Blossom.....	70	33	9. Hazlett's Seizure.....	67	12
4. Golden Giant.....	70	10	10. Thousand Dollar.....	67	2
5. Cromwell.....	69	27	11. Joannette.....	66	21
6. Buckbee's Illinois.....	69	12	12. Bavarian.....	66	26

An average crop of 69 bushels 29 lbs. per acre.

The average crop of all the varieties of oats tested at each of the three experimental farms in 1900 was as follows:—At Ottawa 60 bushels 2 lbs.; Nappan 77 bushels 11 lbs., and at Agassiz 50 bushels 5 lbs. per acre. The average return given by the whole of the varieties tested at the three farms named was 62 bushels 17 lbs. per acre.

TRIAL PLOTS OF BARLEY.

Forty-seven varieties of barley have been tested in the trial plots during 1900, including eighteen different sorts of two-rowed barley and twenty-nine of six-rowed. Among the two-rowed sorts there are twelve hybrid varieties which have been produced at the experimental farms, namely, Beaver, Bolton, Jarvis, Clifford, Harvey, Dunham, Victor, Nepean, Fulton, Sidney, Logan and Leslie. Among the six-rowed sorts there are seventeen of these hybrids, namely, Pioneer, Argyle, Summit, Albert, Vanguard, Claude, Surprise, Success, Nugent, Trooper, Mansfield, Stella, Garfield, Empire, Phoenix, Yale and Brome.

The barley plots were of the same size as those sown with oats. Two bushels of seed was used per acre in each case, and the dates of sowing were as follows: At Ottawa, May 1st; Nappan, May 30th, and at Agassiz on April 20th.

For reasons submitted on page 5 no returns are given in the appended tables from the branch farms at Brandon and Indian Head. The plots of two-rowed barley at Brandon varied in yield from 34 bushels 18 lbs. to 16 bushels 42 lbs. per acre, and the plots of six-rowed barley from 42 bushels 34 lbs. to 15 bushels 10 lbs. per acre. At Indian Head eight plots only out of eighteen of two-rowed barley are reported on, which have varied in yield from 34 bushels 8 lbs. to 15 bushels per acre; particulars are given of the crops of eighteen out of twenty-nine sorts of six-rowed barley, which have ranged from 55 bushels to 24 bushels 28 lbs. per acre.

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.		Nappan, N.S.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.
1	Canadian Thorpe	58	16	58	16	31	32	49	21	98	93	108	100
2	French Chevalier	56	32	55	..	34	28	48	36	97	94	109	100
3	Beaver	54	8	65	..	34	8	51	5	97	92	109	99
4	Bolton	52	24	50	..	31	42	44	38	95	92	102	96
5	Danish Chevalier	51	32	63	16	37	4	50	35	97	93	110	100
6	Jarvis	50	20	25	40	41	32	39	14	97	94	102	98
7	Newton	50	..	47	24	31	22	43	6	99	93	108	100
8	Clifford	50	..	45	..	28	8	41	3	97	93	108	99
9	Harvey	50	..	40	40	33	28	41	23	95	94	110	100
10	Dunham	49	8	44	8	30	10	41	9	99	94	104	99
11	Victor	49	8	28	16	34	38	37	21	97	94	100	100
12	Nepean	49	8	40	..	41	22	43	26	99	92	102	98
13	Falton	47	44	32	24	30	10	36	42	99	94	110	101
14	Sidney	45	..	42	24	30	20	39	15	95	94	107	99
15	Logan	43	16	39	8	29	18	37	14	99	93	104	99
16	Leslie	40	40	25	..	29	18	31	35	97	93	109	100
17	Kinver Chevalier	37	44	40	..	32	24	36	39	97	94	108	100
18	Prize Prolific	26	46	46	32	36	12	36	30	105	94	109	103

The six varieties of two-rowed barley which have given the largest crops at the three experimental farms during 1900 are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.			Per Acre.		
	Bush.	Lbs.		Bush.	Lbs.
1. Canadian Thorpe.....	58	16	4. Bolton	52	24
2. French Chevalier.....	56	32	5. Danish Chevalier.....	51	32
3. Beaver	54	8	6. Newton	50	

An average crop of 53 bushels 42 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Beaver	65	..		4. French Chevalier	55	..	
2. Danish Chevalier.....	63	16		5. Bolton	50	..	
3. Canadian Thorpe.....	58	16		6. Newton.....	47	24	

An average crop of 56 bushels 25 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Jarvis	41	32	4. Prize Prolific	36	12
2. Nepean	41	22	5. Victor	34	38
3. Danish Chevalier	37	4	6. French Chevalier	34	28

An average crop of 37 bushels 31 lbs. per acre.

The six varieties of two-rowed barley which have given the largest crops in 1900, taking the average of the results obtained on the three experimental farms, are :—

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Beaver	51	5	4. French Chevalier	48	36
2. Danish Chevalier	50	33	5. Bolton	44	38
3. Canadian Thorpe	49	21	6. Nepean	43	26

An average crop of 48 bushels 2 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at the three experimental farms in 1900 was as follows :—At Ottawa, 48 bushels ; Nappan, 43 bushels 40 lbs., and at Agassiz, 33 bushels 11 lbs. per acre. The average return given by the whole of the varieties at the three farms named was 41 bushels 33 lbs. per acre.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.		Nappan, N.S.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.
1	Mensury	60	..	60	..	44	8	54	35	94	92	97	94
2	Pioneer	60	..	45	40	35	40	47	11	94	86	102	94
3	Common	59	8	53	16	38	42	50	22	91	87	105	94
4	Royal	58	8	56	32	32	14	49	12	93	86	103	94
5	Argyle	56	32	40	..	36	22	44	18	94	89	103	95
6	Odessa	55	..	51	32	40	20	49	1	93	87	97	92
7	Petschora	54	8	52	24	39	38	48	39	91	86	94	90
8	Summit	54	8	40	..	29	38	41	15	95	93	110	99
9	Albert	53	16	57	24	38	32	49	40	94	87	102	94
10	Vanguard	52	44	40	..	36	42	43	13	92	87	102	94
11	Oderbruch	52	24	42	24	38	16	44	21	94	87	96	92
12	Claude	51	32	29	8	40	10	40	17	94	93	109	99
13	Surprise	51	32	54	80	..	..	..	..	95	93	..	..
14	Success	50	40	33	16	27	34	37	14	88	86	95	90
15	Nugent	50	..	40	..	41	12	43	36	92	92	97	94
16	Hulless Black	48	36	20	40	26	40	32	7	92	87	105	95
17	Trooper	47	4	57	24	38	32	47	36	93	87	110	97
18	Excelsior	46	32	40	..	37	4	41	12	95	87	102	95
19	Champion	45	40	50	40	37	32	44	34	92	87	95	91

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY—*Concluded.*

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.				Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.	
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.
20	Rennie's Improved ..	45	20	52	24			92	87
21	Mansfield.....	45	..	50	..	33	40	45	93
22	Stella.....	43	36	47	24	29	28	40	92
23	Garfield.....	43	36	43	16	32	10	39	95
24	Empire.....	43	36	36	32	28	16	36	93
25	Blue Long Head.....	43	16	25	..	37	44	35	91
26	Baxter.....	41	32	47	24	38	42	42	87
27	Phoenix.....	41	32	52	24	36	22	43	87
28	Yale.....	41	32	53	16	40	..	45	98
29	Brome.....	40	40	32	40	32	4	35	94
									93
									103
									97

The six varieties of six-rowed barley which have given the largest crops at the three experimental farms during 1900 are the following:

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Mensury	60 ..	4. Royal.....	58 8
2. Pioneer.....	60 ..	5. Argyle.....	56 32
3. Common.....	59 8	6. Odessa.....	55 ..

An average crop of 58 bushels 8 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Mensury.....	60 ..	4. Royal.....	56 32
2. Trooper.....	57 24	5. Surprise.....	54 80
3. Albert.....	57 24	6. Yale.....	53 16

An average crop of 56 bushels 37 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Mensury.....	44 8	4. Claude.....	40 10
2. Nugent.....	41 12	5. Yale.....	40 ..
3. Odessa.....	40 20	6. Petschora.....	39 38

An average crop of 40 bushels 47 lbs. per acre.

The six varieties of six-rowed barley which have given the largest crops in 1900, taking the average of the results obtained on the three experimental farms, are :—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury.....	54	35	4. Odessa.....	49	1
2. Common.....	50	22	5. Albert.....	49	40
3. Royal.....	49	2	6. Petschora.....	48	39

An average crop of 50 bushels 15 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at the three experimental farms in 1900 was as follows : At Ottawa, 49 bushels 14 lbs. per acre ; Nappan, 45 bushels 6 lbs. ; and at Agassiz, 35 bushels 45 lbs. The average return given by the whole of the varieties at the three farms named was 43 bushels 22 lbs. per acre.

TRIAL PLOTS OF SPRING WHEAT.

Forty-nine varieties of spring wheat have been grown on the uniform test plots for 1900. Among these there are thirty cross-bred sorts which have been produced at the experimental farms. These are Huron, Blenheim, Preston, Laurel, Captor, Weldon, Admiral, Crown, Stanley, Harold, Clyde, Plumper, Percy, Beauty, Crawford, Byron, Advance, Fraser, Blair, Alpha, Norval, Mason, Progress, Ebert, Vernon, Early Riga, Rideau, Dawn, Countess and Dufferin. The size of the plots in each case was one-fortieth of an acre and the quantity of seed sown was in the proportion of one and one-half bushels per acre. The dates of sowing were as follows : At Ottawa, April 28th to 30th ; Nappan, May 26th, and at Agassiz, April 10th and 11th.

For reasons submitted on page 5 no returns are given in the appended table from the branch farms at Brandon and Indian Head. The plots of spring wheat at Brandon have ranged from 31 bushels 30 lbs. to 8 bushels 20 lbs. per acre. At Indian Head the returns of twenty-nine plots only out of forty-nine are available. These have varied in crop from 35 bushels 20 lbs. to 11 bushels per acre.

UNIFORM TEST PLOTS OF SPRING WHEAT.

Number.	NAME OF VARIETY.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.	Nappan, N.S.	Agassiz, B.C.	Average of Three Farms.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.
1	Huron	38	40	34	..	30	26	34	20	107	105	113	108
2	Wellman's Fife	35	20	34	..	26	30	31	57	108	107	121	112
3	Blenheim	34	40	31	20	24	16	30	3	107	105	114	109
4	Preston	34	..	38	40	27	16	33	17	105	103	114	107
5	Laurel	33	40	44	40	21	10	33	10	109	105	121	113
6	Colorado	33	20	40	..	21	20	31	33	103	103	121	109
7	Captor	32	40	28	..	22	20	27	40	103	105	114	107
8	Red Fern	32	40	40	40	24	40	32	40	107	103	121	110
9	White Russian	32	40	40	40	23	16	33	50	108	107	122	112
10	Weldon	32	40	40	40	18	20	30	33	104	105	124	111
11	Red Fife	32	..	36	40	29	30	32	43	110	105	120	112
12	Pringle's Champlain ..	32	..	38	40	25	20	32	..	107	104	121	111
13	Admiral	31	20	33	20	20	10	28	17	106	104	121	110
14	Dion's	31	20	36	40	23	30	30	30	107	105	120	111
15	Crown	31	20	27	20	28	30	29	3	106	105	115	109
16	Roumanian	31	20	36	40	24	10	30	43	111	104	121	112
17	Stanley	30	40	33	20	22	20	28	47	104	102	115	107
18	Harold	30	40	24	40	16	50	24	3	98	105	110	101
19	Clyde	30	40	37	20	23	20	30	27	107	105	120	111
20	Plumper	30	20	36	..	25	..	30	27	101	102	111	106
21	Percy	30	..	37	20	23	10	30	10	105	104	121	110
22	Beatty	30	..	31	20	26	30	29	17	107	105	121	111
23	Crawford	30	..	28	..	22	20	26	47	103	102	114	106
24	Monarch	30	..	36	40	29	30	32	3	109	105	121	112
25	Byron	30	..	28	..	23	30	27	10	105	102	113	107
26	Goose	29	20	34	..	26	..	27	47	111	103	120	111
27	Advance	29	20	36	40	26	20	30	47	106	104	113	108
28	Fraser	29	20	22	..	27	40	26	20	103	101	111	105
29	Blair	28	40	34	..	25	40	29	27	103	105	115	108
30	White Fife	28	..	42	..	24	20	31	27	108	107	121	112
31	Alpha	27	20	38	..	24	30	29	57	107	105	121	111
32	White Connell	27	..	44	..	26	..	32	20	110	105	120	112
33	Rio Grande	26	40	40	..	22	20	29	40	109	104	122	112
34	Beaudry	26	40	36	..	20	30	27	43	106	105	121	111
35	Norval	26	40	38	..	25	10	29	57	101	102	114	106
36	Mason	26	40	35	20	20	20	27	27	104	105	111	107
37	Progress	26	20	33	20	26	..	28	33	107	105	112	111
38	Ebert	26	20	24	..	21	..	23	47	101	105	114	107
39	Herisson Bearded ..	26	..	33	20	24	20	27	53	107	105	121	111
40	Vernon	26	..	33	20	25	40	28	20	107	101	113	107
41	Hungarian	25	40	41	20	22	20	29	47	110	104	120	111
42	Early Riga	25	20	28	..	20	..	24	27	100	98	110	103
43	White Chaff Camp- bell's	25	20	34	40	17	10	25	43	104	105	122	110
44	Rideau	25	20	24	..	23	10	24	10	107	101	122	110
45	Dawn	24	40	34	..	22	30	27	3	105	103	121	110
46	Ladoga	24	..	35	20	26	20	28	33	101	98	113	104
47	Red Swedish	22	..	40	40	24	10	28	57	104	105	120	110
48	Countess	22	..	20	40	23	20	33	..	105	105	114	108
49	Dufferin	19	..	33	20	24	..	25	27	105	100	114	106

The twelve varieties of spring wheat which have given the largest crops at the three experimental farms in 1900 are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Huron.....	38 40	7. Captor.....	32 40
2. Wellman's Fife.....	35 20	8. Red Fern.....	32 40
3. Blenheim.....	34 40	9. White Russian.....	32 40
4. Preston.....	34 ..	10. Weldon.....	32 40
5. Laurel.....	33 40	11. Red Fife.....	32 ..
6. Colorado.....	33 24	12. Pringle's Champlain...	32 ..

