

DEPARTMENT OF AGRICULTURE
—
CENTRAL EXPERIMENTAL FARM
OTTAWA, CANADA

RESULTS OBTAINED IN 1901

FROM

Trial Plots of Grain, Fodder Corn, Field Roots and Potatoes



By Wm. SAUNDERS, LL.D.,
Director Experimental Farms.

—
BULLETIN No. 39
—

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Summary

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To the Honourable

The Minister of Agriculture.

SIR,—I herewith submit for your approval Bulletin No. 39 of the Experimental Farm series, which has been prepared by myself. There are presented in this publication the results of a large number of experiments, which have been conducted at all the experimental farms under your Department during the season of 1901, with oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots, sugar beets and potatoes in plots of uniform size, and the crops grown under uniform conditions. The average results also are given of six and seven years' tests on such plots with varieties of oats, barley and spring wheat, four to seven years with plots of pease, five to seven years with plots of Indian corn and potatoes, five and six years with plots of turnips, mangels and carrots, and four to five years' experience with sugar beets.

These trial plots are conducted with the object of gaining information as to the relative productiveness of the different sorts and their earliness in ripening. The returns show much variation in the weight of the crops grown and point to the importance of care in the choice of varieties of seed for sowing. It is hoped that these results giving the experience gained under some of the most important climatic variations found in the country 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, December 20, 1901.

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RESULTS OBTAINED IN 1901

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES.

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

Director Experimental Farms.

Seven years ago a number of experiments were undertaken at each of the Dominion Experimental Farms with the object of gaining information as to the best, most productive and earliest ripening varieties of grain, fodder corn, field roots and potatoes. In arranging for these uniform trial plots the same varieties were sown at each of the farms, the seed being supplied from a common stock. The seed in each case has been sown early and as a rule all the varieties of the same product have been sown on the same day or at the most within two or three days, so as to give to all in this respect an even start. The land chosen each year for these plots has been as nearly uniform in character as could be found, and before sowing has been brought into a good condition of tilth. In this bulletin, which is the seventh of the series, the particulars are arranged after the same plan as in previous issues, the different varieties being placed in the tables which follow 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 given and thus their relative earliness is shown.

In comparing the results obtained from the several varieties in any one year with another, the relative positions occupied by the different sorts will often vary from lack of uniformity in the soil and other causes. When, however, the average of a series of results can be given covering a number of years, the evidence is much more satisfactory and valuable.

In the summary given near the end of this bulletin the average crops obtained from the sowings of seven successive years are shown. On comparing the crops of the past year with the average of the previous five and six years, it will be seen that the results of the harvest of 1901 have on the whole been very satisfactory. The best twelve yielding oats on the Central Farm, owing to unfavourable conditions of

weather, average nearly nine bushels less per acre than the average of past years. At the Experimental Farm at Nappan the yield for 1901 is about one and a half bushels less. At Brandon the yield has been considerably above the average, while at Indian Head the crop has been a phenomenal one. The average given at this farm by the best twelve sorts for the five years previous was 83 bushels 13 lbs. per acre, the record for 1901 is an average of 132 bushels 27 lbs., or more than 49 bushels over the previous average. At Agassiz, B.C., the crop has also been unusually large, having exceeded the average of the previous six years by over 36 bushels. In barley the crops at Ottawa, Nappan and Brandon have been above the average and largely so at Indian Head and Agassiz. In spring wheat the average has been exceeded at all the farms and has been very much above the average at Indian Head and Agassiz. Pease show a falling off at Ottawa and Brandon and increases at Nappan, Indian Head and Agassiz. Indian corn is well above the average throughout, except at Agassiz, where it falls below. The yield of turnips, mangels, carrots and sugar beets are good and all considerably above the average, excepting at Agassiz, where the yield of mangels, carrots and sugar beets fall below the usual return.

In potatoes there has been a considerable increase in the crops at Ottawa and Nappan, and remarkable increases at Brandon, Indian Head and Agassiz.

By the issue of this publication early in the season the farmers of Canada are advised as to the relative productiveness and earliness of each sort at the several experimental farms before making their selection of seed for sowing during the approaching season.

TRIAL PLOTS OF OATS.

In arranging the uniform trial plots of oats from year to year the number of varieties under test have been reduced during the past two or three years by omitting those which during a period of five years have not at any time found their way into the list of the twelve most productive sorts at any of the experimental farms. The names of the varieties discontinued either on this account or from weakness of straw or other defects, are the following eighteen sorts:—Coulommiers, Doncaster Prize, Early Dawson, Early Etampes, Giant Cluster, Imported Irish, Medal, Mortgage Lifter, Poland, Prize Cluster, Rennie's Prize White, Scottish Chief, Scotch Hope-ton, Victoria Prize, Welcome, White Wonder, White Monarch, Winter Grey.

Some additions of new kinds have been made to the list, among them four of the new varieties of oats recently introduced into cultivation by the Garton Bros. Seed Co., of Newton-le-Willows, England, namely, Waverley, Tartar King, Goldfinder and Pioneer. Among other recent additions to the list are Loughoughton, Salzer's Big Four, Scotch Potato and Sensation. The Garton Bros.' oats have not given as good crops as was looked for, but they are very promising and it is expected they will do better after a year or two when they become more acclimatized.

There are included in the sixty-four varieties under trial during 1901 the following cross-bred oats which have been originated at the experimental farms:—Cromwell, Holland, Olive, Oxford, Pense, Miller, Brandon, Milford, King, Kendal, Master and Russell. At the farms at Ottawa, Ont., Nappan, N.S., and Agassiz, B.C., the size

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Farms

Number.

- 1 Cromwell
- 2 Joannette
- 3 Columbu
- 4 Milford.
- 5 Kendal.
- 6 Early Mi
- 7 American
- 8 Olive....
- 9 Improved
- 10 Lincoln.
- 11 Mennonit
- 12 Black Be
- 13 Oxford..
- 14 Abundan
- 15 Pense...
- 16 California
- 17 Banner.
- 18 Holstein I
- 19 Prolific B
- 20 American
- 21 Irish Vict
- 22 Sensation.
- 23 Thousand
- 24 Russell...
- 25 Cream Eg
- 26 Rosedale.
- 27 Salzer's B
- 28 White Sch
- 29 Master...
- 30 Hazlett's S
- 31 Buckbee's I
- 32 Golden Be
- 33 Oderbruch.
- 34 Improved I
- 35 Danish Isla
- 36 White Gian

* Not sown
† Not sown

of the plots on which these oats were sown was one-fortieth of an acre each, and at Brandon, Man., and Indian Head, N.W.T., they were one-twentieth of an acre. The quantity of seed sown of each sort was in the proportion of two bushels per acre, and the dates of sowing were as follows:—At Ottawa most of them were sown on April 17, a few were sown later; Nappan, May 1; Brandon, May 10 to 13; Indian Head, May 9; and at Agassiz, April 18.

Particulars as to the character of the land in each case, and of the preparation and treatment it has had, will be found in the Annual Report of the Experimental Farms for the year 1901.

UNIFORM TEST PLOTS OF OATS.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms, Season of 1899.						Number of Days from Sowing to Harvesting.																	
		Ottawa, Ont.		Nappan, N. S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Cromwell	58	8	74	4	65	10	102	12	63	8	73	22	100	107	101	105	120	106	103	101	110	107	118	107
2	Joanette	57	2	62	12	68	28	114	24	67	12	74	..	103	101	110	107	118	107	101	109	99	104	120	106
3	Columbus	57	2	55	10	84	4	120	..	65	39	76	16	101	109	99	104	120	106	101	109	99	104	120	106
4	Milford	57	2	60	..	31	6	102	32	72	12	64	24	96	107	99	106	120	109	107	110	108	120	109	
5	Kendal	55	30	61	6	70	20	108	28	66	6	72	18	100	107	110	108	120	109	100	107	110	108	120	109
6	Early Maine	55	10	62	12	91	26	124	4	66	16	80	..	100	108	102	99	118	105	100	107	110	108	120	109
7	American Triumph	54	24	58	28	87	2	119	14	86	26	83	12	100	113	101	99	125	107	100	107	110	108	120	109
8	Olive	54	24	58	28	70	..	111	26	85	10	76	4	96	107	109	105	120	107	100	107	110	108	120	109
9	Improved American	54	24	65	30	90	..	135	30	70	20	83	14	100	109	102	101	120	106	100	107	110	108	120	109
10	Lincoln	54	24	64	24	85	30	130	20	94	24	86	4	100	109	101	99	120	105	100	107	110	108	120	109
11	Mennonite	54	24	63	18	80	..	134	4	68	8	80	4	98	109	101	102	118	105	100	107	110	108	120	109
12	Black Beauty	53	18	65	30	57	22	109	14	101	6	77	18	95	100	108	102	124	105	100	107	110	108	120	109
13	Oxford	51	26	51	26	65	30	80	..	80	..	65	30	100	109	102	104	120	107	100	107	110	108	120	109
14	Abundance	51	6	62	12	83	18	147	2	80	..	84	28	100	109	102	101	120	106	100	107	110	108	120	109
15	Pense	50	..	64	24	59	14	107	23	74	4	71	6	96	107	110	106	118	107	100	107	110	108	120	109
16	California Prolific	50	..	58	28	69	14	112	32	81	26	74	20	103	109	110	103	123	109	100	107	110	108	120	109
17	Banner	48	28	63	18	85	10	129	14	77	12	80	30	100	107	103	104	118	106	100	107	110	108	120	109
18	Holstein Prolific	48	28	57	22	81	26	118	8	94	4	80	4	100	106	102	99	124	106	100	107	110	108	120	109
19	Prolific Blk. Tartarian	48	28	63	18	60	20	114	24	77	2	72	32	103	109	107	105	118	108	100	107	110	108	120	109
20	American Beauty	48	8	68	8	79	14	137	2	72	22	81	4	98	109	99	102	120	105	100	107	110	108	120	109
21	Irish Victor	48	8	57	22	84	24	87	2	69	14	100	106	99	105	..	102	..	..	100	107	110	108	120	109
22	Sensation	47	22	58	28	75	10	97	22	63	18	68	20	100	102	102	103	118	105	100	107	110	108	120	109
23	Thousand Dollar	47	22	60	..	68	8	138	28	71	6	77	6	98	107	102	101	120	105	100	107	110	108	120	109
24	Russell	47	22	47	2	71	6	95	10	88	8	69	30	100	107	104	102	124	107	100	107	110	108	120	109
25	Cream Egyptian	47	22	76	16	72	12	96	16	91	6	76	28	100	107	90	94	124	103	100	107	110	108	120	109
26	Rosedale	47	2	71	26	76	16	111	26	67	32	75	..	103	101	104	103	120	106	100	107	110	108	120	109
27	Salzer's Big Four	47	2	66	16	60	20	..	..	91	26	63	33	98	105	91	..	125	104	100	107	110	108	120	109
28	White Schonen	46	16	68	8	87	2	97	2	93	18	78	16	100	106	101	97	120	104	100	107	110	108	120	109
29	Master	46	16	47	22	66	16	90	20	87	22	67	22	103	109	102	106	126	109	100	107	110	108	120	109
30	Hazlett's Seizure	46	16	63	18	81	6	101	26	91	26	76	32	100	101	93	95	124	102	100	107	110	108	120	109
31	Buckbee's Illinois	45	10	62	12	73	18	115	30	95	10	78	16	100	109	106	100	124	107	100	107	110	108	120	109
32	Golden Beauty	45	10	60	..	88	28	126	16	77	22	79	20	100	109	104	101	125	107	100	107	110	108	120	109
33	Oderbruch	44	4	68	8	71	26	119	14	86	16	78	..	10	107	104	102	120	107	100	107	110	108	120	109
34	Improved Ligowo	44	4	60	..	81	6	125	30	78	18	77	32	98	106	99	98	124	105	100	107	110	108	120	109
35	Danish Island	44	4	57	22	89	14	128	8	91	6	82	4	101	109	101	100	126	107	100	107	110	108	120	109
36	White Giant	44	4	63	18	89	14	91	26	82	12	74	8	101	107	103	98	120	105	100	107	110	108	120	109

* Not sown at Agassiz.
 † Not sown at Indian Head.