An average crop of 33 bushels 42 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Laurel.....	44 40	7. White Russian.....	40 40
2. White Connell.....	44 ..	8. Red Swedish.....	40 40
3. White Fife.....	42 ..	9. Colorado.....	40 ..
4. Hungarian.....	41 20	10. Rio Grande.....	40 ..
5. Red Fern.....	40 40	11. Preston.....	38 40
6. Weldon.....	40 40	12. Pringle's Champlain...	38 40

An average crop of 41 bushels per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Huron.....	30 20	7. Preston.....	27 10
2. Monarch.....	29 30	8. Wellman's Fife.....	26 30
3. Red Fife.....	29 30	9. Beauty.....	26 30
4. Crown.....	28 30	10. Ladoga.....	26 20
5. White Russian.....	28 10	11. Advance.....	26 20
6. Fraser.....	27 40	12. White Connell.....	26 ..

An average crop of 27 bushels 42 lbs. per acre.

The twelve varieties of spring wheat which have given the largest crops in 1900, taking the average of the results obtained on the three experimental farms, are :—

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Huron.....	34 20	7. Red Fern.....	32 40
2. White Russian.....	33 50	8. White Connell.....	32 20
3. Preston.....	33 17	9. Monarch.....	32 3
4. Laurel.....	33 10	10. Pringle's Champlain...	32 ..
5. Countess.....	33 ..	11. Wellman's Fife.....	31 57
6. Red Fife.....	32 43	12. Colorado.....	31 33

An average crop of 32 bushels 44 lbs. per acre.

The average crop of all the varieties of spring wheat tested at the three experimental farms in 1900 was as follows: At Ottawa, 29 bushels 5 lbs. per acre; Nappan, 34 bushels 30 lbs. and at Agassiz 24 bushels. The average return given by the whole of the varieties of spring wheat at the three farms named was 29 bushels 23 lbs. per acre.

TRIAL PLOTS OF PEASE.

Fifty-six varieties of pease have been tested in the uniform trial plots during 1900. Among these are included thirty of the cross-bred sorts which have been originated at the experimental farms. These are Fergus, Duke, Fenton, Prince, Lanark, Kent, Arthur, Dover, Bright, Nelson, Picton, Alma, Perth, Pearl, Gregory, King, Agnes, Archer, Macoun, Vincent, Trilby, Carleton, Mackay, Herald, Cooper, Bruce, Elder, Elliot, Bedford and Chelsea. These were sown in plots of one-fortieth of an acre each at Ottawa, Nappan and Agassiz, and at Brandon in plots of one-twentieth acre; the quantity of seed used per acre has varied from two to three bushels, depending on the size of the pea. The dates of sowing were as follows: At Ottawa, May 7; Nappan, May 28th; Brandon, April 23rd and at Agassiz, April 3rd.

For reasons submitted on page 5 no returns are given in the appended table for the branch farm at Indian Head. Out of fifty-seven plots sown there returns from sixteen only are available. These have ranged in yield from 33 bushels to 14 bushels per acre.

UNIFORM TEST PLOTS OF PEASE.

Number.	NAME OF VARIETY.	Yield per Acre at the Four Experimental Farms, Season of 1900.						Number of Days from Sowing to Harvesting								
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Agassiz, B.C.		Average of Four Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Agassiz, B.C.	Average of Four Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
1	Golden Vine.....	40	.. 13	20 33	20 19	.. 26	25	109	101	130	129	117				
2	Fergus.....	38	40 10	.. 33	10 24	30 26	35	112	103	131	131	119				
3	Paragon.....	36	.. 18	40 22	50 15	.. 23	7	107	106	127	129	117				
4	Early Britain.....	35	20 16	.. 25	10 32	10 27	10	106	100	129	127	115				
5	Duke.....	35	20 17	20 37	10 30	20 30	2	112	106	130	131	120				
6	Fenton.....	33	20 13	20 29	40 30	10 26	37	111	102	131	131	119				
7	Mummy.....	33	20 22	.. 30	.. 20	30 26	27	110	100	128	129	117				
8	Harrison's Glory.....	32	40 18	.. 32	30 26	.. 27	17	105	101	130	129	116				
9	Prince.....	32	.. 14	.. 41	40 27	20 28	45	112	101	130	127	117				
10	Chancellor.....	31	40 22	40 31	30 24	40 27	37	103	102	129	133	117				
11	New Potter.....	30	40 20	.. 18	30 25	10 23	35	112	101	127	124	116				
12	Lanark.....	30	40 18	.. 30	.. 27	20 26	30	110	101	132	122	116				
13	Kent.....	30	20 13	20 31	.. 19	40 23	35	110	101	131	133	119				
14	Arthur.....	30	.. 20	40 22	40 26	10 21	52	103	100	127	127	114				
15	Oddfellow.....	30	.. 26	40 17	10 21	.. 23	42	103	100	130	126	115				
16	Dover.....	29	20 12	.. 35	30 22	20 24	47	114	102	130	131	119				
17	Prussian Blue.....	28	40 10	.. 37	30 22	40 24	42	112	101	130	133	119				
18	Wisconsin Blue.....	28	40 12	40 ..	.. 27	30 22	57	112	101		129	114				
19	White Wonder.....	28	.. 20	40 43	.. 29	10 30	12	103	100	130	133	116				
20	Elephant Blue.....	28	.. 26	40 16	30 25	50 24	15	110	102	127	127	116				
21	Bright.....	27	20 16	40 30	.. 21	40 26	10	114	101	132	132	120				
22	Ice White Marrowfat	27	20 10	.. 38	30 27	50 25	55	113	101	132	133	120				
23	Nelson.....	27	.. 28	40 26	.. 19	10 25	12	105	101	128	128	115				
24	English Grey.....	26	40 21	20 30	50 24	30 25	50	106	103	130	127	116				
25	Canadian Beauty.....	26	.. 15	20 21	30 25	40 22	7	108	102	130	133	118				
26	Black-eyed Marrowfat	26	.. 22	40 22	40 26	.. 24	20	112	102	130	128	118				
27	Picton.....	26	.. 18	.. 24	40 26	.. 23	40	110	101	128	127	116				
28	Alma.....	26	.. 21	20 25	10 15	.. 21	52	108	101	127	127	116				

UNIFORM TEST PLOTS OF PEASE—*Concluded.*

Number.	NAME OF VARIETY.	Yield per Acre at the Four Experimental Farms, Season of 1900.					Number of Days from Sowing to Harvesting				
		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Agassiz, B.C.	Average of Four Farms.	Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Agassiz, B.C.	Average of Four Farms.
		Bush.	Lbs. Bush.	Lbs. Bush.	Lbs. Bush.	Lbs. Bush.	Days.	Days.	Days.	Days.	Days.
29	Perth	25	40 24	40 35	.. 28	.. 21	26	107	101	130	127
30	Creep	25	20 15	20 31	20 15	40 21	55	108	102	130	127
31	Daniel O'Rourke	25	20 20	40 33	50 29	10 27	15	105	102	128	122
32	German White	25	20 18	.. 36	40 29	.. 27	15	105	101	131	129
33	Pearl	25	20 10	.. 40	.. 19	40 23	45	111	106	130	133
34	Centennial	25	20 23	20 31	.. 24	40 26	5	112	100	130	131
35	Gregory	24	40 10	.. 26	30 24	20 21	22	105	101	132	132
36	King	24	.. 16	.. 44	.. 22	20 26	35	110	102	132	128
37	Pride	24	.. 18	40 29	50 28	20 24	17	107	102	129	127
38	Agnes	24	.. 22	.. 38	.. 24	40 27	10	107	101	129	132
39	Archer	24	.. 21	20 39	30 25	50 27	40	112	102	130	131
40	Microm	23	20 12	.. 36	20 26	.. 24	25	107	105	131	131
41	Vincet	23	20 15	20 31	20 23	.. 23	15	110	101	130	127
42	Victoria	23	20 6	40 32	20 26	.. 22	5	105	102	129	133
43	Crown	23	20 29	20 31	10 26	40 27	37	110	101	129	125
44	Trilby	22	40 15	20 42	30 25	20 26	28	109	105	131	126
45	Carleton	22	.. 21	20 42	40 23	20 27	20	111	102	130	127
46	Prince Albert	22	.. 12	.. 35	10 16	50 21	30	111	101	129	133
47	Mackay	22	.. 17	20 28	40 24	.. 23	..	109	105	128	127
48	Herald	22	.. 10	.. 34	30 26	30 23	15	112	101	131	129
49	Cooper	20	40 19	20 17	40 21	.. 19	40	105	101	129	129
50	French Canner	20	40 22	40 12	40 27	20 20	50	103	102	126	127
51	Bruce	20	.. 13	20 34	20 29	.. 24	10	112	105	131	132
52	Elder	19	20 15	20 32	.. 18	.. 21	10	106	105	129	127
53	Elliott	19	20 22	40 38	30 23	30 26	..	110	106	129	132
54	Bedford	18	.. 17	20 32	40 18	50 21	27	109	106	130	133
55	Chelsea	18	.. 11	20 39	.. 21	20 22	25	110	102	131	133
56	Multiplier	17	20 22	.. 32	50 18	.. 22	32	112	102	129	124

The twelve varieties of pease which have given the largest crops at the four experimental farms during 1900, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Golden Vine	40 ..	7. Mummy	33 20
2. Fergus	38 40	8. Harrison's Glory	33 20
3. Paragon	36 ..	9. Prince	32 ..
4. Early Britain	35 20	10. Chancellor	31 40
5. Duke	35 20	11. New Potter	30 40
6. Fenton	33 20	12. Lamark	30 40

An average crop of 35 bushels 2 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Crown	29 20	7. Chancellor	22 40
2. Nelson	28 40	8. French Canner	22 40
3. Orlifellow	26 40	9. Elliot	22 40
4. Elephant Blue	26 40	10. Black-eyed Marrowfat	22 40
5. Perth	24 40	11. Mummy	22 ..
6. Centennial	23 20	12. Multiplier	22 ..

An average crop of 24 bushels 30 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre, Bush. Lbs.		Per Acre, Bush. Lbs.
1. King.....	44 ..	7. Archer	39 30
2. White Wonder.....	43 ..	8. Bright	39 ..
3. Carleton.....	42 40	9. Chelsea.....	39 ..
4. Trilby.....	42 30	10. Elliot	38 30
5. Prince.....	41 40	11. Large White Marrowfat.	38 30
6. Pearl.....	40 ..	12. Agnes.....	38 ..

An average crop of 40 bushels 32 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre, Bush. Lbs.		Per Acre, Bush. Lbs.
1. Early Britain.....	32 10	7. Bruce.....	29 ..
2. Duke	30 20	8. Iride	28 20
3. Fenton.....	30 10	9. Perth.....	28 ..
4. Daniel O'Rourke.....	29 10	10. Large White Marrowfat.	27 50
5. White Wonder.....	29 10	11. Wisconsin Blue.....	27 30
6. German White.....	29 ..	12. Prince.....	27 20

An average crop of 29 bushels per acre.

The twelve varieties of pease which have given the largest crops in 1900, taking the average results obtained on the four experimental farms, are the following :

	Per Acre, Bush. Lbs.		Per Acre, Bush. Lbs.
1. White Wonder.....	30 12	7. Carleton.....	27 20
2. Duke	30 2	8. Harrison's Glory.....	27 17
3. Prince.....	28 45	9. Daniel O'Rourke.....	27 15
4. Archer	27 40	10. German White.....	27 15
5. Crown	27 37	11. Agnes.....	27 10
6. Chancellor	27 37	12. Early Britain.....	27 10

An average crop of 27 bushels 57 lbs. per acre.

The average crop of all the varieties of pease tested at each of the experimental farms in 1900 was as follows :—At Ottawa, 26 bushels 29 lbs. per acre ; Nappan, 17 bushels 34 lbs. ; Brandon, 31 bushels 35 lbs., and at Agassiz, 24 bushels 14 lbs. The average return given by the whole of the varieties at the four farms named was 24 bushels 58 lbs. per acre.

TRIAL PLOTS OF INDIAN CORN.

Thirty-two varieties of Indian Corn have been tested during 1900. These were planted on fairly uniform soil in rows three feet apart and the plants thinned out to six or eight inches apart in the rows. The dates of planting were as follows : At Ottawa, May 25th ; Nappan, June 7th ; Brandon, May 19th ; Indian Head, May 19th and at Agassiz, May 29th and 30th.

All the plots were cut green and put into the silo for the winter feeding of stock. The dates of cutting were : At Ottawa, September 12th ; Nappan, October 8th ; Brandon, September 3rd ; Indian Head, September 4th, and at Agassiz on October 3rd. The yield per acre has been calculated in each case from the weight obtained from two rows each 66 feet long.

UNIFORM TEST PLOTS OF INDIAN CORN.

Number.	NAME OF VARIETY.	Yield at the Several Experimental Farms Season of 1900.					
		Ottawa,	Nappan,	Brandon,	Indian Head,	Agassiz,	Average
		Ont.	N.S.	Man.	N.W.T.	B.C.	of all Farms.
		Per acre, Tons Lbs.	Per acre, Tons Lbs.	Per acre, Tons Lbs.	Per acre, Tons Lbs.	Per acre, Tons Lbs.	Per acre, Tons Lbs.
1	Rural Tho'bd White Flint	21 1280	28 750	29 1100	17 1420	18 1180	23 1606
2	Red Cob Ensilage	23 1740	24 70	15 360	13 950	26 360	20 1096
3	Early Mastodon	23 1300	23 1850	20 920	16 1110	24 1500	21 1736
4	Giant Prolific Ensilage	23 1300	23 970	16 1446	13 1720	21 570	19 1600
5	Superior Fodder	23 640	26 1900	17 1640	14 260	26 800	21 1610
6	Salzer's All Gold	23 310	20	13 810	11 1100	20 1360	17 1322
7	Champion White Pear	23 200	27 1550	15 800	15 1570	23 530	21 130
8	Mammoth Cuban	23 200	24 1500	14 1700	15 30	26 680	20 1622
9	Longfellow	22 110	21 1670	15 1020	16 310	15 360	18 300
10	Angel of Midnight	22	23 750	18 1620	18 190	17 760	19 1864
11	Canada White Flint	22	22 550	18 1180	15 30	15 580	18 1262
12	White Cap Yellow Dent	21 1780	22 1650	12 1520	12 610	17 320	17 782
13	Cloud's Early Yellow	21 900	25 600	15 1240	15 800	25 1010	20 1316
14	Mammoth, Eight-rowed Flint	21 240	21 1670	15 1900	16 1110	18 1620	18 1708
15	Pride of the North	21 20	24 950	15 1900	12 1410	26 360	20 128
16	Selected Leaning	20 40	24 420	16 120	14 1260	16 670	18 102
17	North Dakota White	20 40	24 950	22 1100	14 260	15 800	19 630
18	Compton's Early	19 500	18 1950	20 700	16 310	15 360	17 1970
19	Early Butler	19 280	23 1850	15 1240	14 490	17 320	18 36
20	Pearce's Prolific	18 1400	20 1800	22 220	13 950	18 630	18 1400
21	King of the Earliest	18 850	23 970	19 500	13 180	21 1580	19 416
22	Sanford	17 1970	20 1550	19 1160	13 720	15 690	17 818
23	Evergreen Sugar	17 1200	22 1106	12 420	14 1260	18 960	17 188
24	Extra Early Huron	17 1000	19 500	12 1520	10 20	24 1720	16 1752
25	Kendall's Early Giant	15 1900	19 1600	16 120	11 1870	16 10	15 1900
26	Early Yellow Long Eared	13 1280		22 220	18 960	21 680	
27	Country Gentleman	12 1520	22 550	11 1100	11 1870	19 280	15 1064
28	Mitchell's Extra Early	12 310	13 1950	20 480	12 1410	11 1210	15 192
29	Yellow Six-weeks Extra	11 110	11 1870	10 900	9 480	17 760	12 24
30	Extra Early Szekely	10 1780	13 1950	11 1100	9 480	13 1280	11 1718
31	North Dakota Yellow	10 1780	11	17 100	13 180	14 1180	13 708
32	Salzer's Earliest Ripe	9 1800	9 700	8 500	9 480	14 1810	10 658

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1900 are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Thoro'bred White Flint	24 1280	4. Giant Prolific Ensilage	23 1300
2. Red Cob Ensilage	23 1740	5. Superior Fodder	23 640
3. Early Mastodon	23 1300	6. Salzer's All Gold	23 310

An average crop of 23 tons 1,428 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Thoro'bred White Flint	28 750	4. Cloud's Early Yellow	25 600
2. Champion White Pearl	27 1550	5. Mammoth Cuban	24 1500
3. Superior Fodder	26 1900	6. North Dakota White	24 950

An average crop of 26 tons 542 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1.	Thoro'bred White Flint...	20	1400	4.	Early Yellow Long Eared	22	220
2.	North Dakota White....	22	1100	5.	Early Mastodon.....	20	920
3.	Pearce's Prolific	22	220	6.	Compton's Early.....	20	700

An average crop of 22 tons 1,760 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1.	Early Yellow Long Eared	18	960	4.	Early Mastodon.....	16	1110
2.	Angel of Midnight.....	18	190	5.	Mammoth 8-rowed Flint.	16	1110
3.	Thoro'bred White Flint..	17	1420	6.	Compton's Early.....	16	310

An average crop of 17 tons 525 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1.	Superior Fodder.....	26	800	4.	Red Cob Ensilage.....	26	360
2.	Mammoth Cuban.....	26	680	5.	Cloud's Early Yellow....	25	1040
3.	Pride of the North	26	360	6.	Extra Early Huron.....	24	1720

An average crop of 25 tons 1,827 lbs. per acre.

The six varieties of Indian corn which have given the heaviest crops in 1900, taking the average of the results obtained on all the experimental farms, are as follows:

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1.	Thoro'bred White Flint..	23	1606	4.	Champion White Pearl..	21	130
2.	Early Mastodon.....	21	1736	5.	Mammoth Cuban	20	1622
3.	Superior Fodder	21	1640	6.	Cloud's Early Yellow....	20	1316

An average crop of 21 tons 1,341 lbs. per acre.

The average weight, cut green, of all the varieties of Indian corn tested at each of the experimental farms in 1900 was as follows: At Ottawa, 18 tons 1,868 lbs. per acre; Nappan, 21 tons 649 lbs.; Brandon, 16 tons 1,406 lbs.; Indian Head, 13 tons 1,746 lbs., and at Agassiz, 19 tons 414 lbs. The average return given by the whole of the varieties at all the farms was 18 tons 17 lbs. per acre.

TRIAL PLOTS OF TURNIPS.

Twenty-eight varieties of turnips were tested during 1900 sown on drills or on the flat 2½ feet apart. Two sowings were made at each farm, the second about two weeks later than the first. The dates of sowing in each case will be found in the accompanying table; the dates on which the roots were pulled were as follows: At Ottawa, October 16th; Nappan, November 1st; Brandon, October 29th; Indian Head, October 8th, and at Agassiz, October 23rd. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF TURNIPS.

Number.	NAME OF VARIETY	OTTAWA, ONT.			NAPLAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMS.	
		Sown May 10	Sown May 22	Sown May 29	Sown June 12	Sown May 19	Sown June 2	Sown May 18	Sown May 25	Sown May 18	Sown June 1	First Sowing	Second Sowing	
		Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	
1	Carter's Elephant.....	42 1800	25 1150	42 480	21 1725	10 64	8 1160	19 310	6 1740	17 1200	16 560	26 771	15 1667	
2	Skirvings.....	37 1240	31 865	42 1800	26 1625	8 1160	15 1680	16 400	15 780	16 560	18 80	24 632	21 1006	
3	Champion Purple Top....	36 1580	26 925	33	24 675	12 1080	10 1384	19 1675	8 1040	24 1280	26 1680	25 725	19 740	
4	West Norfolk Red Top....	36 930	29 1400	33 1680	28 925	7 1048	12 1608	14 290	11 1040	28 1200	22	24 289	20 1794	
5	Sutton's Champion.....	36 105	34 1300	30	29 575	8 1160	11 440	13 670	16 400	17 1080	15 1240	21 203	21 791	
6	Monarch.....	35 1940	18 735	42 480	23 1850	6 1260	8 1160	14 1235	9 990	17 1970	16 120	23 965	15 1199	
7	Magnum Bonum.....	35 1289	30 1710	34 1300	23 1400	10 856	9 1800	8 1850	10 1825	15 1680	19 280	21 135	20 2963	
8	Drummond Purple Top....	35 620	21 1830	38 1880	26 1625	9 216	10 325	20 545	8 1580	29 1580	19 1600	24 1768	18 192	
9	Perfection Swede.....	33 825	28 925	35 950	25 1975	10 1120	12 1872	20 410	15 1590	26 160	31 920	27 293	22 1836	
10	Shamrock Purple Top....	33 825	31 37	37 745	23 1850	8 104	14 1040	14 1565	11 1010	19 280	15 800	22 1091	19 553	
11	Kangaroo.....	33 330	29 575	40 850	26 1150	9 480	10 1120	10 70	7 415	17 1800	13 400	22 318	17 732	
12	Elephant's Master.....	32 1835	30 1050	37 250	26 1625	7 320	9 480	11 965	13 130	26 800	22 220	23 62	20 701	
13	Selected Purple Top.....	32 1540	28 760	33	30 1650	7 1048	11 704	15 1590	15 240	24 1280	18 80	22 1451	20 1366	
14	Hall's Westbury.....	32 1010	25 530	38 1550	27 450	5 1088	15 1680	17 80	12 990	18 80	20 700	22 761	19 1670	
15	Selected Champion.....	32 680	30 1050	40 1675	25 325	9 1800	15 260	15 1995	15 1590	17 320	16 560	23 494	20 1177	
16	East Lothian.....	32 330	21 240	37 1075	28 1750	8 368	13 136	19 1000	14 560	16 1000	11 1760	22 1520	17 1689	
17	Hartley's Bronze.....	31 1360	24 1170	42 975	25 1975	9 1800	13 400	17 350	10 235	19 1160	19 620	24 329	18 1280	
18	Mammoth Clyde.....	31 1195	26 1790	36 600	21 1725	6 936	11 440	17 1700	13 400	25 1920	25 1040	23 1270	19 1479	
19	Marquis of Lorne.....	31 1030	26 965	31 1325	18 1455	6 1392	11 440	15 240	14 560	16 780	16 1680	20 713	17 1016	
20	New Arctic.....	31 1030	24 180	34 1300	22 1375	7 1376	9 480	12 315	8 350	18 520	16 1880	20 174	16 453	
21	Junbo.....	31 370	27 1935	33 1650	22 1375	5 1883	19 800	8 1175	12 1395	17 320	15 1680	19 679	19 1437	
22	Imperial Swede.....	30 390	26 1130	42 1365	29 1400	9 480	13 400	11 770	22 385	25 1920	22 1020	23 1773	22 1667	
23	Pearce's Prize Winner....	29 80	22 1375	37 1900	26 1625	8 1160	12 1080	14 1505	9 525	19 1380	19 620	22 5	18 245	
24	Prize Purple Top.....	28 1750	25 860	37 250	26 800	9 1800	12 1344	15 375	13 1480	18 80	16 560	21 1651	18 1069	
25	Halewood's Bronze Top..	28 100	14 1370	37 1075	28 100	4 1240	11 1760	19 1675	14 290	18 1400	14 1040	21 1498	16 1258	
26	Bangholm Selected.....	27 1410	24 510	35 125	23 1025	5 560	14 1040	17 1365	12 315	26 1680	25 820	22 1074	19 1292	
27	Giant King.....	24 180	21 900	30 225	18 1350	10 1120	15 1160	16 1665	9 1485	17 1860	15 360	19 1810	14 1571	
28	Webb's New Renown.....	all rotted	all rotted	27 1275	26 1625	10 1120	15 360	19 310	20 1625	15 1680	11 1980	18 569	18 596	

The six varieties of turnips which have produced the heaviest crops in 1900, taking the average of the results obtained on all the experimental farms are the following :

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Carter's Elephant.....	25	291		4. Drummond Purple Top..	24	1768	
2. Perfection Swede	27	293		5. Skirvings.....	24	632	
3. Champion Purple Top..	25	723		6. Hartley's Bronze.....	24	329	

An average crop of 25 tons 1,339 lbs. per acre.