UNIFORM TEST PLOTS OF OATS—Concluded.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms, Season of 1899.						Number of Days from Sowing to Harvesting.																	
		Ottawa.		Nappan, N.S.		Brandon, Man.		Agassiz, B.C.		Indian Head, N.W.T.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
37	Newmarket	44	4	63	18	68	8	124	24	62	12	72	20	100	109	102	100	120	106	106	106	106	106	106	106
38	Early Gothland	44	4	58	28	75	10	119	14	89	4	77	12	101	107	104	102	120	106	106	106	106	106	106	106
39	King	43	28	54	4	65	30	110	..	90	..	72	26	100	107	105	98	125	107	107	107	107	107	107	107
40	New Zealand	42	12	49	14	78	8	105	10	78	8	70	24	113	113	105	108	120	111	111	111	111	111	111	111
41	Wide Awake	41	26	56	16	89	14	129	14	100	..	83	14	100	109	103	99	123	106	106	106	106	106	106	106
42	Holland	41	26	47	2	67	22	105	10	97	2	71	26	103	109	110	104	118	107	107	107	107	107	107	107
43	Pioneer	41	26	57	22	61	26	104	24	75	..	68	6	100	109	101	106	118	106	106	106	106	106	106	106
44	Early Blossom	41	26	62	12	74	24	121	26	87	2	77	18	103	107	104	104	118	107	107	107	107	107	107	107
45	Bavarian	40	20	65	30	84	4	117	22	71	26	76	..	100	109	101	100	118	105	105	105	105	105	105	105
46	Abyssinia	40	20	68	8	70	20	119	14	89	4	77	20	103	108	102	103	125	108	108	108	108	108	108	108
47	Wallis	40	20	61	6	86	16	121	6	68	28	75	22	98	109	103	103	118	106	106	106	106	106	106	106
48	S. Jines	40	20	44	24	63	18	96	16	92	32	67	22	104	108	105	105	120	108	108	108	108	108	108	108
49	Flying Scotchman	40	..	67	2	57	22	103	18	70	..	67	22	97	101	99	95	118	102	102	102	102	102	102	102
50	Goldfinder	39	14	55	10	73	18	116	16	73	8	71	20	103	109	110	109	124	111	111	111	111	111	111	111
51	Miller	39	14	56	16	70	..	95	10	67	32	65	28	106	109	104	98	120	107	107	107	107	107	107	107
52	Black Mesdag	37	22	65	30	64	24	87	2	72	12	65	18	95	97	94	96	112	98	98	98	98	98	98	98
53	Brandon	37	22	48	8	62	12	92	32	89	14	66	..	103	109	103	98	120	106	106	106	106	106	106	106
54	White Russian	37	22	62	12	69	14	113	18	85	30	73	22	100	105	101	102	120	105	105	105	105	105	105	105
55	Siberian	34	24	65	30	88	28	120	..	74	4	76	24	103	109	101	104	124	108	108	108	108	108	108	108
56	Bonanza	33	18	61	6	69	14	72	32	77	22	62	32	97	101	89	95	125	101	101	101	101	101	101	101
57	Golden Giant	32	12	57	22	70	..	108	28	72	32	68	12	103	113	106	106	120	109	109	109	109	109	109	109
58	Early Archangel	32	12	60	..	73	18	111	26	81	6	71	26	98	99	101	96	113	103	103	103	103	103	103	103
59	Early Golden Prolific	32	12	67	2	67	2	127	2	93	8	77	12	100	101	104	98	123	105	105	105	105	105	105	105
60	Tartar King	31	6	60	..	58	28	98	28	80	20	65	30	98	101	101	105	124	105	105	105	105	105	105	105
61	Golden Tartarian	31	6	60	..	82	32	99	14	103	18	75	14	106	113	106	103	124	110	110	110	110	110	110	110
62	Waverley	30	..	51	26	78	8	97	2	68	18	65	4	100	107	104	104	118	106	106	106	106	106	106	106
63	Loughoughton	20	20	44	24	* ..	..	81	6	69	14	53	33	103	109	..	109	121	111	111	111	111	111	111	111
64	Scotch Potato	20	20	58	28	45	10	94	24	78	28	59	22	103	107	105	106	124	109	109	109	109	109	109	109

* Destroyed by cut-worms.

The twelve varieties of oats which have produced the largest crops during 1901 at the several experimental farms are the following :-

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.	
	Bush.	Lbs.	Bush.	Lbs.
1. Cromwell	58	8	7. American Triumph	54 24
2. Jeanette	57	2	8. Olive	54 24
3. Columbus	57	2	9. Improved American	54 24
4. Milford	57	2	10. Lincoln	54 24
5. Kendall	55	30	11. Mennonite	54 24
6. Early Maine	55	10	12. Black Beauty	53 18

An average crop of 55 bushels 22 lbs. per acre.

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2. Abund
3. Improv
4. Wide
5. Americ
6. Danish

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Cream Egyptian	76	16	7.	White Schonen	68	8
2.	Cromwell	74	4	8.	Early Golden Prolific	67	2
3.	Rosedale	71	26	9.	Flying Scotchman	67	2
4.	Abyssinia	68	8	10.	Bavarian	65	30
5.	American Beauty	68	8	11.	Improved American	65	30
6.	Oderbruch	68	8	12.	Black Mesdag	65	30

An average crop of 68 bushels 31 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Early Maine	91	26	7.	Siberian	88	23
2.	Improved American	90	.	8.	American Triumph	87	2
3.	White Giant	89	14	9.	White Schonen	87	2
4.	Danish Island	89	14	10.	Wallis	86	16
5.	Wide Awake	89	14	11.	Lincoln	85	30
6.	Golden Beauty	88	28	12.	Banner	85	10

An average crop of 88 bushels 10 lbs. per acre.

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Abundance	147	2	7.	Banner	129	14
2.	Thousand Dollar	138	28	8.	American Triumph	129	14
3.	American Beauty	137	2	9.	Wide Awake	129	14
4.	Improved American	135	30	10.	Danish Island	128	8
5.	Mennonite	134	4	11.	Early Golden Prolific	127	2
6.	Lincoln	130	20	12.	Golden Beauty	126	16

An average crop of 132 bushels 27 lbs. per acre.

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Golden Tartarian	103	18	7.	White Schonen	93	18
2.	Black Beauty	101	6	8.	Early Golden Prolific	93	8
3.	Wide Awake	100	.	9.	Saines	92	32
4.	Holland	97	2	10.	Fazlett's Seizure	91	26
5.	Buckbee's Illinois	95	10	11.	Salzer's Big Four	91	26
6.	Lincoln	94	24	12.	Cream Egyptian	91	6

An average crop of 95 bushels 17 lbs. per acre.

The twelve varieties of oats which have produced the largest crops in 1901, taking the average results obtained on all the experimental farms, are :

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Lincoln	86	4	7.	American Beauty	81	4
2.	Abundance	84	28	8.	Banner	80	30
3.	Improved American	83	14	9.	Holstein Prolific	80	4
4.	Wide Awake	83	14	10.	Mennonite	80	..
5.	American Triumph	83	12	11.	Early Maine	80	..
6.	Danish Island	82	4	12.	Golden Beauty	79	20

An average crop of 82 bushels 3 lbs. per acre.

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Average of all Farms.
Days.
20 106 1/2
20 109 1/2
25 107
20 111 1/2
23 106 1/2
24 110
18 106 1/2
18 107 1/2
18 105 1/2
25 108 1/2
18 106 1/2
20 108 1/2
18 102
24 111
20 107 1/2
12 98
20 106
20 105 1/2
24 108 1/2
25 101 1/2
20 109 1/2
103
23 105 1/2
24 105 1/2
24 110 1/2
18 106 1/2
24 111 1/2
24 109
1901
acre.
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24
24
24
24
18

The average crop of all the varieties of oats tested at each of the experimental farms in 1901 was as follows :—At Ottawa, 44 bushels 12 lbs. per acre ; Nappan, 60 bushels 7 lbs.; Brandon, 72 bushels 8 lbs.; Indian Head, 109 bushels 8 lbs.; and at Agassiz, 80 bushels 15 lbs. The average return given by the whole of the varieties of oats tested at all the farms was 73 bushels 10 lbs. per acre.

TRIAL PLOTS OF BARLEY.

During the season of 1901 fifty-one varieties of barley have been under test, twenty-one of which were two-rowed sorts and thirty six-rowed. Among the two-rowed sorts there were twelve hybrid varieties which have been produced at the experimental farms : Beaver, Bolton, Clifford, Dunham, Fulton, Harvey, Jarvis, Leslie, Logan, Nepean, Sidney and Victor. Among the six-rowed sorts there are seventeen of these hybrids, namely, Albert, Argyle, Brome, Claude, Empire, Garfield, Mansfield, Nugent, Phoenix, Pioneer, Stella, Success, Summit, Surprise, Trooper, Vanguard and Yale.

The barley plots were the same size as those sown with oats. Two bushels of seed was used in each case, and the dates of sowing were as follows :—At Ottawa, six-rowed, April 19 ; two-rowed, April 26 ; Nappan all May 11 ; Brandon May 17 and 18 ; Indian Head, May 14, and at Agassiz on April 17.