The early sown plots have again given the larger crops at four of the experimental farms. The average results from all the farms show (Brandon being the exception) a difference of 3 tons 1,280 lbs. per acre in favor of the early sowings.

TRIAL PLOTS OF MANGELS.

Twenty-two varieties of mangels have been under test during 1900, all sown on drills or on the flat in rows $2\frac{1}{2}$ feet apart. Two sowings were made at each of the experimental farms, the second sowing two weeks later than the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following : At Ottawa, October 16th ; Nappan, October 24th ; Brandon, October 2nd ; Indian Head, September 28th and at Agassiz October 24th. The yield per acre has been calculated in each case from the weight of roots gathered from two rows each 66 feet long.

UNIFORM TEST PLOTS OF MANGELS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPKAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMS.	
		Sown May 16	Sown May 30	Sown May 29	Sown June 12	Sown June 19	Sown June 2	Sown May 18	Sown May 25	Sown April 25	Sown May 12	First Sowing	Second Sowing
		Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.
1	Canadian Giant.....	51 630	34 310	37 250	25 1750	10 328	13 1720	24 1590	11 740	18 740	20 1580	28 708	21 1620
2	Giant Yellow Intermediate.....	49 340	24 1500	40 175	30 1875	12 552	11 440	20 1370	16 370	28 1960	21 1120	32 79	20 1861
3	Ward's Large Oval Shaped.....	47 1040	33 1650	35 1650	24 1560	9 744	13 928	12 735	13 1500	13 1720	11 1760	32 790	19 1868
4	Mammoth Long Red.....	46 400	39 540	41 1325	30 1875	13 928	13 136	19 640	21 1980	14 1040	12 640	27 67	23 1634
5	Giant Yellow Half Long.....	45 1080	25 1150	47 875	28 100	10 1648	11 1232	19 1465	12 1200	26 800	19 1380	29 1973	19 1012
6	Mam. Yellow Intermediate.....	44 440	38 560	47 875	33 825	11 704	15 888	16 335	13 715	18 1620	22 880	27 1195	26 1745
7	Gate Post.....	42 480	34 1300	40 25	30 225	16 1384	15 888	23 1670	18 1950	16 120	14 600	26 1136	22 1363
8	Half Long Sugar Rosy.....	42 295	28 430	30 1875	22 1375	10 1384	11 701	12 1740	15 1500	22 1760	18 80	23 1811	19 418
9	Yellow Intermediate.....	42 150	40 1510	43 625	25 1150	5 32	13 664	12 1080	18 570	14 1920	14 1040	23 761	23 987
10	Champion Yellow Globe.....	42 150	35 290	41 1325	30 1875	10 1384	12 288	26 740	13 820	20 480	11 880	28 416	20 1231
11	Half Long Sugar White.....	41 1820	31 700	27 1275	26 1025	7 1840	12 1608	13 1270	15 1920	16 560	12 640	22 953	19 1579
12	Prize Mammoth Long Red.....	41 1400	33 930	40 1675	25 1150	11 1760	13 400	18 860	18 1815	14 1040	17 200	25 965	21 1311
13	Gate Post Yellow.....	41 500	29 1400	33 1650	25 655	10 328	8 1080	18 30	11 1163	14 820	13 180	23 1066	17 1415
14	Lion Yellow Intermediate.....	41 500	40 1180	50 1805	32 1175	11 704	8 1688	10 1080	17 1490	11 880	14 160	25 196	23 1539
15	Giant Yellow Globe.....	41 170	27 450	43 625	39 375	12 816	12 1608	20 5	13 160	10 240	11 440	25 771	20 1407
16	Sutton's Yellow Globe.....	41 170	37 580	51 1125	33 650	8 1482	11 1760	not sown	not sown	15 800	14 1920	29 512	24 727
17	Mammoth Oval Shaped.....	39 210	41 500	34 475	28 1750	14 1832	15 1416	16 1840	16 1330	13 1720	11 1760	23 1615	22 1751
18	Norfolk Giant.....	37 910	31 1360	39 375	31 1325	12 582	12 816	17 935	19 910	18 960	15 1460	24 1946	22 414
19	Selected Mam. Long Red.....	37 250	30 1650	40 25	28 100	13 664	21 240	16 1350	23 590	13 1720	15 360	24 1398	23 1268
20	Golden Fleshed Tankard.....	36 1390	31 1855	35 950	26 305	8 1954	7 1312	12 1620	12 660	15 840	14 820	21 1782	18 990
21	Yellow Fleshed Tankard.....	31 865	30 60	41 5	28 1255	8 1688	8 896	7 570	12 765	18 80	13 400	21 632	18 1081
22	Warden Orange Globe.....	31 370	30 60	32 175	28 925	11 176	8 632	13 565	16 370	9 1380	10 1340	19 94	18 1465

The crops from the two sowings of mangels at the experimental farms in 1900 have averaged per acre as follows:—

Central Experimental Farm, first sowing.....	41 tons	1175 lbs.	Experimental Farm, Indian Head, first sowing.....	16 tons	1687 lbs.
" " second sowing.....	33 "	337 "	" " second sowing.....	15 "	1930 "
Experimental Farm, Napkan, first sowing.....	40 "	294 "	" " Agassiz, first sowing.....	16 "	1334 "
" " second sowing.....	29 "	247 "	" " second sowing.....	15 "	76 "
" " Brandon, first sowing.....	10 "	1516 "	Average crop from all the farms, first sowing, 25 tons		
" " second sowing.....	12 "	336 "	69 lbs.; second sowing, 21 tons 225 lbs, per acre.		

The six varieties of mangels which have produced the heaviest crops at the several experimental farms during 1900, are the following. (Unless otherwise stated, the yields given are all from the earliest sown plots.) :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Canadian Giant.....	51 630	4. Mammoth Long Red....	46 400
2. Giant Yellow Intermediate.....	49 310	5. Giant Yellow Half Long..	45 1050
3. Ward's Large Oval Shaped	47 1049	6. Mam. Yellow Intermediate	44 440

An average crop of 47 tons 650 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Sutton's Yellow Globe....	51 1125	4. Mam Yellow Intermediate	47 875
2. Lion Yellow Intermediate	50 1805	5. Giant Yellow Globe.....	43 625
3. Giant Yellow Intermediate	49 175	6. Yellow Intermediate	43 625

An average crop of 47 tons 1,205 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Selected Mammoth Long Red (2nd sowing) ...	21 240	4. Gate Post (2nd sowing) ..	15 888
2. Red Fleshed Tankard (2nd sowing).....	17 1904	5. Canadian Giant (2nd sowing)	13 1720
3. Mammoth Oval Shaped (2nd sowing)	15 1416	6. Mammoth Long Red....	13 928

An average crop of 16 tons 516 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Champion Yellow Globe..	26 740	4. Selected Mammoth Long Red (2nd sowing)	23 590
2. Canadian Giant.....	24 1590	5. Mammoth Long Red (2nd sowing)	21 1980
3. Gate Post.....	23 1670	6. Giant Yellow Intermediate	20 1370

An average crop of 23 tons 990 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Giant Yellow Intermediate.....	28 1960	4. Mammoth Yellow Intermediate (2nd sowing) ..	22 880
2. Giant Yellow Half Long..	26 800	5. Canadian Giant (2nd sowing)	20 1580
3. Half Long Sugar Rosy ..	22 1760	6. Champion Yellow Globe..	20 480

An average crop of 23 tons 1,243 lbs. per acre.

The six varieties of mangels which have produced the heaviest crops in 1900, taking the average of the results obtained on all the experimental farms, are :

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Giant Yellow Intermediate.....	32 79	4. Canadian Giant.....	28 708
2. Giant Yellow Half Long..	29 1973	5. Champion Yellow Globe..	28 416
3. Sutton's Yellow Globe....	29 512	6. Mammoth Yellow Intermediate.....	27 1195

An average crop of 29 tons 480 lbs. per acre.

The early sown plots of mangels have given in 1900 larger crops than those later sown at all the experimental farms, excepting that at Brandon, the average of all, showing an advantage in favour of early sowing of 3 tons 8.44 lbs. per acre.

TRIAL PLOTS OF CARROTS.

Nineteen varieties of carrots were under test during 1900, all sown on drills or on the flat, in rows two feet apart. Two sowings were made in each case, the second sowing two weeks later than the first. For reasons submitted on page 5 no returns are given in the appended table from the branch farm at Indian Head, and the results of the second sowing only at Brandon.

The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following: At Ottawa, October 16th; Nappan, November 2nd; Brandon, October 4th, and at Agassiz, October 23rd. The yield per acre in each case has been calculated from the weight of roots gathered from two rows each 66 feet long.

UNIFORM TEST PLOTS OF CARROTS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N.S.		BRANDON, MAN.		AGASSIZ, B.C.		AVERAGE OF FOUR FARMS.	
		Sown May 16	Sown May 30	Sown May 29	Sown June 12	Sown June 2	Sown April 24	Sown May 11	First Sowing	Second Sowing	
		Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	Per acre, Tons, Lbs.	
1	Giant White Vosges.....	38 1880	27 1770	25 325	15 195	5 1000	36 160	31 920	33 788	20 410	
2	New White Intermediate.....	37 250	31 1810	23 1025	17 650	4 1240	31 480	24 400	30 1251	19 1025	
3	Improved Short White.....	35 1280	27 120	21 15	17 155	4 1240	35 400	29 740	30 1251	19 1061	
4	Half Long White.....	33 1155	27 1275	30 1875	15 195	5 560	33	27 120	32 1010	18 1537	
5	Iverson's Champion.....	32 1340	26 1130	19 280	14 875	4 360	25 160	15 960	25 1200	15 1831	
6	Green Top White Orthe.....	32 515	26 470	26 1955	12 255	5 1880	26 800	25 1480	28 1000	17 1021	
7	White Vosges Large Short.....	31 700	25 1150	21 405	10 955	2 1280	23 420	21 1500	25 508	15 236	
8	Guerande or Ox-Heart.....	27 615	23 1190	19 775	13 895	5 560	26 800	23 420	24 730	16 766	
9	Yellow Intermediate.....	26 1460	24 1170	17 650	13 400	3 1480	20 1360	16 786	21 1157	14 957	
10	Ontario Champion.....	26 800	24 15	25 325	12 255	3 160	30 1660	35 400	27 928	18 1207	
11	Mann, White Intermediate.....	26 140	22 530	29 80	16 505	3 600	27 120	20 1580	27 750	15 1369	
12	Carter's Orange Giant.....	25 1810	21 1560	17 25	10 1450	4 1240	27 1440	23 1300	25 1032	15 387	
13	Half Long Chantenay.....	25 985	24 1170	17 1475	15 1680	5 1000	20 1380	23 1960	21 680	17 952	
14	Early Gem.....	25 820	22 550	22 1705	15 855	5 1000	28 1200	23 1520	25 1242	16 1481	
15	White Belgian.....	22 880	21 570	18 1455	12 1575	3 1040	25 600	23 640	22 312	15 456	
16	Scarlet Intermediate.....	19 1270	15 1185	14 1205	9 150	3 160	17 1200	12 640	17 558	10 34	
17	Scarlet Nantes.....	17 1805	15 690	14 875	9 975	2 1720	13 400	11 880	15 360	9 1506	
18	Long Orange or Surrey.....	17 1805	14 50	17 320	9 1305	2 1720	13 400	11 660	16 175	9 954	
19	Scarlet Altringham.....	17 650	12 1080	19 1600	9 1305	3 600	16 560	19 1580	17 1363	11 591	

The crops from the two sowings of Carrots at the Experimental Farms in 1900 have averaged as follows:—

Central Experimental Farm, first sowing.....	27 tons 745 lbs.	Experimental Farm Agassiz, first sowing.....	25 tons 302 lbs.
" " " second sowing.....	21 " 1763 "	" " " second sowing.....	22 " 544 "
Experimental Farm, Nappan, first sowing.....	21 " 293 "	Average crop from all the plots at the four farms, omitting the	
" " " second sowing.....	13 " 244 "	second sowing at Brandon, was: first sowing 24 tons 1063 lbs.; second	
" " " Brandon, second sowing only....	4 " 360 "	sowing, 19 tons 850 lbs., an advantage in favor of the early sown plots	
		of 5 tons 243 lbs. per acre.	

The six varieties of carrots which have produced the heaviest crops at the four experimental farms during 1900 are the following. (Unless otherwise stated the yields given are all from the earliest sown plots):

CENTRAL EXPERIMENTAL FARM, OTTAWA, ON

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant White Vosges....	38	1880	4. Half Long White.....	33	1155
2. New White Intermediate	37	250	5. Iverson's Champion.....	32	1340
3. Improved Short White. 35		1280	6. Green Top White Orthe	32	515

An average crop of 35 tons 70 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
Half Long White.....	30	1875	4. Giant White Vosges....	25	325
2. Mamm. White Intermediate.....	29	80	5. Ontario Champion.....	25	325
3. Green Top White Orthe	26	1955	6. New White Intermediate.....	23	1025

An average crop of 26 tons 1,597 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BBANDON, MAN.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
From second sowing only.			4. Early Gem	5	1000
1. Green Top White Orthe. 5		1880	5. Half Long White.....	5	560
2. Half Long Chantenay... 5		1000	6. Guerande or Ox-heart... 5		560
3. Giant White Vosges.... 5		1000			

An average crop of 5 tons 1,000 lbs per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant White Vosges....	36	160	4. Half Long White.....	33	
2. Improved Short White. 35		400	5. New White Intermediate.....	31	480
3. Ontario Champion, 2nd sowing.....	35	400	6. Early Gem.....	28	1200

An average crop of 33 tons 440 lbs per acre.

The six varieties of carrots which have produced the heaviest crops in 1900, taking the average of the results obtained on the four experimental farms named, are the following:—

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant White Vosges....	33	788	4. New White Intermediate.....	30	1251
2. Half Long White.....	32	1010	5. Green Top White Orthe	28	1090
3. Improved Short White. 30		1251	6. Ontario Champion.....	27	928

An average crop of 30 tons 1,053 lbs. per acre.

TRIAL PLOTS OF SUGAR BEETS.

Six varieties of sugar beets have been tested during 1900, sown on drills or on the flat two feet apart. Two sowings were made in each case, the second sowing about two weeks later than the first. For reasons submitted on page 5 no returns are given in the appended table from the branch farm at Agassiz.

The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following: At Ottawa, October 16th; Nappan, October 24th; Brandon, October 4th and at Indian Head September 28th. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF SUGAR BEETS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AVERAGE OF FOUR FARMS.	
		Sown May 16.	Sown May 30.	Sown May 29.	Sown June 12.	Sown May 19.	Sown June 2.	Sown May 18.	Sown May 25.	First Sowing.	Second Sowing.
		Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.	Per Acre. Tons Lbs.
1	Danish Improved.	42 810	28 430	25 325	20 425	8 632	10 1384	10 970	10 10	21 1184	17 562
2	Wanzleben.	40 355	31 1030	28 1225	19 1005	9 744	13 400	11 740	12 1740	22 766	19 544
3	Improved Imperial.	38 1335	25 490	37 1075	23 1355	10 328	13 136	11 1295	9 1860	24 1008	17 1960
4	Red Top Sugar.	37 580	26 1130	35 125	23 200	10 542	11 1232	12 930	15 1125	23 1557	19 422
5	Danish Red Top.	34 805	31 1030	30 1875	25 325	10 64	14 1040	11 50	12 1620	21 1198	4
6	Vilmorin's Improved.	27 615	22 220	22 1375	21 1725	8 368	8 632	10 1000	11 1970	17 362	16 137

The crops from the two sowings of Sugar Beets at the Experimental Farms in 1900, omitting that at Agassiz, B.C., have averaged as follows:

	Tons Lbs.
Central Experimental Farm, first sowing.	36 1417
" " second sowing.	27 1055
Experimental Farm, Nappan, first sowing.	30
" " second sowing.	22 506
Experimental Farm, Brandon, first sowing.	9 788
" " second sowing.	11 1804
Experimental Farm, Indian Head, first sowing.	11 513
" " second sowing.	12 388

Average crop from all the farms, excepting Agassiz: first sowing, 21 tons 1679 lbs.; second sowing, 18 tons 938 lbs. per acre, showing an advantage in favour of early sowing of 3 tons 741 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops at the four experimental farms in 1900 are the following:—

(Unless otherwise stated the yields given are all from the earliest sown plots).

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Danish Improved.....	42	810	3. Improved Imperial.....	38	1335		
2. Wanzleben	40	355	4. Red Top Sugar.....	37	580		

An average crop of 39 tons 1,270 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Improved Imperial.....	37	1075	3. Danish Red Top.....	30	1875		
2. Red Top Sugar	35	125	4. Wanzleben	28	1225		

An average crop of 33 tons 75 lbs. per acre

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Danish Red Top (2nd sowing).....	14	1040	3. Improved Imperial (2nd sowing).....	13	136		
2. Wanzleben (2nd sowing)	13	400	4. Red Top Sugar (2nd sowing)	11	1232		

An average crop of 13 tons 202 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Red Top Sugar (2nd sowing).....	15	1125	3. Danish Red Top (2nd sowing).....	12	1620		
2. Wanzleben (2nd sowing)	12	1740	4. Vilmorin's Improved (2nd sowing).....	11	1970		

An average crop of 13 tons 614 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops in 1900, taking the average of the results obtained at all the experimental farms excepting Agassiz, are the following:—

		Per Acre.				Per Acre.	
		Tons.	Lbs.			Tons.	Lbs.
1. Improved Imperial.....	24	1008	3. Wanzleben	22	766		
2. Red Top Sugar	23	1557	4. Danish Red Top.....	21	1198		

An average crop of 23 tons 132 lbs. per acre.

The early sown plots of sugar beets have given larger crops than those later sown at the experimental farms at Ottawa and Nappan, while those later sown at Brandon and Indian Head have given in most instances the larger crops. The average results however from all the farms show a difference in the crops of 1900 of 3 tons 741 lbs. per acre in favour of the early sowings.

TRIAL PLOTS OF POTATOES.

Eighty-two varieties of potatoes have been under trial in uniform test plots during 1900. The potatoes for planting were cut into pieces with two or three eyes in each and these were planted in rows $2\frac{1}{2}$ feet apart, the sets being placed a foot apart in the rows. The following were the dates of planting: At Ottawa, planted on May 22nd and 23rd, dug October 9th to 11th; Nappan, planted June 6th, dug October 14th; Brandon, planted May 23rd, dug September 20th; Indian Head, planted May 14th, dug Sept. 29th, and at Agassiz, planted May 17th and 18th and dug October 1st to 4th.

UNIFORM TEST PLOTS OF POTATOES.

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1900.					
		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N. W. T.	Agassiz, B.C.	Average of all Farms.
		Per acre. Bush. lbs.	Per acre. Bush. lbs.	Per acre. Bush. lbs.	Per acre. Bush. lbs.	Per acre. Bush. lbs.	Per acre. Bush. lbs.
1	Vanier	576 24	484 ..	253 ..	452 ..	212 18	395 32
2	Early Sunrise.....	532 24	259 36	187 ..	422 30	157 27	311 47
3	Irish Cobbler.....	532 24	536 48	300 40	465 ..	156 54	398 21
4	Rose No. 9.....	528 ..	435 36	282 20	474 45	235 24	391 13
5	Burnaby Seedling ..	525 48	477 24	275 ..	495 30	142 ..	383 8
6	Northern Spy	525 48	492 48	304 20	465 ..	237 36	405 6
7	Flemish Beauty Seedling.....	525 48	444 24	201 40	348 30	143 45	332 49
8	Empire State.....	519 12	451 ..	216 20	607 15	136 ..	385 57
9	Money Maker.....	517 ..	396 ..	311 40	283 ..	151 10	331 46
10	General Gordon.....	517 ..	376 22	165 ..	522 45	145 ..	3-5 13
11	Polaris	502 42	272 48	198 ..	470 15	169 24	322 38
12	Late Puritan.....	492 48	330 ..	249 20	472 45	150 ..	338 58
13	American Wonder..	488 24	473 ..	242 ..	662 ..	169 24	406 57
14	Seattle	490 36	495 ..	348 20	607 15	211 12	430 28
15	Rural No. 2.....	488 24	308 ..	220 ..	397 30	150 30	312 53
16	Swiss Snow-Flake..	486 12	431 12	198 ..	308 15	197 17	324 11
17	State of Maine.....	481 48	347 36	293 20	570 45	154 ..	369 30
18	Vick's Extra Early..	481 48	396 ..	216 20	556 30	150 15	360 11
19	Sharpe's Seedling ..	475 12	490 ..	146 40	468 15	168 18	349 41
20	New Queen	475 12	435 36	212 40	462 15	130 ..	343 8
21	Rochester Rose.....	470 48	420 12	150 20	722 ..	153 ..	383 16
22	American Giant.....	464 12	444 24	183 20	656 ..	140 ..	377 35
23	Seedling No. 230....	464 12	451 ..	311 40	417 45	292 36	387 27
24	Early Northern.....	462 ..	448 48	168 40	294 30	150 15	304 50
25	Early Market.....	462 ..	444 24	256 40	379 ..	280 30	364 31
26	Rural Blush.....	459 48	462 ..	304 20	501 15	232 16	391 56
27	Dreer's Standard....	457 36	451 ..	260 20	418 ..	152 30	347 53
28	Maule's Thorough- bred.....	457 36	407 ..	242 ..	431 15	155 ..	338 34
29	Reeve's Rose.....	455 24	378 34	282 20	485 ..	148 30	349 58
30	Brown's Rot Proof..	455 24	402 36	271 20	396 ..	153 12	335 42
31	L. X. L.....	451 ..	402 36	238 20	552 30	138 30	356 35
32	Penn Manor.....	446 36	226 36	256 40	511 15	167 12	321 40
33	Columbus.....	446 36	462 ..	286 ..	541 ..	141 30	375 25
34	Holborn Abundance	442 12	605 ..	286 ..	459 15	141 ..	386 41
35	Clay Rose.....	440 ..	477 24	201 40	358 15	198 ..	335 4
36	Lee's Favourite	437 48	367 24	234 40	481 ..	162 48	336 41

UNIFORM TEST PLOTS OF POTATOES.—*Concluded.*

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1900.					
		Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Indian Head, N. W. T.	Agassiz, B. C.	Average of all Farms.
		Per acre, Bush. Lbs.	Per acre, Bush. Lbs.	Per acre, Bush. Lbs.	Per acre, Bush. Lbs.	Per acre, Bush. Lbs.	Per acre, Bush. Lbs.
37	Troy Seedling.....	437 48	448 ..	337 20	507 ..	171 36	371 21
38	Country Gentleman.....	435 36	163 ..	190 40	495 30	165 ..	329 57
39	Uncle Sam.....	435 36	413 36	300 40	579 45	232 16	392 22
40	Early Six Weeks.....	424 36	473 ..	293 20	488 30	171 36	370 12
41	Carman No. 3.....	424 36	396 ..	308 ..	478 45	156 12	352 42
42	Early Harvest.....	422 24	418 ..	297 ..	443 45	174 54	350 36
43	Wonder of the World.....	420 12		165 ..	408 45	142 ..	283 59
44	Cambridge Russet.....	420 12	448 48	293 20	417 45	152 ..	346 25
45	Thorburn.....	420 12	422 24	172 20	440 45	150 30	321 14
46	Green Mountain.....	420 12	396 ..	293 20	342 30	180 24	246 29
47	Burpee's Extra Early.....	418 ..	418 ..	201 40	388 ..	138 ..	312 44
48	Early Rose.....	415 48	360 48	220 ..	372 15	158 24	305 27
49	Sir Walter Raleigh.....	404 48	440 ..	256 40	308 15	143 45	310 41
50	Everett.....	402 36	506 ..	231 ..	550 45	173 48	372 50
51	Early Puritan.....	400 24	484 ..	238 20	408 45	169 24	340 11
52	Delaware.....	400 24	424 36	363 ..	570 45	152 ..	382 9
53	Great Divide.....	400 24	435 36	286 ..	344 45	173 48	328 6
54	Dakota Red.....	400 24	451 ..	374 ..	436 ..	232 16	378 44
55	Daisy.....	391 36	385 ..	238 20	397 30	140 ..	310 20
56	Lizzie's Pride.....	389 24	330 ..	311 40	452 ..	292 36	355 8
57	Bovee.....	385 ..	466 24	201 40	508 30	180 24	348 23
58	Early White Prize.....	385 ..	360 48	253 ..	369 45	127 ..	299 7
59	McIntyre.....	380 36	360 48	146 40	217 ..	212 8	263 26
60	Carman No. 1.....	380 36	475 12	348 20	559 15	184 48	389 38
61	Pearce's Extra Early.....	378 24	352 ..	183 20	331 ..	153 ..	279 33
62	Irish Daisy.....	374 ..	589 36	304 20	573 ..	173 48	402 57
63	New Variety No. 1.....	374 ..	424 36	344 40	561 30	131 20	367 13
64	White Beauty.....	374 ..	468 36	231 ..	461 30	148 30	336 43
65	Quaker City.....	374 ..	437 48	256 40	388 ..	245 18	240 21
66	Chicago Market.....	369 36	334 24	209 ..	462 15	145 30	301 9
67	Pearce's Prize Winner.....	367 24	501 36	198 ..	545 30	142 30	351 ..
68	Early Ohio.....	363 ..	385 ..	168 40	312 45	143 ..	274 20
69	Prize Taker.....	356 24	413 36	253 ..	502 30	157 27	336 35
70	Beauty of Hebron.....	347 36	433 24	238 20	598 15	142 ..	351 55
71	Maggie Murphy.....	334 24	422 24	201 40	410 45	127 ..	299 14
72	Clarke's No. 1.....	321 12	418 ..	308 ..	418 ..	158 ..	324 38
73	Earliest of All.....	319 ..	354 12	249 20	408 45	141 45	294 36
74	Seedling No. 7.....	318 ..	466 24	330 ..	481 ..	165 ..	352 5
75	Early Michigan.....	300 12	330 ..	267 40	312 45		302 39
76	Hale's Champion.....	290 34	451 ..	293 20	468 45	268 24	342 24
77	Houlton Rose.....	272 48	334 24	293 20	424 30	184 48	301 58
78	Brownell's Winner.....	266 12	325 36	333 40	513 30	211 12	330 2
79	Reading Giant.....	244 12	330 ..	238 20	354 45	297 ..	292 51
80	Ohio Junior.....	237 36	462 ..	223 40	348 30	155 ..	285 21
81	Bill Nye.....	217 48	477 24	161 20	433 45	153 27	288 45
82	Pride of the Market.....	209 ..	455 24	264 ..	460 30	229 53	322 33