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

Number.	NAME OF VARIETY.	Yield per acre at the several Experimental Farms for Season of 1901.						Number of Days from Sowing to Harvesting.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B. C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	
1	French Chevalier.....	55 10	52 24	23 26	57 44	51 42	48 12	90	95	97	102	118	100 ³						
2	Danish Chevalier.....	47 4	38 16	19 8	57 4	47 4	41 36	93	96	96	102	115	100 ³						
3	Beaver.....	46 2	56 32	18 36	36 32	61 2	43 40	85	91	96	89	112	94						
4	Canadian Thorpe.....	45 10	44 8	27 14	50 40	50 20	43 28	88	96	95	100	115	98 ⁴						
5	Standwell.....	42 34	45 ..	30 20	67 44	55 40	48 18	88	96	96	101	117	99 ³						
6	Clifford.....	41 42	33 16	39 8	54 8	46 22	43 ..	88	95	91	84	111	93 ⁴						
7	Nepean.....	41 2	37 24	31 32	58 16	52 24	44 10	88	96	93	91	115	96 ³						
8	Logan.....	39 18	35 40	35 20	54 28	51 12	43 14	88	96	96	89	111	96						
9	Kinver Chevalier.....	36 22	33 16	17 24	55 40	50 40	38 38	90	96	97	103	117	100 ³						
10	Gordon.....	33 46	36 32	43 36	52 24	46 38	42 35	85	95	95	88	113	95 ⁴						
11	Jarvis.....	31 42	27 24	47 44	57 4	50 40	43 2	83	95	91	85	111	93						
12	Sidney.....	31 22	38 16	25 40	61 32	37 44	39 2	87	96	90	87	117	93 ³						
13	Prize Prolific.....	31 12	42 24	24 8	56 32	59 8	42 36	93	95	96	102	119	101						
14	Dunham.....	30 30	30 40	41 32	45 20	50 ..	39 34	85	96	91	86	112	94						
15	Invincible.....	29 28	35 40	29 8	55 40	34 8	36 44	93	95	95	99	118	100						
16	Bolton.....	25 10	45 ..	26 12	59 28	50 40	41 18	94	91	90	92	112	95 ⁴						
17	Victor.....	21 42	30 40	27 44	47 4	45 40	34 34	88	96	92	92	115	96 ³						
18	Fulton.....	20 10	30 ..	36 12	50 40	38 16	35 6	90	96	94	88	112	96						
19	Harvey.....	14 38	36 32	42 24	57 24	51 2	40 24	97	96	94	83	111	96 ⁴						
20	Leslie.....	11 2	39 8	35 20	58 36	52 46	39 22	97	96	93	83	115	96 ⁴						
21	Newton.....	*	45 ..	19 28	55 20	51 42	42 46	..	96	97	101	113	101 ⁴						

* Not grown at Ottawa.

1901.

1. French
2. Danish
3. Beaver

1. Beaver
2. French
3. Bolton

1. Jarvis
2. Gordon
3. Harvey

1. Standwell
2. Sidney
3. Bolton.

1. Beaver..
2. Prize Pro
3. Standwell

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1901, takin

1. Standwell
2. French Ch
3. Nepean..

The six varieties of two-rowed barley which have given the largest crops during 1901 at the several experimental farms are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. French Chevallier..	57 44	4. Canadian Thorpe...	45 10
2. Danish Chevallier...	57 4	5. Standwell...	42 34
3. Beaver...	46 2	6. Clifford...	41 42

An average crop of 48 bushels 23 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Beaver...	56 32	4. Newton...	45 ..
2. French Chevallier...	52 24	5. Standwell...	45 ..
3. Bolton...	45 ..	6. Canadian Thorpe...	44 8

An average yield of 48 bushels 3 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Jarvis...	47 44	4. Dunham...	41 32
2. Gordon...	43 36	5. Clifford...	39 8
3. Harvey...	42 24	6. Fulton...	36 13

An average yield of 41 bushels 42 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Standwell...	67 44	4. Leslie...	58 26
2. Sweeney...	61 32	5. Nepean...	58 16
3. Bolton...	59 28	6. French Chevallier...	57 44

An average yield of 60 bushels 33 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Beaver...	61 2	4. Leslie...	52 46
2. Prize Prolific...	59 8	5. Newton...	51 42
3. Standwell...	55 40	6. Logan...	51 12

An average crop of 55 bushels 17 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest crops in 1901, taking the average results obtained on all the experimental farms, are :

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Standwell...	48 18	4. Beaver...	43 40
2. French Chevallier...	48 12	5. Canadian Thorpe...	43 28
3. Nepean...	44 10	6. Logan...	43 14

An average crop of 45 bushels 12 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at each of the experimental farms in 1901 was as follows:—At Ottawa, 33 bushels 40 lbs. per acre; Nappan, 38 bushels 39 lbs.; Brandon, 30 bushels 31 lbs.; Indian Head, 54 bushels 40 lbs.; and at Agassiz, 49 bushels 18 lbs. The average return given by the whole of the varieties of two-rowed barley tested at all the farms was 41 bushels 24 lbs. per acre.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms for Season of 1901.						Number of Days from Sowing to Harvesting.																	
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Odessa	41	2	60		26	32	68	36	59	8	51	6	90	88	93	93	113	95						
2	Mensury	39	2	56	32	48	16	67	4	59	28	54	8	83	88	95	92	110	93						
3	Stella	36	42	38	16	21	32	51	12	47	14	39	4	90	96	95	91	113	97						
4	Claude	36	42	52	24	38	36	66	12	60	40	51	2	90	88	95	89	112	94						
5	Royal	33	26	41	32	33	36	63	16	67	24	47	46	90	89	91	90	110	94						
6	Nugent	33	6	47	24	33	36	55	40	61	12	46	14	90	89	94	100	113	97						
7	Blue Long-head	31	42	33	16	33	16	57	4	57	4	42	26	89	89	95	99	112	96						
8	Rennie's Improved	29	18	46	32	32	4	52	24	54	28	43	2	90	87	92	87	110	93						
9	Petschora	27	34	46	32	41	32	59	8	55	20	46	6	89	88	91	88	108	92						
10	Pioneer	27	34	44	8	27	24	54	8	52	16	41	8	94	88	90	98	110	96						
11	Vanguard	27	34	47	24	29	28	45	40	47	14	39	28	90	89	89	87	110	93						
12	Albert	26	42	50		44	8	45	40	54	28	44	14	89	86	87	88	113	92						
13	Garfield	26	42	45	40	46	12	53	16	47	4	43	38	92	88	95	92	112	95						
14	Yale	26	2	50	40	47	4	48	36	58	36	46	14	94	93	91	92	113	96						
15	Oderbruch	26	2	61	32	29	28	53	16	51	44	44	24	92	88	92	85	107	92						
16	Common	26	2	64	8	29	8	53	36	60	40	46	38	89	86	89	89	113	93						
17	Trooper	25	10	41	32	29	8	59	28	50	40	41	14	91	91	95	89	113	95						
18	Summit	25	10	40	40	37	24	56	12	47	4	41	18	90	96	91	99	111	97						
19	Phoenix	25	10	42	24	44	8	40		52	46	40	46	90	88	87	87	110	92						
20	Baxter	24	18	59	8	37	24	50		55	32	44	45	89	88	91	87	108	92						
21	Empire	23	34	46	32	33	16	56	32	58	26	43	28	90	89	95	93	111	95						
22	Argyle	21	42	48	16	43	36	44	8	58	16	43	14	90	88	91	88	113	94						
23	Champion	..	..	47	24	30	40	47	4	51	4	44	6	..	86	88	85	107	91						
24	Mansfield	..	..	40	..	47	24	57	4	59	18	50	48	..	93	87	92	115	96						
25	Excelsior	..	..	50	..	40	40	..	..	54	28	48	23	..	86	87	..	107	93						
26	Surprise	..	..	40	..	32	4	46	12	45	40	41	2	..	96	94	92	113	98						
27	Brome	..	..	45	..	27	44	58	16	52	16	45	43	..	93	95	91	113	98						
28	Hullless Black	..	..	50	40	36	32	45	40	45	20	44	44	..	86	93	85	110	93						
29	Hullless White	..	..	46	32	16	12	37	4	45	..	36	12	..	86	87	84	110	91						
30	Success	..	..	49	8	29	28	41	12	50	30	42	31	..	86	93	85	107	92						

* Eight varieties of six-rowed barley were sown at the Central Experimental Farm in a hollow place where they were injured by water so as to make the results unreliable.

The six varieties of six-rowed barley which have given the largest crops during 1901 at the several experimental farms are the following—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa	41	2	4. Claude	36	42
2. Mensury	39	8	5. Royal	33	26
3. Stella	36	42	6. Nugent	33	6

An average crop of 36 bushels 37 lbs. per acre.

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Common	64	8	4.	Baxter	59	8
2.	Oderbruch	61	22	5.	Mensury	56	32
3.	Odessa	60	..	6.	Claude	52	24

An average crop of 59 bushels 1 lb. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Mensury	48	16	4.	Garfield	46	12
2.	Mansfield	47	24	5.	Phoenix	44	8
3.	Yale	47	4	6.	Albert	44	8

An average crop of 46 bushels 12 lbs. per acre.

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Odessa	68	36	4.	Royal	63	16
2.	Mensury	67	4	5.	Trooper	59	28
3.	Claude	66	12	6.	Petschora	59	8

An average crop of 64 bushels 1 lb. per acre.

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

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Royal	67	24	4.	Common	60	40
2.	Nugent	61	12	5.	Mensury	59	28
3.	Claude	60	40	6.	Mansfield	59	18

An average crop of 61 bushels 27 lbs. per acre.

The six varieties which have produced the largest crops in 1901, taking the average of the results obtained on all the experimental farms, are :

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1.	Mensury	54	8	4.	Mansfield	50	48
2.	Odessa	51	6	5.	Excelsior	48	23
3.	Claude	51	2	6.	Royal	47	46

An average crop of 50 bushels 30 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at each of the experimental farms in 1901 was as follows :—At Ottawa, 29 bushels 7 lbs. per acre ; Nappan, 47 bushels 41 lbs.; Brandon, 35 bushels 1 lb.; Indian Head, 52 bushels 46 lbs., and at Agassiz, 54 bushels 2 lbs. The average returns given by the whole of the varieties of six-rowed barley tested at all the farms was 44 bushels 29 lbs. per acre.

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TRIAL PLOTS OF SPRING WHEAT.

Seventy-one varieties of spring wheat were grown on the uniform trial plots during 1901. Among the new sorts added to the list this year are four promising kinds received under numbers from Prof. Wm. Hays, of St. Anthony's Park, Minnesota, a number of varieties from Australia and eight cross-bred sorts which have been produced at the experimental farms. The cross-bred sorts now under test in these trial plots number thirty-eight in all, as follows:—Admiral, Advance, Alpha, Angus, Beauty, Benton, Bishop, Blair, Blenheim, Byron, Captor, Cartier, Cassel, Chester, Clyde, Countess, Crawford, Crown, Dawn, Dufferin, Early Riga, Ebert, Essex, Fraser, Harold, Hastings, Huron, Laurel, Mason, Norval, Percy, Plumper, Preston, Progress, Rideau, Stanley, Weldon and Vernon.

The size of the plots was one-fortieth of an acre each at Ottawa, Nappan and Agassiz, and one-twentieth of an acre at Brandon and Indian Head, 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 18; Nappan, May 1; Brandon, May 2 and 3; Indian Head, May 7, and at Agassiz, April 16 to 22.