The twelve varieties of potatoes which have produced the largest crops at the several experimental farms in 1900, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Vanier.	576 24	7. Flemish Beauty Seedling	525 48
2. Early Sunrise.....	532 24	8. Empire State.....	519 12
3. Irish Cobbler.....	532 24	9. Money Maker.....	517
4. Rose No. 9.....	528	10. General Gordon.....	517
5. Burnaby Seedling.....	525 48	11. Polaris.....	502 42
6. Northern Spy.....	525 48	12. Late Puritan.....	492 48

An average crop of 524 bushels 34 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Holborn Abundance.....	605	7. Northern Spy.....	492 48
2. Irish Daisy.....	589 36	8. Sharpe's Seedling.....	490
3. Irish Cobbler.....	536 48	9. Vanier.....	484
4. Everett.....	506	10. Early Puritan.....	484
5. Pearce's Prize Winner.....	501 36	11. Bill Nye.....	477 21
6. Seattle.....	495	12. Burnaby Seedling.....	477 21

An average crop of 511 bushels 38 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Dakota Red.....	374	7. Brownell's Winner.....	333 40
2. Delaware.....	363	8. Seedling No. 7.....	330
3. Seattle.....	348 20	9. Lizzie's Pride.....	311 40
4. Carman No. 1.....	348 20	10. Money Maker.....	311 40
5. New Variety No. 1.....	344 40	11. Seedling No. 230.....	311 40
6. Troy Seedling.....	337 20	12. Carman No. 3.....	308

An average crop of 325 bushels 12 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Rochester Rose.....	722	7. Uncle Sam.....	579 45
2. American Wonder.....	662	8. Irish Daisy.....	573
3. American Giant.....	656	9. State of Maine.....	570 45
4. Empire State.....	607 15	10. Delaware.....	570 45
5. Seattle.....	607 15	11. New Variety No. 1.....	561 30
6. Beauty of Hebron.....	598 15	12. Carman No. 1.....	559 15

An average crop of 605 bushels 35 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Reading Giant.....	297	7. Northern Spy.....	237 36
2. Seedling No. 230.....	292 36	8. Rose No. 9.....	235 24
3. Lizzie's Pride.....	242 36	9. Uncle Sam.....	232 16
4. Early Market.....	280 30	10. Dakota Red.....	232 16
5. Hale's Champion.....	268 24	11. Rural Blush.....	232 16
6. Gaiety City.....	245 18	12. Pride of the Market...	223 36

An average crop of 255 bushels 50 lbs. per acre.

The twelve varieties of potatoes which have produced the largest crops in 1900, taking the average of the results obtained at all the experimental farms, are the following :

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Seattle	430	28	7. Uncle Sam.....	392	22
2. American Wonder	408	57	8. Rural Blush.....	391	56
3. Northern Spy.....	405	6	9. Rose No. 9.....	391	13
4. Irish Daisy.....	402	57	10. Carman No 1	389	38
5. Irish Cobbler.....	398	21	11. Seedling No. 230.....	387	27
6. Vanier	395	32	12. Holborn Abundance....	386	41

An average crop of 398 bushels 13 lbs. per acre

The average crop of all the varieties of potatoes tested at each of the experimental farms was as follows : At Ottawa, 415 bushels 23 lbs. per acre ; Nappan, 414 bushels 37 lbs. ; Brandon, 251 bushels 34 lbs. ; Indian Head, 455 bushels 1 lb., and at Agassiz, 170 bushels 57 lbs. the average return given by the whole of the varieties at all the farms was 341 bushels 30 lbs. per acre.

AVERAGE OF CROPS FOR THE PAST FIVE AND SIX YEARS.

The results of experiments with varieties of grain to ascertain their relative productiveness become much more reliable and conclusive when the average experience of a series of years can be given. In this way slight variations arising from inequality of soil and variability of season are, to a large extent equalized, and the conclusions reached become a much more valuable guide to the farmer in his selection of seed. The longer the experiments are continued the more accurate are the indications given. The experiences here recorded with most of the more important cereals now cover a period of five or six years.

FIVE AND SIX YEARS' EXPERIENCE WITH VARIETIES OF OATS.

The twelve varieties of oats which have averaged the heaviest crops at the several experimental farms during the past five and six years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Banner.....	68 25	7. Golden Beauty.....	63 7
2. Golden Giant.....	66 11	8. Oderbruch.....	63 3
3. American Triumph.....	65 27	9. Improved Ligowo.....	63 1
4. Holstein Prolific.....	65 20	10. Bavarian.....	62 3
5. Joannette.....	64 12	11. Columbus.....	62 1
6. American Beauty.....	63 31	12. Hazlett's Seizure.....	61 26

An average crop of 64 bushels 5 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Average for six years.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. Wallis.....	75 7	7. Golden Beauty.....	69 24
2. White Russian.....	72 22	8. Wide Awake.....	69 21
3. Oderbruch.....	71 9	9. White Schonen.....	68 15
4. Lincoln.....	70 30	10. Abyssinia.....	68 8
5. Early Blossom.....	70 17	11. Pense.....	68 8
6. Banner.....	70 ..	12. Cream Egyptian.....	68 8

An average crop of 70 bushels 8 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

For reasons given on page 5 the crops of oats for 1900 are not included.

Per acre. Bush. Lbs.		Per acre. Bush. Lbs.	
1. American Beauty.....	99 9	7. White Schonen.....	83 4
2. Banner.....	94 6	8. Golden Beauty.....	82 26
3. Bavarian.....	93 25	9. American Triumph.....	81 11
4. Early Golden Prolific.....	88 22	10. Abundance.....	78 4
5. Golden Giant.....	85 25	11. California Prolific Blk.....	77 30
6. Holstein Prolific.....	83 26	12. Columbus.....	77 ..

An average crop of 85 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Average for five years.

For reasons given on page 5 the crops of oats for 1900 are not included.

Per acre.		Per acre.	
Bush. lbs.		Bush. lbs.	
1. Columbus.....	88 20	7. Bavarian.....	81 22
2. Holstein Prolific.....	87 8	8. White Schonen.....	81 17
3. American Beauty.....	86 31	9. Early Golden Prolific.....	81 16
4. Abundance.....	85 4	10. Early Archangel.....	80 32
5. Golden Beauty.....	83 24	11. American Triumph.....	80 30
6. Wide Awake.....	82 ..	12. Banner.....	80 27

An average crop of 83 bushels 13 lbs. per acre.

Champion Oats—some of the heaviest average yielders in six years' trial. No. 1, Banner; 2, Oderbruch; 3, Columbus; 4, White Schonen; 5, Holstein Prolific; 6, American Beauty; 7, Golden Giant.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Average for six years.

Per Acre.		Per Acre.	
Bush. lbs.		Bush. lbs.	
1. Golden Giant.....	67 15	7. Columbus.....	57 30
2. Banner.....	63 15	8. Buckbee's Illinois.....	57 22
3. Lincoln.....	59 29	9. Prolific Blk Tartarian ..	57 9
4. Early Blossom.....	59 22	10. Holstein Prolific.....	57 4
5. Bavarian.....	58 33	11. Abyssinia.....	56 31
6. Early Gothland.....	58 15	12. American Beauty.....	56 30

An average crop of 59 bushels 10 lbs. per acre.

The twelve varieties of oats which have produced the largest average crops for the past five or six years on all the experimental farms, and hence may, perhaps, be regarded as worthy of being placed at the head of the list for general cultivation, are the following :

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Banner.....	75	15	7. Columbus.....	70	15		
2. American Beauty....	74	31	8. Golden Beauty.....	69	30		
3. Bavarian.....	71	31	9. Early Golden Prolific..	69	28		
4. Golden Giant.....	71	19	10. White Schonen.....	68	13		
5. Holstein Prolific.....	71	19	11. Oderbruch.....	68	5		
6. Buckbee's Illinois.....	70	28	12. Wallis.....	68	2		

An average crop of 70 bushels 31 lbs. per acre.

FIVE AND SIX YEARS' EXPERIENCE WITH VARIETIES OF BARLEY.

TWO-ROWED BARLEY.

The six varieties of two-rowed barley which have averaged the heaviest crops at the several experimental farms during the past five and six years are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Beaver.....	45	17	4. Sidney.....	42	17		
2. Canadian Thorpe.....	44	18	5. Bolton.....	42	..		
3. French Chevalier.....	43	23	6. Victor.....	41	14		

An average crop of 43 bushels 7 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Average for six years.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. Beaver.....	42	41	4. Nepean.....	40	20		
2. Danish Chevalier.....	42	21	5. Newton.....	40	20		
3. French Chevalier.....	41	25	6. Canadian Thorpe.....	40	13		

An average crop of 41 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOHA, BRANDON, MAN.

Average for five years.

For reasons given on page 5, the crops of two-rowed barley at Brandon for 1900 are not included.

		Per Acre.				Per Acre.	
		Bush.	Lbs.			Bush.	Lbs.
1. French Chevalier.....	51	4	4. Newton.....	47	12		
2. Sidney.....	49	30	5. Bolton.....	47	1		
3. Nepean.....	47	24	6. Victor.....	45	10		

An average crop of 47 bushels 46 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Average for five years.

For reasons given on page 5, the crops of two-rowed barley at Indian Head for 1900 are not included.

Per Acre.		Per Acre.	
Bush. Lbs.		Bush. Lbs.	
1. French Chevalier	60 12	4. Prize Prolific.....	54 14
2. Danish Chevalier.....	58 24	5. Beaver	52 36
3. Canadian Thorpe	55 21	6. Sidney	52 32

An average crop of 55 bushels 31 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Canadian Thorpe.....	36 12	4. Kinver Chevalier.....	34 44
2. French Chevalier	35 47	5. Beaver	34 20
3. Danish Chevalier.....	35 40	6. Prize Prolific.....	33 3

An average crop of 35 bushels 4 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest crops for the past five and six years, taking the average of the results obtained on all the experimental farms, are :

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. French Chevalier	45 45	4. Canadian Thorpe.....	43 30
2. Danish Chevalier	44 14	5. Newson	42 6
3. Beaver.....	44 2	6. Sidney	41 38

An average crop of 43 bushels 30 lbs. per acre.

SIX-ROWED BARLEY.

The six varieties of six-rowed barley which have averaged the heaviest crops at the several experimental farms for the past five and six years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Odessa	55 16	4. Pioneer	53 1
2. Mensury	54 30	5. Oderbruch.....	48 36
3. Royal	53 18	6. Common.....	48 23

An average crop of 52 bushels 13 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Mensury.....	51 45	4. Odessa	43 13
2. Trooper	44 31	5. Oderbruch.....	42 44
3. Surprise	44 13	6. Stella.....	42 21

An average crop of 44 bushels 44 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

For reasons given on page 5 the crops of six-rowed barley at Brandon for 1900 are not included.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Trooper	57	9	4. Nugent.....	53	30
2. Common.....	56	4	5. Summit.....	52	26
3. Mensury	55	8	6. Surprise.....	51	46

An average crop of 54 bushels 20 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH WEST TERRITORIES, INDIAN HEAD, N.W.T.

Average for five years.

For reasons given on page 5 the crops of six-rowed barley at Indian Head for 1900 are not included.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Rennie's Improved.....	62	10	4. Trooper	58	16
2. Odessa	59	44	5. Common.....	57	35
3. Mensury.....	58	20	6. Baxter	57	30

An average crop of 58 bushels 9 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Average for six years.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Mensury	35	37	4. Odessa	34	1
2. Oderbruch.....	35	29	5. Common	33	12
3. Baxter	35	2	6. Royal	33	29

An average crop of 34 bushels 26 lbs. per acre.

The six varieties of six-rowed barley which have produced the largest crops for the past five and six years, taking the average of the results obtained on all the experimental farms, are:

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Mensury.....	51	9	4. Common	46	46
2. Trooper.....	48	10	5. Royal	46	26
3. Odessa	48	..	6. Oderbruch.....	46	2

An average crop of 47 bushels 39 lbs. per acre.