UNIFORM TEST PLOTS OF SPRING WHEAT.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms Season of 1901.						Number of Days from Sowing to Harvesting.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Goose	33 50	26	42	63	37 40	40 30	110	112	112	114	126	114	110	112	109	109	119	110
2	Hastings	33 50	34 40	20 40	57 20	50	39 18	101	112	109	109	119	110	101	111	107	108	125	111
3	Huron	32	25 20	35 20	66 40	44 20	40 44	104	111	107	108	125	111	105	111	103	113	125	111
4	Herisson Bearded	32	32	26 40	57 20	37	37	105	111	103	113	125	111	105	111	103	113	125	111
5	White Fife	31 10	30	34 20	52	40	37 30	110	113	109	104	123	111	110	109	103	110	123	111
6	Beaudry	29 50	34 40	25 40	60 40	31	36 22	110	109	103	110	123	111	112	118	112	108	119	113
7	Australian No. 19	29 10	20	18	56 40	45 20	33 50	112	118	112	108	119	113	111	111	109	111	126	112
8	Red Fife	29 13	27 20	36 40	57	40 30	38 8	109	111	111	110	123	112	111	111	109	111	126	112
9	Hungarian	29 10	34	29 40	56 40	44 40	38 50	105	111	109	111	126	112	111	111	109	111	126	112
10	Preston	28 40	33 20	31	57 20	44	38 52	104	110	106	114	123	111	111	111	106	114	123	111
11	Minnesota No. 181	28 40	29 20	25	60	43	37 12	105	113	112	110	126	113	111	111	108	108	123	112
12	Beauty	28 30	24 40	35 40	58 40	42	37 54	111	113	111	105	123	112	111	111	108	108	123	112
13	Dion's	27 50	26 40	27 20	59 20	36 40	35 34	111	111	108	108	123	112	106	110	108	108	125	111
14	White Chaff, Campbell's	27 50	30	33	56	38 10	37	106	110	108	108	125	111	104	111	110	107	126	111
15	Plumper	27 20	32 40	31 20	51	41 20	36 44	104	111	110	107	126	111	113	118	111	109	115	113
16	Australian No. 13	27 10	24	36	66 40	39 40	38 42	113	118	111	109	115	113	111	118	112	108	116	113
17	Australian No. 10	26 30	27 20	25 20	48 40	40 40	33 42	111	118	112	108	116	113	104	112	102	102	126	109
18	Clyde	26 30	34	36 40	60 40	36	38 46	104	112	102	102	126	109	105	112	106	109	125	111
19	Crown	26 30	34 40	33	50	39 40	37 46	105	112	106	109	125	111	111	111	107	114	122	113
20	Rio Grande	25 10	30 40	33	62	35 40	37 18	111	111	107	114	122	113	105	111	106	111	123	111
21	Blenheim	24 40	28 40	32 20	54	38	35 32	105	111	106	111	123	111	111	111	106	103	123	108
22	Percy	24	30	29 20	57 20	37	35 32	104	111	99	103	123	108	105	112	111	108	117	110
23	Chester	23 50	30 40	19 20	50 40	49 20	34 46	105	112	111	108	117	110	106	113	111	107	126	109
24	Minnesota, No. 169	23 20	22 40	32 40	57 20	46 40	36 32	106	113	111	111	125	113	106	113	111	108	117	110

Number.

- 25 Pringle
- 26 Minne
- 27 Wellm
- 28 Austra
- 29 Cartier
- 30 Rouma
- 31 Early
- 32 Red Fe
- 33 Colorad
- 34 Dawn
- 35 Captor
- 36 Rideau
- 37 Austral
- 38 Speltz
- 39 Laurel
- 40 White
- 41 White
- 42 Admiral
- 43 Alpha
- 44 Robin's
- 45 Benton
- 46 Advance
- 47 Monarch
- 48 Blair
- 49 Countess
- 50 Red Swe
- 51 Progress
- 52 Australia
- 53 Minnesot
- 54 Harold
- 55 Australia
- 56 Stanley
- 57 Norval
- 58 Dufferin
- 59 Essex
- 60 Crawford
- 61 Fraser
- 62 Angus
- 63 Weldon
- 64 Byron
- 65 Japanese
- 66 Cassel
- 67 Vernon
- 68 Mason
- 69 Ebert
- 70 Ladoga
- 71 Bishop

UNIFORM TEST PLOTS OF SPRING WHEAT—Concluded.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms Season of 1901.						Number of Days from Sowing to Harvesting.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
25	Pringle's Champlain.	23	20	30	..	29	20	56	40	42	20	36	20	104	110	106	111	125	111
26	Minnesota, No. 163.	23	20	30	..	34	..	58	..	38	40	36	48	106	113	111	109	126	113
27	Wellman's Fife.	23	10	28	40	34	40	57	40	36	20	36	6	110	113	109	109	125	113
28	Australian, No. 27.	23	10	24	40	17	20	58	..	39	40	32	34	110	118	110	106	117	112
29	Cartier.	23	10	24	40	28	..	44	40	48	40	33	50	105	112	102	106	117	108
30	Roumanian.	23	10	40	..	35	40	57	20	52	..	41	38	111	113	112	112	126	114
31	Early Riga.	22	40	26	40	27	20	49	..	46	20	34	24	94	107	96	98	118	102
32	Red Fern.	22	30	32	40	28	..	57	20	40	40	36	14	106	111	110	113	126	113
33	Colorado.	22	..	34	..	31	20	58	20	44	40	38	4	105	110	106	113	122	111
34	Dawn.	22	..	26	..	33	20	61	..	39	20	36	20	104	111	101	105	123	108
35	Captor.	22	..	23	20	18	..	50	20	47	..	32	8	105	113	103	108	125	110
36	Rideau.	22	..	28	40	33	..	62	40	36	20	36	32	103	112	105	107	119	109
37	Australian, No. 23.	21	50	22	40	19	20	58	40	46	30	33	43	111	118	111	108	118	113
38	Speltz.	21	50	28	..	45	20	58	20	39	30	38	36	111	113	108	102	104	107
39	Laurel.	21	10	30	..	35	..	54	..	45	20	37	6	112	113	111	111	126	114
40	White Connell.	21	10	34	..	34	..	55	20	37	40	36	26	112	113	111	109	126	114
41	White Russian.	21	10	35	20	36	..	54	..	38	..	36	30	111	113	111	105	125	113
42	Admiral.	21	10	33	20	37	20	56	20	41	20	37	54	112	112	108	108	126	113
43	Alpha.	20	40	33	20	35	..	53	40	46	40	37	52	105	112	103	110	125	111
44	Robin's Rust Proof.	20	40	20	40	26	..	49	20	43	20	32	..	112	113	111	112	117	113
45	Benton.	20	40	20	..	33	20	49	20	44	30	33	34	105	113	103	108	116	109
46	Advance.	20	40	35	20	34	20	57	..	43	20	38	8	104	109	103	110	118	108
47	Monarch.	20	30	30	40	36	20	57	40	37	20	36	30	110	113	109	110	126	113
48	Blair.	20	..	32	40	30	20	55	..	51	10	37	50	105	113	112	104	125	111
49	Countess.	20	..	28	40	26	20	65	20	50	40	38	12	106	113	111	103	123	111
50	Red Swedish.	19	50	30	..	24	20	49	..	42	20	33	6	111	110	109	114	123	113
51	Progress.	19	50	25	20	37	..	54	..	39	10	35	4	101	112	106	105	125	109
52	Australian, No. 25.	19	50	28	40	21	20	54	..	44	40	33	18	111	118	112	107	117	113
53	Minnesota, No. 149.	19	40	22	..	33	40	59	20	41	40	35	16	106	113	112	109	126	113
54	Harold.	19	40	30	40	23	20	48	..	35	20	31	24	94	111	107	100	116	105
55	Australian, No. 9.	19	30	20	..	30	..	50	40	48	40	33	46	106	118	109	107	118	111
56	Stanley.	19	20	30	40	36	..	61	40	50	40	39	40	104	112	106	105	126	110
57	Norval.	19	20	34	..	34	40	45	40	38	20	34	24	101	111	101	104	116	106
58	Dufferin.	19	10	24	40	30	40	58	..	46	10	35	44	105	112	103	111	118	109
59	Essex.	19	10	24	40	24	..	61	20	47	20	35	18	112	113	109	109	119	112
60	Crawford.	19	..	26	40	28	..	55	..	47	20	35	12	101	112	105	99	119	107
61	Fraser.	18	40	26	40	27	20	52	..	41	40	33	16	95	111	105	100	118	105
62	Angus.	18	40	24	40	30	40	46	..	39	40	31	56	105	112	106	110	117	110
63	Weldon.	18	40	35	20	31	40	57	40	41	20	36	56	105	113	111	102	122	110
64	Byron.	17	50	30	..	30	40	43	40	34	..	31	14	104	113	107	103	119	109
65	Japanese.	17	20	32	40	16	40	56	40	40	10	32	42	97	112	99	108	119	107
66	Cassel.	17	10	26	..	20	40	54	..	44	50	32	32	112	112	112	108	121	113
67	Vernon.	17	10	33	20	35	40	59	20	44	40	38	2	105	110	110	111	119	111
68	Mason.	16	40	32	..	31	..	67	..	40	20	37	24	105	112	105	104	125	110
69	Ebert.	15	20	26	40	28	..	50	20	51	30	34	22	95	112	102	99	120	105
70	Ladoga.	14	40	26	40	27	..	55	40	41	20	33	4	100	108	105	107	118	107
71	Bishop.	13	50	26	..	24	40	52	..	42	..	31	42	105	113	106	106	120	110

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Average of all Farms.
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The twelve varieties of spring wheat which have given the largest crops at the several experimental farms in 1901 are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Goose...	33	50	7. Australian, No. 19...	29	10
2. Hastings...	33	50	8. Red Fife...	29	10
3. Huron...	32	..	9. Hungarian...	29	10
4. Herlisson Bearded...	32	..	10. Preston...	28	40
5. White Fife...	31	10	11. Minnesota, No. 181...	28	40
6. Beaudry...	29	50	12. Beauty...	28	30

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

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Roumanian...	40	..	7. Hungarian...	34	..
2. Weldon...	35	20	8. Colorado...	34	..
3. Advance...	35	20	9. White Connell...	34	..
4. Hastings...	34	40	10. Norval...	34	..
5. Beaudry...	34	40	11. Clyde...	34	..
6. Crown...	34	40	12. Preston...	33	20

An average crop of 34 bushels 50 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Goose...	42	..	7. Monarch...	36	20
2. Crown...	38	..	8. Stanley...	36	..
3. Admiral...	37	20	9. White Russian...	36	..
4. Progress...	37	..	10. Australian, No. 13...	36	..
5. Clyde...	36	40	11. Vernon...	35	40
6. Red Fife...	36	40	12. Beauty...	35	40

An average crop of 36 bushels 57 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mason...	67	..	7. Rio Grande...	62	..
2. Huron...	66	40	8. Stanley...	61	40
3. Australian, No. 13...	66	40	9. Essex...	61	20
4. Countess...	65	20	10. Dawn...	61	..
5. Goose...	63	..	11. Clyde...	60	40
6. Rideau...	62	40	12. Beaudry...	60	40

An average crop of 63 bushels 13 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Roumanian...	52	..	7. Chester...	49	20
2. Ebert...	51	30	8. Cartier...	48	40
3. Blair...	51	10	9. Australian No. 9...	48	40
4. Stanley...	50	40	10. Essex...	47	20
5. Countess...	50	40	11. Crawford...	47	20
6. Hastings...	50	..	12. Captor...	47	..

An average crop of 49 bushels 32 lbs. per acre.

The twelve varieties of spring wheat which have given the largest crops in 1901, taking the average of the results obtained on all the experimental farms, are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Roumanian....	41	38	7. Hungarian....	38	50
2. Huron....	40	44	8. Clyde....	38	46
3. Goose....	40	30	9. Australian, No. 13....	38	42
4. Stanley....	39	40	10. Speltz....	38	36
5. Hastings....	39	18	11. Countess....	38	12
6. Preston....	38	52	12. Red Fife....	38	8

An average crop of 39 bushels 20 lbs. per acre.

The average crop of all the varieties of spring wheat, tested at each of the experimental farms in 1901, was as follows :—At Ottawa, 22 bushels 50 lbs. per acre ; Nappan, 23 bushels 53 lbs.; Brandon, 30 bushels 9 lbs.; Indian Head, 55 bushels 49 lbs., and Agassiz, 42 bushels 14 lbs. The average return given by the whole of the varieties of spring wheat at all the farms was 35 bushels 59 lbs. per acre.

TRIAL PLOTS OF PEASE.

The varieties of pease under test in 1901 in the uniform trial plots numbered fifty-seven. Among these there are thirty cross-bred sorts which have been originated at the experimental farms. These are Agnes, Alma, Archer, Arthur, Bedford, Bright, Bruce, Carleton, Chelsea, Cooper, Dover, Duke, Elder Elliot, Fenton, Fergus, Gregory, Herald, Kent, King, Lanark, Mackay, Macoun, Nelson, Pearl, Perth, Picton, Prince, Trilby and Vincent. These were sown in plots of one-fortieth of an acre each at Ottawa, Nappan and Agassiz, and one-twentieth of an acre at Brandon and Indian Head. 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 :—Ottawa, April 29 ; Nappan, May 2 ; Brandon, May 4 to 8 ; Indian Head, May 15, and at Agassiz, April 15.

UNIFORM TEST PLOTS OF PEASE.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1901.										NUMBER OF DAYS FROM [SOWING TO HARVESTING.]							
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
1	Cooper	33	20	41	20	36	..	50	40	47	10	41	42	108	113	122	115	130	117
2	English Grey	32	..	36	40	29	50	48	20	64	..	42	10	108	120	127	112	128	119
3	Paragon	32	..	43	20	43	..	59	40	49	40	45	32	95	108	121	118	130	114
4	Nelson	32	..	42	40	36	10	51	..	51	..	43	10	99	108	108	119	123	111
5	French Canner	31	40	40	40	33	..	49	40	50	..	41	..	105	118	108	113	128	114
6	Bruce	31	40	42	40	31	50	51	20	52	30	42	..	111	118	113	118	127	117
7	Centennial	31	20	35	20	29	50	49	..	50	40	39	14	113	113	129	113	131	119
8	Vincent	30	40	35	20	32	..	47	..	49	50	38	58	113	119	104	116	127	115
9	Elder	30	40	46	40	16	30	40	20	52	40	37	22	107	121	129	118	130	121
10	Chancellor	30	40	45	20	30	40	50	..	48	..	40	56	96	107	111	107	130	101
11	Kent	30	40	42	40	31	..	52	..	52	..	41	40	107	121	124	116	133	120
12	Arthur	30	..	50	..	35	50	50	20	51	50	43	36	108	112	115	113	127	115
13	Victoria	30	..	48	..	41	20	45	20	47	..	42	20	114	119	126	118	127	120
14	Carleton	30	..	36	40	34	50	50	40	52	20	40	54	107	118	124	116	130	119
15	Alma	30	..	36	40	37	20	47	40	51	20	40	36	107	108	114	116	127	114
16	Elliot	30	..	44	40	38	30	50	20	42	20	41	10	106	118	125	118	133	120
17	King	29	20	41	20	38	50	56	..	47	20	42	34	111	113	116	109	131	116
18	Canadian Beauty	29	20	33	20	34	40	49	40	37	20	36	52	106	112	126	116	130	118
19	Pictou	29	20	42	..	41	20	48	..	52	10	42	34	108	119	115	109	131	116
20	Golden Vine	29	..	40	..	35	..	53	20	48	20	41	8	106	111	119	115	133	116
21	Lanark	29	..	40	..	33	50	52	20	49	20	40	54	105	119	121	113	130	117
22	Bright	28	..	46	..	25	40	46	..	39	20	37	..	109	118	128	120	133	121
23	Bedford	28	..	25	20	30	20	43	20	44	40	34	20	108	118	119	116	131	118
24	Large White Marrowfat	28	..	43	20	31	..	51	20	55	20	41	48	107	118	127	117	131	120
25	Perth	28	..	40	..	35	40	48	40	56	..	41	40	107	111	118	114	130	116
26	Prussian Blue	27	20	40	40	36	20	50	40	48	40	40	44	99	108	115	111	126	111
27	Mackay	27	20	42	..	29	..	45	20	58	50	40	30	103	119	124	119	128	118
28	Pride	27	20	46	40	34	20	60	20	59	20	45	36	105	118	119	115	130	117
29	Mummy	27	20	36	40	39	40	50	..	44	..	39	32	108	117	122	110	131	117
30	Pearl	27	20	50	..	27	20	46	20	48	..	39	48	114	121	126	119	130	122
31	Prince	26	40	38	..	38	..	49	40	51	..	41	16	106	108	126	111	127	115
32	Daniel O'Rourke	26	40	38	40	29	40	59	..	48	10	40	26	98	115	116	107	122	111
33	Creeper	26	40	38	40	31	50	47	..	48	40	38	31	105	107	103	114	122	110
34	New Potter	26	40	42	..	41	20	51	..	57	20	43	40	113	117	130	116	128	120
35	Wisconsin Blue	26	..	42	40	33	30	44	20	47	40	38	50	110	118	116	113	133	118
36	Duke	26	..	42	40	35	20	46	40	60	..	42	8	108	113	105	116	130	114
37	Oddfellow	26	..	43	20	33	20	66	..	41	20	42	..	108	118	111	113	125	115
38	Agnes	26	..	44	40	33	10	53	40	56	50	42	52	107	118	119	112	131	117
39	Black-eyed Marrowfat	25	40	38	..	30	..	50	20	47	10	38	14	112	117	105	114	127	115
40	White Wonder	25	20	41	20	33	20	57	..	54	20	42	16	100	107	108	104	131	110
41	Archer	25	..	42	..	34	20	48	20	45	20	39	..	111	113	124	116	131	119
42	Macoun	24	40	42	40	41	40	51	20	42	..	40	28	112	118	127	119	130	121
43	Multiplier	24	40	43	20	28	40	40	40	46	30	36	46	112	118	127	113	131	120
44	Gregory	24	40	48	40	42	30	58	40	55	..	45	54	104	118	126	113	126	117
45	Early Britain	24	40	40	..	36	20	53	..	59	20	42	40	106	107	117	116	122	113
46	Crown	24	20	44	..	38	30	54	20	52	30	42	44	106	115	124	114	128	117
47	Harrison's Glory	24	..	38	..	35	..	46	..	60	40	40	44	104	108	116	118	129	115
48	Elephant Blue	24	..	40	..	28	20	52	..	57	..	40	16	106	108	127	114	126	116
49	Prince Albert	24	..	43	20	31	..	49	20	56	40	40	52	114	117	130	113	128	120
50	Fergus	24	..	45	20	29	40	47	40	59	..	41	8	110	121	104	116	133	116
51	Chelsea	23	40	42	..	34	20	39	20	38	40	35	36	112	121	123	113	128	119
52	Dover	22	40	42	40	33	..	49	..	38	40	37	12	108	119	125	116	130	119
53	Herald	21	20	42	40	28	30	41	20	46	40	36	6	113	120	124	113	130	120
54	Fenton	20	..	36	40	36	40	54	40	40	20	37	40	103	118	119	113	123	115
55	Trilby	19	20	37	20	32	..	53	..	52	50	38	54	105	119	127	116	127	118
56	German White	18	20	40	..	38	40	60	..	52	..	41	48	100	111	117	107	128	112
57	Grass Pea	16	40	22	..	32	20	36	..	24	40	26	20	114	121	127	120	141	124

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2. Pearl
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4. Victori
5. Pride
6. Elder

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1. Paragon
2. Gregory
3. Macoun
4. Pictou
5. Victoria
6. New Pot

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1. Oddfellow
2. Pride
3. German V
4. Paragon
5. Daniel O'
6. Gregory

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2. Harrison's
3. Duke
4. Early Brita
5. Pride
6. Fergus

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The twelve varieties of pease which have given the largest crops at the several experimental farms during 1901, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Cooper.....	33	20	7. Centennial.....	31	20
2. English Grey.....	32	..	8. Vincent.....	30	40
3. Paragon.....	32	..	9. Elder.....	30	40
4. Nelson.....	32	..	10. Chancellor.....	30	40
5. French Canner.....	31	40	11. Kent.....	30	40
6. Bruce.....	31	40	12. Arthur.....	30	..

An average crop of 31 bushels 23 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Arthur.....	50	..	7. Bright.....	46	..
2. Pearl.....	50	..	8. Chancellor.....	45	20
3. Gregory.....	48	40	9. Fergus.....	45	20
4. Victoria.....	48	..	10. Elliot.....	44	40
5. Pride.....	46	40	11. Agnes.....	44	40
6. Elder.....	46	40	12. Crown.....	44	..

An average crop of 46 bushels 40 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Paragon.....	43	..	7. Mummy.....	39	40
2. Gregory.....	42	30	8. King.....	38	50
3. Macoun.....	41	40	9. German White.....	38	40
4. Picton.....	41	20	10. Crown.....	38	40
5. Victoria.....	41	20	11. Elliot.....	38	10
6. New Potter.....	41	20	12. Prince.....	38	..

An average crop of 40 bushels 18 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Oddfellow.....	66	..	7. White Wonder.....	57	..
2. Pride.....	60	20	8. King.....	56	..
3. German White.....	60	..	9. Faton.....	54	40
4. Paragon.....	59	40	10. Crown.....	54	20
5. Daniel O'Rourke.....	59	..	11. Agnes.....	53	49
6. Gregory.....	58	40	12. Golden Vine.....	53	20

An average crop of 57 bushels 43 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. English Grey.....	64	..	7. Mackay.....	58	50
2. Harrison's Glory.....	60	40	8. A hur.....	57	50
3. Duke.....	60	..	9. New Potter.....	57	20
4. Early Britain.....	59	20	10. Elephant Blue.....	57	..
5. Pride.....	59	20	11. Agnes.....	56	50
6. Fergus.....	59	..	12. Perth.....	56	..

An average crop of 58 bushels 51 lbs. per acre.