FIVE AND SIX YEARS EXPERIENCE WITH VARIETIES OF SPRING WHEAT.

The twelve varieties of spring wheat which have averaged the heaviest crops at the several experimental farms during the past five and six years, are the following:

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Preston.....	28	30	7. Rio Grande.....	25	2
2. Wellman's Pife.....	27	11	8. Goose.....	24	51
3. Colorado.....	26	15	9. Hungarian.....	24	49
4. Huron.....	25	18	10. Stanley.....	24	30
5. Monarch.....	25	6	11. Percy.....	23	16
6. Pringle's Champlain.....	25	3	12. Red Fern.....	23	11

An average crop of 25 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Monarch.....	35 4	7. Hungarian.....	32 52
2. Wellman's Fife.....	35 2	8. White Russian.....	32 50
3. White Connell.....	34 50	9. Rio Grande.....	32 40
4. Preston.....	33 10	10. Red Fern.....	32 10
5. Huron.....	33 6	11. Advance.....	31 43
6. Goose.....	32 53	12. Stanley.....	31 43

An average crop of 33 bushels 10 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

For reasons given on page 5 the crops of spring wheat at Brandon for 1900 are not included.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Goose.....	40 34	7. Pringle's Champlain....	35 58
2. White Fife.....	39 4	8. White Connell.....	35 40
3. Crown.....	37 30	9. Rio Grande.....	35 30
4. Red Fife.....	37 10	10. White Russian.....	34 22
5. Monarch.....	37 4	11. Wellman's Fife.....	33 58
6. Preston.....	36 37	12. Advance.....	33 46

An average crop of 36 bushels 26 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Average for five years.

For reasons given on page 5 the crops of spring wheat at Indian Head for 1900 are not included.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Red Fife.....	41 38	7. White Fife.....	39 34
2. Wellman's Fife.....	40 24	8. Beaudry.....	39 30
3. Huron.....	40 6	9. Percy.....	39 22
4. Red Fern.....	39 50	10. Crown.....	38 46
5. Preston.....	39 48	11. Alpha.....	38 36
6. Emporium.....	39 38	12. Monarch.....	38 2

An average crop of 39 bushels 43 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. White Russian.....	28 15	7. Herisson Bearded.....	26 15
2. Preston.....	27 23	8. Wellman's Fife.....	26 8
3. Monarch.....	27 8	9. Countess.....	26 5
4. Red Fife.....	26 38	10. White Connell.....	25 55
5. Dawn.....	26 20	11. Hungarian.....	25 54
6. Huron.....	26 18	12. White Fife.....	25 44

An average crop of 26 bushels 30 lbs. per acre.

Some of the heaviest average yielders in six years trial of Spring Wheats. No. 1, Preston; 2, Red Fife; 3, Goose; 4, White Fife; 5, Huron; 6, Wellman's Fife; 7, White Russian; 8, Rio Grande.

The twelve varieties of spring wheat which have produced the largest crop, taking the average of the results obtained for the past five and six years on all the experimental farms, are :

Per acre.		Per acre.	
Bush, Lbs.		Bush, Lbs.	
1. Preston.....	35 5	7. White Connell.....	31 19
2. Monarch.....	32 37	8. Huron.....	31 15
3. Wellman's Fife.....	32 32	9. White Russian.....	31 8
4. White Fife.....	31 36	10. Rio Grande.....	31 6
5. Goose.....	31 30	11. Hungarian, 5 yrs.....	30 52
6. Red Fife.....	31 29	12. Pringle's Champlain....	30 52

An average crop of 31 bushels 47 lbs. per acre.

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THREE TO SIX YEARS' EXPERIENCE WITH VARIETIES OF PEASE.

The twelve varieties of pease which have averaged the heaviest crops at the several experimental farms for the past three to six years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Arthur, 5 yrs	39	6	7. Mummy, 5 yrs.....	34	2
2. Macoun, 5 yrs	36	11	8. Agnes, 5 yrs	33	57
3. Kent, 5 yrs	35	37	9. Prussian Blue, 6 yrs.....	33	50
4. Duke, 5 yrs	35	18	10. Mackay, 5 yrs	33	24
5. Paragon, 5 yrs	35	2	11. Creeper, 5 yrs.....	33	22
6. Blk-Eyed Marrowfat, 5 yrs	34	10	12. Canadian Beauty, 4 yrs..	33	7

An average crop of 34 bushels 44 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPA, N.S.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Crown, 5 yrs	39	11	7. Duke, 4 yrs	27	44
2. Pride, 4 yrs	33	45	8. Agnes, 4 yrs	26	25
3. Centennial, 5 yrs.....	32	40	9. Canadian Beauty, 5 yrs..	25	56
4. Blk-Eyed Marrowfat, 5 yrs	30	48	10. Multiplier, 5 yr	25	56
5. New Potter, 5 yrs.....	30	20	11. Prince, 4 yrs	25	45
6. Carleton, 4 yrs	28	24	12. Paragon, 4 yrs	25	44

An average crop of 29 bushels 22 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Pride, 6 yrs	47	17	7. New Potter, 6 yrs.....	42	58
2. Carleton, 5 yrs	46	20	8. Kent, 5 yrs	42	32
3. Mummy, 6 yrs	45	10	9. Crown, 6 yrs	42	27
4. White Wonder, 4 yrs.....	45	2	10. Mackay, 5 yrs	42	4
5. Trilby, 5 yrs	44	10	11. Archer, 4 yrs	41	30
6. King, 4 yrs	43	22	12. Blk-Eyed Marrowfat, 6 yrs	40	42

An average crop of 43 bushels 39 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Trilby, 4 yrs	40	40	7. Prince Albert, 4 yrs.....	34	57
2. Carleton, 4 yrs	39	2	8. Centennial, 4 yrs.....	34	5
3. Paragon, 4 yrs	38	37	9. Perth, 3 yrs	33	46
4. Crown, 4 yrs	38	20	10. Macoun, 4 yrs	33	45
5. Archer, 3 yrs	35	26	11. Creeper, 4 yrs	33	40
6. Duke, 4 yrs	35	22	12. White Wonder, 3 yrs.....	33	36

An average crop of 35 bushels 50 lbs per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. King, 4 yrs.	34	35	7. Perth, 4 yrs.	29	15
2. White Wonder, 4 yrs.	33	7	8. Archer, 4 yrs.	29	9
3. Victoria, 4 yrs.	32	34	9. Vincent, 4 yrs.	29	..
4. Early Britain, 4 yrs.	30	59	10. Chancellor, 4 yrs.	28	50
5. Bright, 4 yrs.	30	27	11. Prussian Blue, 4 yrs.	28	29
6. Arthur, 5 yrs.	29	42	12. Macoun, 5 yrs.	28	2

An average crop of 30 bushels 21 lbs. per acre.

The twelve varieties of pease which have produced the largest crops for the past three to six years, taking the average of the results obtained at all the experimental farms, are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Crown.	35	28	7. Mummy.	32	26
2. Carleton.	34	25	8. Centennial.	32	12
3. Pride.	33	52	9. Trilby.	32	9
4. New Potter.	32	41	10. Archer.	32	6
5. Early Britain.	32	39	11. King.	32	..
6. Duke.	32	37	12. Paragon.	31	51

An average crop of 32 bushels 52 lbs. per acre.

FIVE AND SIX YEARS' EXPERIENCE WITH VARIETIES OF INDIAN CORN.

(Where not otherwise marked the figures given are the results of six years tests.)

The six varieties of Indian Corn which have averaged the heaviest crops at the several experimental farms during the past five or six years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Red Cob Ensilage.	24	1366	4. Selected Leaming, 5 yrs. .	23	563
2. Giant Prolific Ensilage. .	24	294	5. Champion White Pearl. .	21	121
3. Thoro'bred White Flint. .	24	226	6. White Cap Yellow Dent. .	20	358

An average crop of 22 tons 1,822 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Thoro'bred White Flint. .	18	78	4. Selected Leaming, 5 yrs. .	16	271
2. Red Cob Ensilage.	16	1585	5. Angel of Midnight.	15	1652
3. Sanford.	16	390	6. Canada White Flint.	15	1460

An average crop of 16 tons 906 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Thoro'bred White Flint. .	21	1008	4. Compton's Early.	18	1767
2. Angel of Midnight.	21	625	5. Red Cob Ensilage.	18	1708
3. Longfellow.	19	903	6. Champion White Pearl. .	18	1418

An average crop of 19 tons 1,586 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTH-WEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Thoro'bred White Flint. .	11	1632	4. Compton's Early.	11	1151
2. Mammi, 8-rowed Flint. .	11	1522	5. Champion White Pearl. .	11	1097
3. Sanford.	11	1157	6. Selected Leaming.	11	1025

An average crop of 11 tons 1,264 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Red Cob Ensilage.....	25 1	4. Pride of the North.....	21 966
2. Selected Leaming.....	22 1822	5. Giant Prolific Ensilage..	21 783
3. King of the Earliest....	21 1158	6. Champion White Pearl..	20 192

An average crop of 22 tons 152 lbs. per acre

The six varieties of Indian corn which have produced the largest crops for the past five or six years, taking the average of the results obtained on all the experimental farms, are :

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Red Cob Ensilage.....	19 718	4. Giant Prolific Ensilage..	17 1580
2. Thoro'bred White Flint..	18 1555	5. Angel of Midnight.....	17 723
3. Selected Leaming.....	18 788	6. Champion White Pearl..	17 657

An average crop of 21 tons 1,604 lbs. per acre.

FIVE YEARS' EXPERIENCE WITH VARIETIES OF TURNIPS.

The six varieties of turnips which have averaged the heaviest crops at the several experimental farms during the past five years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Selected Purple Top.....	36 830	4. Mammoth Clyde.....	33 1727
2. Carter's Elephant.....	35 400	5. Jumbo.....	33 310
3. Perfection Swede.....	34 1336	6. East Lothian.....	32 1879

An average crop of 34 tons 896 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Hartley's Bronze.....	34 945	4. Skirvings.....	33 350
2. Perfection Swede.....	34 303	5. Selected Purple Top....	32 1108
3. Carter's Elephant.....	33 566	6. Mammoth Clyde.....	32 282

An average crop of 33 tons 592 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Selected Purple Top.....	24 945	4. Skirving's.....	22 1249
2. Hartley's Bronze.....	23 1282	5. Champion Purple Top....	22 410
3. Perfection Swede.....	23 543	6. East Lothian.....	22 273

An average crop of 23 tons 100 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Per Acre.		Per Acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Perfection Swede, 5 years	20 6	4. Selected Purple Top.....	19 545
2. Hartley's Bronze.....	19 1316	5. Mammoth Clyde.....	19 146
3. Champion Purple Top....	19 935	6. Bugholm Selected 4 yrs.	18 1873

An average crop of 19 tons 803 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Bangholm Selected.....	45 197	4. Jumbo.....	38 956
2. Selected Purple Top, 4 yrs	41 642	5. East Lothian.....	38 291
3. Perfection Swede.....	40 1129	6. Giant King.....	37 1817

An average crop of 40 tons 505 lbs. per acre.

The six varieties of turnips which have produced the largest crops, taking the average of the results obtained on all the experimental farms for the past five years, are :

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Selected Purple Top.....	30 1614	4. East Lothian.....	28 1380
2. Perfection Swede.....	30 1063	5. Hartley's Bronze.....	28 1126
3. Bangholm Selected.....	29 397	6. Skirvings.....	27 1930

An average crop of 29 tons 585 lbs. per acre.

FOUR AND FIVE YEARS' EXPERIENCE WITH VARIETIES OF MANGELS.

The six varieties of mangels which have averaged the heaviest crops at the several experimental farms for the past four and five years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Gate Post, 5 yrs.....	39 188	4. Canadian Giant, 5 yrs....	35 1670
2. Giant Yellow Intermediate, 5 yrs.....	37 1746	5. Yellow Intermediate, 5 yrs	35 608
3. Mammoth Long Red, 5 yrs	36 1590	6. Giant Yellow Globe, 5 yrs.	34 1464

An average crop of 36 tons 1,211 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Giant Yellow Intermediate, 5 yrs.....	34 1405	4. Norbiton Giant, 4 yrs....	32 231
2. Yellow Intermediate, 5 yrs	33 66	5. Giant Yellow Globe, 5 yrs.	31 1015
3. Giant Yellow Half Long, 4 yrs.....	32 879	6. Gate Post, 5 yrs.....	30 499

An average crop of 32 tons 682 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Selected Mamm. Long Red 4 yrs.....	36 616	4. Gate Post, 5 yrs.....	33 831
2. Yellow Intermediate, 5 yrs	34 274	5. Prize Mamm. Long Red, 5 yrs.....	32 1947
3. Giant Yellow Intermediate, 5 yrs.....	33 1438	6. Giant Yellow Globe, 5 yrs	30 1630

An average crop of 33 tons 1,123 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Yellow Intermediate, 5 yrs	22 1964	4. Selected Mamm. Long Red 4 yrs.....	22 1046
2. Champion Yellow Globe, 5 yrs.....	22 1396	5. Gate Post, 5 yrs.....	22 133
3. Giant Yellow Half Long, 4 years.....	22 1151	6. Norbiton Giant, 5 yrs....	21 917

An average crop of 22 tons 768 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Yellow Intermediate, 5 yrs	38 65	4. Selected Mammoth Long Red	
2. Giant Yellow Intermediate, 5 yrs	33 1902	4 yrs	33
3. Giant Yellow Half Long, 4 yrs	33 89	5. Gate Post, 5 yrs	31 158
		6. Mammoth Long Red, 4 yrs	30 1541

An average crop of 33 tons 62½ lbs. per acre.