Average of all Farms.
 Days.
 10 117 1/2
 8 119
 20 114 1/2
 23 111 1/2
 26 114 1/2
 27 117 1/2
 31 119 1/2
 31 115 1/2
 30 121
 30 110 1/2
 3 120 1/2
 7 115
 7 120 1/2
 0 119
 7 114 1/2
 3 120
 1 116
 0 118
 1 116 1/2
 3 116 1/2
 0 117 1/2
 3 121 1/2
 1 118 1/2
 1 120
 0 116
 6 111 1/2
 8 118 1/2
 0 117 1/2
 1 117 1/2
 0 122
 7 115 1/2
 2 111 1/2
 2 110 1/2
 8 120 1/2
 3 118
 0 114 1/2
 5 115
 1 117 1/2
 7 115
 1 110
 1 119
 0 121 1/2
 1 120 1/2
 6 117 1/2
 2 113 1/2
 5 117 1/2
 0 115
 3 116 1/2
 3 120 1/2
 3 116 1/2
 3 119 1/2
 0 119 1/2
 0 120
 3 115 1/2
 7 118 1/2
 3 112 1/2
 1 124 1/2

The twelve varieties of pease which have given the largest crops in 1901, taking the average results obtained on all the experimental farms, are the following :—

		Per acre.				Per acre.	
		Bush. Lbs.				Bush. Lbs.	
1. Gregory.....	45	54	7. Agnes.....	42	53		
2. Pride.....	45	36	8. Crown.....	42	44		
3. Paragon.....	45	32	9. Early Britain.....	42	40		
4. New Potter.....	43	40	10. King.....	42	34		
5. Arthur.....	43	36	11. Picton.....	42	34		
6. Nelson.....	43	19	12. Victoria.....	42	20		

An average crop of 43 bushels 36 lbs. per acre.

The average crop of all the varieties of pease tested at each of the experimental farms in 1901 was as follows :—At Ottawa, 27 bushels per acre ; Nappan, 41 bushels ; Brandon, 33 bushels 53 lbs. ; Indian Head, 50 bushels 4 lbs., and at Agassiz, 49 bushels 57 lbs. The average return given by the whole of the varieties at all the farms was 40 bushels 23 lbs. per acre.

TRIAL PLOTS OF INDIAN CORN.

The number of varieties of Indian corn which have been tested in 1901 is thirty-four. These were planted 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 28 ; Nappan, June 3 ; Brandon, May 29 ; Indian Head, May 22, and at Agassiz, May 20 and 21.

All the corn was cut green and put into the silo for the winter feeding of stock. The dates of cutting were :—At Ottawa, September 18 ; Nappan, September 27 ; Brandon, September 5 ; Indian Head, September 2, and at Agassiz, October 14. The yield per acre has been calculated in each case from the weight obtained from two rows, each 66 feet long.

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UNIFORM TEST PLOTS OF INDIAN CORN.

Number.	NAME OF VARIETY.	Yield per Acre at the several Experimental Farms, Season of 1901.					
		Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, E. C.	Average 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	Superior Fodder.....	24 840	13 620	19 940	23 860	15 1,570	19 568
2	Early Mastodon.....	24 400	20 150	17 1,112	26 1,724	20 700	21 1,617
3	Early Butler.....	23 1,300	16 1,220	17 1,376	21 900	15 1,469	19 51
4	Rural Thoro'bred White Flint.....	23 290	14 1,700	23 860	20 524	22 220	20 1,501
5	Extra Early Huron.....	22 1,760	14 1,370	19 1,600	19 544	15 800	18 815
6	Giant Prolific Ensilage.....	22 1,540	14 1,370	18 1,752	25 1,480	12 1,410	18 1,910
7	Cloud's Early Yellow.....	22 1,540	19 1,600	18 300	24 388	12 1,520	19 1,070
8	Selected Learning.....	22	17 100	18 1,752	23 209	17 540	19 1,318
9	Red Cob Ensilage.....	22	14 1,700	19 1,600	22 180	16 1,770	19 250
10	Evergreen Sugar.....	21 1,120	13 1,500	18 1,092	23 1,784	11 1,430	17 1,785
11	Champion White Pearl.....	21 460	17 320	18 1,356	19 1,600	16 1,440	18 1,435
12	Country Gentleman.....	20 1,360	12 1,850	16 1,660	22 1,850	9 150	16 974
13	Sanford.....	19 1,820	14 270	20 920	16 500	13 1,060	16 1,714
14	Salzer's All Gold.....	19 1,380	14 50	23 464	24 180	17 210	19 1,257
15	Mammoth Cuban.....	19 940	17 650	19 280	24 388	17 320	19 512
16	Canada White Flint.....	18 1,840	13 400	16 1,660	22 220	11 1,850	16 1,196
17	Pride of the North.....	18 1,820	15 1,800	20 656	25 800	16 1,000	19 1,215
18	Compton's Early.....	18 1,620	14 50	17 980	19 1,995	19 1,820	18 93
19	White Cap Yellow Dent.....	18 1,300	13 400	18 1,224	20 920	20 1,250	18 619
20	King of the Earliest.....	18 80	14 50	18 564	16 200	16 1,660	16 1,311
21	Mamm. Eight rowed Flint.....	17 1,420	13 620	19 1,732	20 1,844	22 1,320	18 1,787
22	Black Mexican.....	16 1,660	13 1,720	18 168	17 640	7 620	14 1,342
23	Early Yellow Long Eared.....	16 1,220	16 1,000	21 1,956	17 452	13 1,280	17 382
24	Longfellow.....	15 360	15 250	19 1,204	21 1,560	15 1,900	17 1,055
25	North Dakota White.....	14 1,700	12 750	20 1,448	21 504	15 360	16 1,752
26	Angel of Midnight.....	14 1,480	14 1,370	15 1,152	22 1,408	10 1,890	15 1,460
27	Pearce's Prolific.....	14 1,260	12 750	20 1,184	23 1,520	10 20	16 547
28	North Dakota Yellow.....	14 1,040	13 950	17 1,904	17 1,738	9 1,800	14 1,488
29	Kendall's Early Giant.....	13 1,280	13 950	17 452	17 188	13 1,610	15 94
30	Early August.....	10 240	9 1,800	*	19 558	5 1,120	11 179
31	Salzer's Earliest Ripe.....	9 700	10 900	11 1,364	12 1,080	5 1,440	9 1,897
32	Extra Early Szekely.....	9 260	8 1,600	11 704	13 1,004	** ..	10 1,472
33	Yellow Six-weeks.....	9 40	10 650	11 176	19 1,000	5 560	11 238
34	Mitchell's Early.....	8 1,600	9 370	14 512	12 1,244	5 450	10 35

*Seed not received at Brandon.

**Did not germinate well at Agassiz.

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1901, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.
1. Superior Fodder.....	24 840	4. Rural Thoro'bred White Flint.. 23 200
2. Early Mastodon.....	24 400	5. Extra Early Huron.. .. . 22 1,760
3. Early Butler.....	23 1,300	6. Giant Prolific Ensilage.. .. . 22 1,540

An average crop of 23 tons 1,007 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Early Mastodon...	20	150	4. Pride of the North...	17	650
2. Cloud's Early Yellow...	19	1,600	5. Champion White Pearl...	17	320
3. Mammoth Cuban...	17	650	6. Selected Leaming...	17	100

An average crop of 18 tons 245 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Rural Thoro'bred White Flint...	23	860	4. North Dakota White...	20	1,448
2. Salzer's All Gold...	23	464	5. Pearce's Prolific...	20	1,184
3. Early Yellow Long-eared...	21	1,956	6. Sanford...	20	920

An average crop of 21 tons 1,472 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Early Mastodon...	26	1,724	4. Cloud's Early Yellow...	24	388
2. Pride of the North...	26	800	5. Mammoth Cuban...	24	383
3. Giant Prolific Ensilage...	25	1,430	6. Salzer's All Gold...	24	180

An average crop of 25 tons 493 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Red Cob Ensilage...	16	1,770	4. Cloud's Early Yellow...	12	1,529
2. Early Yellow Long-eared...	13	1,280	5. Giant Prolific Ensilage...	12	1,410
3. Sanford...	13	1,060	6. Canada White Flint...	11	1,860

An average crop of 13 tons 1,150 lbs. per acre.

The six varieties of Indian corn which have given the heaviest crops in 1901, taking the average of the results obtained on all the experimental farms, are the following:—

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Early Mastodon...	21	1,617	4. Salzer's All Gold...	19	1,257
2. Rural Thoro'bred White Flint...	20	1,501	5. Pride of the North...	19	1,215
3. Selected Leaming...	19	1,318	6. Cloud's Early Yellow...	19	1,070

An average crop of 20 tons 330 lbs. per acre.

The average weight cut green of all the varieties of Indian corn tested at each of the experimental farms in 1901 was as follows :—At Ottawa, 17 tons 1,811 lbs. per acre ; Nappan, 14 tons 199 lbs.; Brandon, 18 tons 488 lbs.; Indian Head, 20 tons 1,211 lbs.; and at Agassiz, 13 tons 1,953 lbs. The average return given by the whole of the varieties at all the farms was 16 tons 1,932 lbs. per acre.

TRIAL PLOTS OF TURNIPS.

Twenty-nine varieties of turnips were tested during 1901, sown on drills or on the flat 2½ feet apart. Two sowings were made at each farm, the second sowing about 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 as follows :—At Ottawa, October 14 ; Nappan, October, 30 ; Brandon, October 10 ; Indian Head, October 11, and at Agassiz, November 11. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

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UNIFORM TEST PLOTS OF TURNIPS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIA, B.C.		AVERAGE OF ALL FARMS.	
		Sown May 8.	Sown May 22.	Sown May 27.	Sown June 10.	Sown May 16.	Sown May 30.	Sown May 21.	Sown May 22.	Sown May 23.	Sown June 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.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.
1	Carter's Elephant.....	41 1,820	29 80	42 150	23 200	24 312	9 1,800	22 352	14 1,435	42 1,305	42 480	34 1,188	23 1,889
2	Hartley's Bronze.....	41 1,450	29 80	44 1,100	28 925	30 1,312	15 1,680	30 1,116	21 1,660	40 529	35 950	37 1,148	26 239
3	Drummond Purple Top.....	40 520	23 760	29 1,400	26 1,625	19 280	6 1,200	21 360	19 1,680	43 1,129	38 230	30 1,836	23 259
4	Hall-wood's Bronze Top.....	39 1,530	23 430	33 1,650	26 890	22 616	13 1,720	31 436	13 1,896	35 1,128	38 1,035	32 1,072	24 1,180
5	Hall's Westbury.....	37 1,240	27 1,110	31 1,625	25 1,180	31 1,624	16 1,752	32 648	24 840	45 429	42 1,470	35 1,471	27 872
6	Sutton's Champion.....	37 1,240	25 1,090	28 1,750	21 75	25 272	13 400	34 1,696	27 1,368	43 295	40 850	34 251	26 345
7	Bangholm Selected.....	36 1,590	25 1,480	35 950	24 1,500	23 1,784	13 1,384	22 1,804	27 1,582	38 1,220	42 1,140	31 1,059	26 1,527
8	Imperial Swede.....	36 270	32 1,670	31 700	29 1,400	15 1,944	12 1,059	28 1,948	22 1,540	49 10	48 30	32 574	29 344
9	Imperial Purple Top.....	34 1,300	27 450	28 1,750	18 1,125	14 1,568	13 1,954	25 1,744	29 1,843	40 359	39 530	28 1,742	23 1,987
10	Prize Purple Top.....	34 310	23 1,520	34 475	28 1,750	26 1,054	14 1,040	30 1,192	36 72	46 70	38 1,385	34 422	28 753
11	Imperial Bonum.....	33 1,650	24 1,830	28 1,750	19 1,600	26 8	12 1,872	33 33	28 1,156	44 1,020	38 1,220	34 86	24 1,955
12	Imperial Lerna.....	33 1,320	27 120	33 1,650	25 1,975	19 1,804	11 176	23 992	23 1,124	44 440	34 1,530	31 53	24 1,005
13	New Arctic.....	33 990	21 240	41 500	32 350	26 535	11 1,760	20 1,976	25 1,480	43 1,935	41 1,820	33 387	26 1,130
14	Selected Purple Top.....	33 330	28 1,750	34 475	24 1,500	17 1,640	11 175	37 1,900	25 1,10	39 1,530	35 290	32 1,175	25 371
15	Skirwings.....	32 1,340	27 1,110	30 225	22 1,375	23 464	14 1,040	28 1,288	27 120	43 1,450	40 1,180	31 1,353	26 965
16	West Norfolk Red Top.....	32 1,340	26 800	30 1,875	29 1,400	20 920	11 1,760	28 486	26 1,976	37 1,570	29 1,730	39 40	23 1,583
17	Imperial Swede.....	32 1,010	25 1,150	30 850	25 325	25 1,744	14 776	28 232	26 536	47 380	42 1,140	34 1,709	26 331
18	Selected Champion.....	32 20	26 1,790	36 1,455	20 225	17 1,640	12 1,872	33 33	25 562	41 800	35 620	32 575	25 1,704
19	Shamrock Purple Top.....	31 1,650	20 1,580	30 1,875	20 1,550	24 1,368	10 1,944	34 1,300	29 1,796	38 860	37 1,900	32 812	27 1,896
20	Elephant's Master.....	31 1,380	26 1,400	35 950	22 1,650	21 296	7 1,312	25 1,000	16 1,332	40 1,150	35 600	32 409	22 651
21	Giant King.....	30 1,720	26 1,440	28 700	20 1,250	30 720	17 320	33 1,452	26 932	43 400	42 1,140	33 543	26 1,045
22	Prize Winner.....	30 720	31 700	22 1,375	24 576	24 576	12 552	24 972	30 316	46 1,790	39 540	31 938	24 1,145
23	East Lothian.....	30 60	29 1,070	33 1,940	30 1,875	34 312	16 1,294	29 1,144	32 944	38 1,055	38 230	33 1,804	26 1,077
24	Perfection Swede.....	27 120	22 1,870	33 1,650	24 1,500	25 494	9 1,596	28 760	24 1,632	40 1,800	45 1,080	31 1,633	25 1,123
25	Kangaroo.....	25 490	22 880	33 1,650	24 576	34 576	13 400	41 104	28 364	45 172	42 1,140	33 705	26 292
26	Monarch.....	24 180	22 560	37 1,075	34 1,500	27 1,704	10 860	25 688	34 576	41 1,820	39 540	31 693	27 305
27	Manmoth Clyde.....	23 1,850	20 560	37 850	28 800	22 1,468	6 1,160	23 1,256	19 280	43 955	38 1,220	30 1,004	24 1,210
28	Webb's New Renown.....	16 670	17 1,970	38 1,625	26 1,625	26 1,625	35 1,808	30 1,508	30 1,508	34 1,660	38 60	30 109	28 892

*This variety at Brandon was destroyed by rot.

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The crops of the two sowings of turnips at the experimental farms in 1901 have averaged per acre as follows :—

	Tons.	Lbs.
Central Experimental Farm, first sowing....	32	1,420
“ “ second sowing.....	25	1,582
Experimental Farm, Nappan, first sowing.....	34	297
“ “ second sowing.....	26	183
“ Brandon, first sowing... ..	23	1,049
“ “ second sowing	12	1,617
“ Indian Head, first sowing... ..	29	899
“ “ second sowing	24	951
“ Agassiz, first sowing... ..	42	886
“ “ second sowing	39	442

Average crop from all the plots at all the farms, first sowing, 32 tons 910 lbs.; second sowing, 25 tons 1,356 lbs., showing an advantage in favour of the first sowing of 6 tons 1,554 lbs. per acre. It will be seen that the early sown plots have given the larger crops at all the experimental farms.

The six varieties of turnips which have given the heaviest crop at the several experimental farms during the season of 1901 are the following. (Where not otherwise stated the quantities given are all from the early sown plots) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Carter's Elephant... ..	41 1,820	4. Halewood's Bronze Top....	39 1,530
2. Hartley's Bronze... ..	41 1,490	5. Hall's Westbury... ..	37 1,240
3. Drummond Purple Top... ..	40 520	6. Sutton's Champion... ..	37 1,240

An average crop of 39 tons 1,640 lbs. per acre.

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

Per acre.		Per acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Hartley's Bronze... ..	44 1,100	4. Imperial Swede... ..	40 850
2. Carter's Elephant... ..	42 150	5. Perfection Swede... ..	37 1,900
3. New Arctic... ..	41 500	6. Mammoth Clyde... ..	37 1,076

An average crop of 40 tons 1,262 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons.	Lbs.	Tons.	Lbs.
1. Hall's Westbury... ..	31 1,624	4. Mammoth Clyde... ..	27 1,704
2. Hartley's Bronze... ..	30 1,512	5. Prize Purple Top... ..	26 1,064
3. Prize Winner... ..	30 720	6. New Arctic... ..	26 536

An average crop of 28 tons 1,860 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Monarch....	41	104	4. Prize Purple Top (second sowing)	36	72
2. Perfection Swede....	39	144	5. Webb's New Renown....	35	1,808
3. Selected Purple Top..	37	1,500	6. Sutton's Champion....	34	1,656

An average crop of 37 tons 954 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Emperor Swede....	49	10	4. East Lothian....	46	1,720
2. Magnum Bonum....	48	1,020	5. Prize Purple Top..	46	70
3. Imperial Swede....	47	380	6. Kangaroo (second sowing)....	45	1,080

An average crop of 47 tons 380 lbs. per acre.

The six varieties of turnips which have produced the heaviest crops in 1901, taking the average of the results obtained on all the experimental farms, are the following :—

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Hartley's Bronze....	37	1,148	4. Carter's Elephant....	34	1,188
2. Hall's Westbury....	35	1,471	5. Prize Purple Top..	34	423
3. Imperial Swede....	34	1,709	6. Sutton's Champion....	34	251

An average crop of 35 tons 365 lbs. per acre.

TRIAL PLOTS OF MANGELS.

Twenty-five varieties of mangels have been under test during 1901, all sown on drills or on the flat in rows 2½ feet apart. Two sowings were made at each farm, the second sowing about 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 as follows :—At Ottawa, October 14; Nappan, October 17; Brandon, September 24; Indian Head, October 1, and at Agassiz, November 6. 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.		NAPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N. W. T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMS.	
		Sown May 8.	Sown May 22.	Sown May 27.	Sown June 10.	Sown May 16.	Sown May 30.	Sown May 22.	Sown May 29.	Sown April 26.	Sown May 10.	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	Champion Yellow Globe...	45 1,080	32 1,340	31 1,425	15 360	23 1,320	22 1,804	20 95	19 280	28 880	23 880		
2	Mam. Yellow Intermediate...	44 1,100	33 1,750	37 250	13 400	21 1,328	25 880	24 840	21 570	30 1,486	24 1,170		
3	Yellow Intermediate...	44 1,100	32 350	31 700	13 1,720	23 728	25 1,612	21 1,065	19 610	30 1,789	24 998		
4	Prize Winner Yellow Intermediate...	43 790	30 1,380	27 1,440	31 1,225	34 640	32 1,936	26 1,200	23 530	31 788	27 859		
5	Prize Winner Yellow Globe	42 1,800	34 1,630	27 1,275	15 1,680	32 1,208	29 80	20 460	14 1,865	26 1,685	27 1,612		
6	Norbiton Giant...	42 1,470	27 450	32 350	32 1,175	35 480	24 972	21 504	19 1,600	30 1,776	23 1,579		
7	Half Long Sugar Rosy...	42 480	27 450	35 1,775	32 680	24 1,368	24 576	16 1,085	17 1,475	27 1,03	22 385		
8	Giant Yellow Half Long...	41 830	34 1,300	29 400	30 1,875	21 240	18 960	26 308	24 576	16 1,640	30 661		
9	Gate Post...	41 335	31 370	35 620	32 1,175	29 1,136	24 972	17 1,910	16 1,165	17 1,640	30 661		
10	Giant Yellow Globe...	39 1,695	30 1,380	35 1,25	31 700	46 400	38 560	24 1,368	27 384	17 1,640	15 360		
11	Half Long Sugar White...	37 1,570	27 780	28 1,750	28 925	37 1,768	29 80	21 1,824	19 1,336	16 1,660	16 1,990		
12	Mammoth Long Red...	37 910	24 675	28 1,795	31 205	28 232	17 1,904	19 1,16	24 708	20 920	19 940		
13	Ward's Large Oval Shaped...	36 1,590	24 675	28 1,750	36 1,755	18 432	25 1,480	19 940	22 1,012	13 730	17 980		
14	Golden Fleshed Tankard...	35 1,260	30 1,380	29 400	30 1,575	26 800	21 240	23 1,124	17 1,640	16 835	15 690		
15	Leviathan Long Red...	35 270	32 20	29 1,895	29 575	31 1,360	24 576	30 1,380	29 740	17 320	16 1,000		
16	Prize Mamm. Long Red...	38 1,280	31 1,360	31 1,360	33 825	24 1,104	20 920	27 912	22 1,572	22 1,000	20 95		
17	Gate Post Yellow...	34 1,660	30 60	29 1,805	33 825	24 1,896	33 1,848	20 1,448	18 960	15 1,020	13 400		
18	Selected Mann. Long Red...	34 640	28 1,430	31 1,525	31 1,195	28 760	19 1,600	23 332	28 1,532	19 1,275	21 500		
19	Mammoth Oval Shaped...	34 310	22 1,540	37 700	25 1,25	37 1,240	26 272	26 1,856	21 1,816	19 1,435	21 240		
20	Ward's Large Oval Shaped...	33 1,320	26 510	33 1,650	25 1,975	22 440	22 440	10 1,648	8 236	16 840	17 330		
21	Rect Fleshed Tankard...	33 900	25 400	23 825	31 1,525	29 1,400	26 1,400	26 1,208	24 444	16 840	17 330		
22	Triumph Yellow Globe...	30 225	30 60	34 1,300	31 1,700	21 504	24 640	28 1,948	18 168	12 1,740	16 1,330		
23	Canadian Giant...	29 1,070	24 1,830	37 1,075	28 100	19 1,600	19 1,864	22 1,672	19 1,864	19 1,330	17 320		
24	Yellow Fleshed Tankard...												
25													

The crops from the two sowings of mangels at the experimental farms in 1901 have averaged per acre as follows:—

	Tons.	Lbs.
Central Experimental Farm first sowing.....	38	648
" " second sowing.....	29	405
Experimental Farm Nappan first sowing.....	31	1,425
" " second sowing.....	30	1,900
" " " first sowing.....	27	1,820
" " " second sowing.....	23	665
" " " Failed entirely.		
" " " first sowing 28 tons 215 lbs.; second sowing 24 tons 1613 lbs. showing an advantage in favour of early sowing of 3 tons 662 lbs. per acre.		