The six varieties of mangels which have produced the largest crops for the past four or five years, taking the average of the results obtained at all the experimental farms, are:

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Yellow Intermediate	32 1513	4. Selected Mammoth Long Red	30 855
2. Giant Yellow Intermediate	32 226	5. Giant Yellow Half Long	30 57
3. Gate Post	31 162	6. Giant Yellow Globe	28 1816

An average crop of 31 tons 21 lbs. per acre.

FOUR AND FIVE YEARS' EXPERIENCE WITH VARIETIES OF CARROTS.

The six varieties of carrots which have produced the heaviest crops at the several experimental farms for the past four or five years are the following:

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Giant White Vosges, 5 yrs	29 54	4. Iverson's Champion, 5 yrs	27 1044
2. Improved Short White, 5 yrs	28 716	5. Half Long White, 5 yrs	26 909
3. Mammoth White Intermediate, 5 yrs	27 1308	6. Green Top White Orthe, 4 yrs	26 264

An average crop of 27 tons 1,049 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Half Long White, 5 yrs	21 1219	4. Green Top White Orthe, 4 yrs	19 892
2. Mammoth White Intermediate, 5 yrs	20 1688	5. Improved Short White, 5 yrs	19 493
3. Giant White Vosges, 5 yrs	19 1522	6. Iverson's Champion, 5 yrs	18 1635

An average crop of 19 tons 1,858 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Half Long White, 5 yrs	12 1828	4. Early Gem, 5 yrs	12 1124
2. Giant White Vosges, 5 yrs	12 1828	5. Mammoth White Intermediate, 5 yrs	12 662
3. Iverson's Champion, 5 yrs	12 1784	6. White Belgian, 5 yrs	11 176

An average crop of 12 tons 901 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Improved Short White, 5 yrs.....	31 224	4. Green Top White Orthe 4 yrs.....	29 1961
2. Giant White Vosges, 5 yrs..	32 880	5. Yellow Intermediate 5 yrs.	29 329
3. Half Long White 5 yrs....	32 44	6. Mammoth White Interme- diate, 5 yrs.....	28 1198

An average crop of 31 tons 101 lbs. per acre.

The six varieties of carrots which have produced the largest crops during the past four or five years, taking the average of the results obtained on all the experimental farms, are :

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Half Long White.....	20 1721	4. Mammoth White Interme- diate.....	19 1786
2. Giant White Vosges.....	20 1615	5. Iverson's Champion.....	19 1329
3. Improved Short White...	20 1584	6. Green Top White Orthe..	18 1976

An average crop of 20 tons 335 lbs. per acre.

THREE AND FOUR YEARS' EXPERIENCE WITH VARIETIES OF SUGAR BEETS.

The four varieties of sugar beets which have averaged the heaviest crops at the several experimental farms for the past three or four years are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Improved Imperial, 4 yrs	26 100	3. Danish Improved, 4 yrs..	25 586
2. Wanzleben, 4 years.....	25 1823	4. Danish Red Top, 3 yrs..	22 1925

An average crop of 25 tons 108 lbs. per acre.

EXPERIMENTAL FARM FOR MARITIME PROVINCES, SAPPAN, N.S.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Red Top Sugar, 4 years..	26 1631	3. Improved Imperial 4 yrs	24 1003
2. Danish Red Top, 3 years	25 733	4. Danish Improved 4 yrs.	22 812

An average crop of 24 tons 1,545 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Danish Red Top, 3 years.	32 570	3. Wanzleben, 4 years.....	25 77
2. Danish Improved, 4 yrs..	26 222	4. Red Top Sugar, 4 years..	23 1786

An average crop of 26 tons 1,664 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

	Per acre, Tons, Lbs.		Per acre, Tons, Lbs.
1. Danish Red Top, 3 years.	16 1719	3. Red Top Sugar, 4 years..	14 80
2. Wanzleben, 4 years.....	15 586	4. Danish Improved, 4 yrs.	13 374

An average crop of 14 tons 1,190 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, AGASSIZ, B.C.

	Per acre Tons. Lbs.		Per acre. Tons. Lbs.
1. Improved Imperial, 4 yrs	24 40	3. Red Top Sugar, 4 years.	23 705
2. Danish Improved, 4 yrs.	23 992	4. Vilmorin's Improved, 4 years.	22 1694

An average crop of 23 tons 858 lbs. per acre.

The four varieties of sugar beets which have produced the largest crops for the past three or four years, taking the average results obtained at all the experimental farms, are :

	Per acre, Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 3 years	26 658	3. Red Top Sugar, 4 years..	22 183
2. Danish Improved, 4 years	22 197	4. Wanzleben, 4 years.....	21 1019

An average crop of 23 tons 14 lbs. per acre.

FOUR TO SIX YEARS' EXPERIENCE WITH VARIETIES OF POTATOES.

The twelve varieties of potatoes which have averaged the heaviest crops at the several experimental farms, during the past four to six years, are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Holborn Abundance, 6 yrs	419 28	7. Burnaby Seedling, 6 yrs	365 30
2. American Wonder, 6 yrs.	411 56	8. Vanier, 6 years,	362 49
3. Seedling No. 230, 6 years	392 41	9. State of Maine, 6 years.	362 32
4. Late Puritan, 6 years....	389 43	10. Seattle, 6 years.....	362 8
5. Empire State, 6 years....	378 17	11. Polaris, 6 years.....	360 49
6. Everett, 6 years.....	371 3	12. Early Northern, 6 years.	358 56

An average crop of 377 bushels 59 lbs. per acre.

EXPERIMENTAL FARM FOR THE MARITIME PROVINCES, NAPPAN, N.S.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Seedling No. 230, 5 yrs..	461 43	8. Pearce's Prize Winner, 5 yrs.....	396 36
2. American Giant, 4 yrs...	434 16	9. Pride of the Market, 6 yrs.....	391 10
3. Irish Daisy, 6 yrs.....	433 15	10. Vanier, 5 yrs.....	383 54
4. Holborn Abundance, 6 yrs	433 10	11. Reading Giant, 5 yrs...	380 27
5. Seattle, 5 yrs.....	422 59	12. Green Mountain, 5 yrs..	379 28
6. Carman No. 1, 6 yrs	405 24		
7. Hale's Champion, 5 yrs..	400 16		

An average crop of 410 bushels 13 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Irish Daisy, 5 yrs.	390 8	8. State of Maine, 6 yrs ..	354 45
2. Delaware, 5 yrs.....	381 20	9. New Variety No. 1, 5 yrs	353 28
3. Carman No. 1, 6 yrs	370 57	10. Pearce's Prize Winner, 5 yrs.....	349 48
4. Late Puritan, 6 yrs.....	363 ..	11. Chicago Market, 5 yrs..	344 40
5. Drear's Standard, 6 yrs ..	363 ..	12. Pride of the Market, 6 yrs.....	344 40
6. Clarke's No. 1, 6 yrs....	359 57		
7. Great Divide, 6 yrs.....	358 7		

An average crop of 361 bushels 9 lbs. per acre.

EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN 1

N.W.T.

Per acre.		Per acre.	
Bush, lbs.		Bush, lbs.	
1. American Giant, 5 yrs.	473 50	7. Brownell's Winner, 6	
2. American Wonder, 6 yrs.	434 33	yrs.	391 25
3. Rochester Rose, 5 yrs.	439 6	8. General Gordon, 4 yrs.	386 26
4. Vick's Extra Early, 5 yrs.	425 2	9. Empire State, 6 yrs.	384
5. Lee's Favorite, 5 yrs.	419 4	10. Lizzie's Pride, 6 yrs.	382 40
6. New Variety No. 1, 5 yrs.	405 6	11. Northern Spy, 6 yrs.	382 16
		12. Houlton Rose, 4 yrs.	376 51

An average crop of 400 bushels 2 lbs. per acre.

EXPERIMENTAL FARM FOR BRITISH COLUMBIA, MASSIZ, B.C.

Per acre.		Per acre.	
Bush, lbs.		Bush, lbs.	
1. Dakota Red, 6 yrs.	358 36	8. Vick's Extra Early, 1 yrs.	328 1
2. Brown's Rot Proof, 4 yrs.	354 29	9. Carman No. 3, 6 yrs.	317 29
3. Seedling No. 230, 5 yrs.	352 51	10. Troy Seedling, 6 yrs.	317 14
4. Clay Rose, 6 yrs.	346 55	11. New Variety No. 1,	
5. Houlton Rose, 4 yrs.	346 49	6 yrs.	308 11
6. Reading Giant, 6 yrs.	343 5	12. Brownell's Winner,	
7. Irish Daisy, 6 yrs.	330 41	5 yrs.	307 58

An average crop of 334 bushels 22 lbs. per acre.

Some of the heaviest yielding potatoes, average of six years trial. No. 1 Everett, early, pink; 2. Carman, No. 1, medium early, white; 3. Rochester Rose, early, pink; 4. American Wonder, late, white; 5. Late Puritan, medium late, white; 6. Empire State, medium late, white.

The twelve varieties of potatoes which have produced the largest crops for the past four to six years, taking the average of the results obtained on all the experimental farms, are:

Per acre.		Per acre.	
Bush, lbs.		Bush, lbs.	
1. Seedling No. 230.	376 40	7. Late Puritan.	348 9
2. Irish Daisy.	371 14	8. State of Maine.	341 24
3. American Giant.	367 18	9. New Variety No. 1.	340 44
4. American Wonder.	365 40	10. Seattle.	338 22
5. Empire State.	351 27	11. Vanier.	337 27
6. Carman No. 1.	348 15	12. General Gordon.	337 19

An average crop of 352 bushels per acre.

SUMMARY.

The evidence furnished by the work of another year adds further testimony to the importance of choosing the best and most productive varieties for seed, and confirms the view that there are marked and fairly constant differences in the productiveness of varieties when grown side by side under similar conditions. Among the 41 different sorts of oats which have been subject to uniform tests for six years, nine of these have appeared among the twelve most productive sorts every year for the whole period, and the other three places have been filled during the time at irregular intervals by six other varieties. Hence only fifteen of the 41 varieties have produced a crop sufficiently large during the whole of that time to entitle them to a place with the best twelve sorts. On comparing the best twelve varieties this year with the best twelve of 1899 we find that ten of them are the same.

Taking the results of the cropping of the twelve most productive sorts of oats at the Central Experimental Farm for six years, where the climate and soil are fairly representative of the two great provinces of Ontario and Quebec, we find that they have given an average yield for the whole period of 69 bushels 17 lbs. per acre. The remaining 29 varieties have averaged during the same time 51 bushels 7 lbs. per acre, an average difference in favor of the productive sorts of 18 bushels 10 lbs. per acre. The value of these figures is more fully realized if we bear in mind that every bushel of oats added to the average crop of Canada puts about one million dollars into the pockets of Canadian farmers.

In spring wheat we find similar persistent productiveness in certain sorts. Of the 31 varieties of this cereal which have been tested for six consecutive years, eight of these have appeared among the twelve most productive every year for the whole period. Comparing the best twelve varieties for 1899 with the best twelve for 1900 we find that eleven of them are the same. Taking the results of the cropping of the best twelve sorts of spring wheat for six years at the Central farm we find that they have averaged for the whole period 26 bushels 57 lbs. per acre, while the remaining nineteen varieties grown for the same period have averaged 20 bushels 30 lbs. per acre an average difference in favor of the best twelve sorts of 6 bushels 27 lbs. per acre.

Similar evidence is afforded by the trial plots of potatoes. Comparing the twelve best sorts for 1900 with those of 1899 we find that nine of them are the same. Sixty-two varieties of potatoes have been under trial for five or six successive years at all the experimental farms, and while the twelve most productive sorts have averaged during that period 352 bushels per acre, the remaining 50 have given an average of 294 bushels 51 lbs., an average difference in favor of the best twelve sorts of 57 bushels 9 lbs. per acre.

Additional evidence of a similar character could be deduced from the results of other crops did space permit. The facts presented should induce farmers to choose the most productive sorts for sowing, a practice which if generally followed would no doubt result in a material increase in the average crops of the country and thus make farming more profitable.