Average crop from all the plots, at all the farms: first sowing 28 tons 215 lbs.; second sowing 24 tons 1613 lbs. showing an advantage in favour of early sowing of 3 tons 662 lbs. per acre.

	Tons.	Lbs.
Experimental Farm Indian Head, first sowing.....	24	772
" " second sowing.....	22	1,940
" " " Agassiz, first sowing.....	18	412
" " " second sowing.....	17	1,153

The early sown mangels have given larger crops at all of the experimental farms.

The six varieties of mangels which have produced the heaviest crops at the several experimental farms during 1901 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. Champton Yellow Globe..	45 1,080	4. Giant Yellow Intermediate... ..	43 790
2. Mammoth Yellow Intermediate... ..	44 1,110	5. Prize Winner Yellow Globe... ..	42 1,800
3. Yellow Intermediate..	44 110	6. Norbiton Giant...	42 1,470

An average crop of 43 tons 1,727 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Gate Post..	39 1,200	4. Yellow Fleshed Tankard... ..	36 1,755
2. Golden Fleshed Tankard... ..	37 1,075	5. Half Long Sugar Rosy... ..	35 1,775
3. Mamm. Yellow Intermediate (2nd sowing)...	37 250	6. Giant Yellow Globe...	35 620

An average crop of 37 tons 112 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Half Long Sugar White..	46 400	4. Giant Yellow Globe...	36 1,920
2. Mammoth Long Red...	37 1,768	5. Norbiton Giant...	35 483
3. Selected Mammoth Long Red... ..	37 1,240	6. Yellow Intermediate...	34 1,168

An average crop of 38 tons 164 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Prize Mammoth Long Red... .. .	30 1,380	4. Canadian Giant...	28 1,948
2. Ward's Long Oval-shaped... .. .	29 740	5. Selected Mammoth Long Red (2nd sowing)...	28 1,816
3. Prize Winner Yellow Globe (2nd sowing)...	29 80	6. Mammoth Oval-shaped...	28 1,552

An average crop of 29 tons 586 lbs per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Giant Yellow Intermediate... .. .	26 120	4. Yellow Intermediate...	21 1,055
2. Mammoth Yellow Intermediate... ..	24 840	5. Mammoth Oval-shaped (2nd sowing)...	21 590
3. Lion Yellow Intermediate...	22 1,000	6. Selected Mammoth Long Red... ..	21 240

An average crop of 22 tons 1,642 lbs. per acre.

The six varieties of mangels which have produced the heaviest crops in 1901, taking the average of the results obtained on all the experimental farms, are :

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Half Long Sugar White..	32	1,446	4. Yellow Intermediate....	30	1,789
2. Giant Yellow Globe.	31	1,037	5. Norbiton Giant....	30	1,776
3. Giant Yellow Intermediate....	31	788	6. Mammoth Yellow Intermediate..	30	1,486

An average crop of 31 tons 720 lbs. per acre.

TRIAL PLOTS OF CARROTS.

Twenty different sorts of carrots were tested during 1901, 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. The dates of sowing will be found in the accompanying table ; the dates on which the carrots were pulled were as follows :—At Ottawa, October 14 ; Nappan, October 30 ; Brandon, October 12 ; Indian Head, October 12, and at Agassiz, November 5. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

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UNIFORM TEST PLOTS OF CARROTS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N. S.		BRANTON, MAN.		INDIAN HEAD, N. W. T.		AGASSIZ, B. C.		AVERAGE OF ALL FARMS.	
		Sown May 8.	Sown May 22.	Sown May 27.	Sown June 10.	Sown May 16.	Sown May 30.	Sown May 21.	Sown May 29.	Sown April 25.	Sown May 9.	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	Half Long White.....	43 790	27 1,440	21 1,725	20 425	15 800	12 1,344	6 1,860	25 490	28 1,585	26 523	29 1,549	
2	New White Intermediate.....	42 1,140	31 1,030	28 1,000	21 900	19 1,600	12 1,603	11 1,760	25 1,542	26 1,400	25 1,542	26 1,294	
3	Mamm. White Intermediate.....	40 1,510	36 1,260	29 1,400	17 1,475	11 880	17 1,900	12 1,420	27 1,110	25 1,974	24 665	20 1,927	
4	Giant White Vosges.....	38 800	30 1,050	31 700	21 900	21 240	12 1,080	8 1,744	8 1,652	28 1,585	28 740	25 1,432	
5	Iverson's Champion.....	37 580	29 1,460	31 1,225	30 1,250	14 1,920	14 600	12 1,212	10 592	30 300	23 831	21 46	
6	Half Long Chantenay.....	37 250	23 1,190	23 1,025	19 1,600	6 320	13 1,720	12 1,816	8 1,688	20 920	20 1,580	19 1,866	
7	Ontario Champion.....	34 1,300	34 310	30 1,050	21 1,725	20 480	13 840	12 1,740	11 1,080	26 1,130	25 534	21 915	
8	Improved Short White.....	33 650	32 20	27 450	19 775	15 1,680	14 1,040	11 1,292	12 1,080	25 637	23 1,448	20 1,510	
9	Green Top White Orthe.....	30 1,050	32 1,870	25 1,295	21 900	6 750	16 1,880	11 1,668	8 806	27 1,440	25 1,585	20 1,943	
10	Yellow Stump root.....	28 1,750	25 860	17 1,475	19 775	14 1,920	12 1,520	10 1,590	23 1,520	25 1,314	20 1,267	18 1,495	
11	White Vosges Large Short.....	24 1,500	22 1,870	17 1,475	14 1,700	14 1,880	12 532	10 1,252	21 1,230	24 1,500	18 553	15 1,100	
12	Yellow Intermediate.....	24 1,500	17 350	23 1,300	20 1,250	17 1,640	11 880	9 1,332	8 1,424	23 1,046	21 240	20 1,524	
13	Carter's Orange Giant.....	24 840	21 240	19 775	18 525	7 140	14 1,320	9 1,068	6 1,728	23 1,130	26 635	17 779	
14	Eary Gem.....	23 530	21 240	24 1,005	16 1,825	5 1,880	16 1,000	9 1,312	7 652	23 800	21 1,548	17 577	
15	Guerrande or Ox-Heart.....	22 550	21 570	26 800	17 659	4 1,240	13 840	9 1,312	6 1,200	17 1,640	18 1,143	16 960	
16	Scarlet Intermediate.....	21 1,560	20 580	19 775	16 1,825	16 1,000	8 720	9 1,400	9 216	23 1,468	21 240	18 441	
17	White Belgian.....	19 610	23 530	29 1,400	19 1,600	13 1,720	12 816	11 1,668	19 1,765	24 1,181	20 438	18 1,340	
18	Long Orange or Surrey.....	17 1,970	14 1,370	17 1,745	16 175	9 40	8 720	5 1,616	4 1,504	14 1,040	13 1,720	13 82	
19	Long Scarlet Altringham.....	16 1,380	14 50	20 425	18 525	8 784	5 1,660	7 80	5 448	20 590	19 1,330	14 1,346	
20	Scarlet Nantes.....	14 710	13 730	18 300	11 1,925	10 1,560	7 960	6 388	13 1,573	13 70	12 1,706	10 1,080	

* The seed of this variety was not received early enough for the first sowing.

The crops from the two sowings of carrots at the experimental farms in 1901 have averaged as follows:—

Experimental Farm, Indian Head, first sowing.....	10 tons.	1,124 lbs.
" " second sowing.....	8	1,473 "
Experimental Farm, Nappan, first sowing.....	23	1,932 "
" " second sowing.....	23	1,164 "
Average crop from all the plots at all the farms, first sowing, 20 tons 269 lbs., second sowing, 17 tons 1,247 lbs., showing an advantage in favour of the early sown plots of 2 tons 1,022 lbs. per acre.		

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The six varieties of carrots which have produced the heaviest crops during the season of 1901 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. Half Long White...	43 790	4. Giant White Vosges....	38 890
2. New White Intermediate...	42 1,140	5. Iverson's Champion..	37 680
3. Mammoth White Intermediate...	40 1,510	6. Half Long Chantenay...	37 250

An average crop of 39 tons 1,860 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Giant White Vosges...	31 700	4. White Belgian..	29 1,400
2. Ontario Champion..	30 1,050	5. New White Intermediate..	28 100
3. Mammoth White Intermediate...	29 1,400	6. Improved Short White..	27 450

An average crop of 29 tons 850 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Giant White Vosges...	21 240	4. White Belgian..	19 1,600
2. Half Long White...	20 480	5. New White Intermediate..	19 1,600
3. Ontario Champion..	20 480	6. Yellow Intermediate....	17 1,640

An average crop of 19 tons 1,673 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Ontario Champion...	12 1,740	4. Improved Short White (2nd sowing)...	12 1,080
2. New White Intermediate...	12 1,608	5. Half Long Chantenay...	12 816
3. Iverson's Champion...	12 1,212	6. White Belgian..	12 816

An average crop of 12 tons 1,212 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Improved Short White..	30 1,220	4. Green Top White Orthe (2nd sowing)...	28 1,585
2. Iverson's Champion...	30 720	5. Half Long White (2nd sowing)..	28 1,585
3. Giant White Vosges...	28 1,585	6. Mammoth White Intermediate...	27 1,110

An average crop of 29 tons 301 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops in 1901, taking the average of the results obtained at the several experimental farms, are the following :—

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Half Long White...	26	523	4. Ontario Champion....	25	534
2. New White Intermediate...	25	1,542	5. Mammoth White Intermediate...	24	665
3. Giant White Vosges...	25	1,432	6. Improved Short White..	23	1,448

An average crop of 25 tons 357 lbs. per acre.

TRIAL PLOTS OF SUGAR BEETS.

Seven varieties of sugar beets have been tested during 1901, sown on drills or on the flat two feet apart. Two sowings were made at each farm, the second sowing about 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 as follows :—At Ottawa, October 14; Nappan, October 17; Brandon, September 24; Indian Head, October 1, and at Agassiz, November 6. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

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UNIFORM TEST PLOTS OF SUGAR BEETS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N. S.		BRANDON, MAN.		INDIAN HEAD, N. W. I.		AGASSIZ, B. C.		AVERAGE OF ALL FARMS.	
		Sown May 8.	Sown May 22.	Sown May 27.	Sown June 10.	Sown May 16.	Sown May 30.	Sown May 22.	Sown May 29.	Sown April 26.	Sown May 10.	First Sowing.	Second Sowing.
		Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.	Per acre.
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Red Top Sugar	34 640	25 1,150	27 780	30 225	30 984	29 1,139	27 912	25 1,348	13 400	15 30	26 1,143	25 378
2	Royal Giant	33 660	29 1,070	25 1,645	26 1,625	18 930	18 696	29 1,664	26 8	16 1,165	17 816	24 1,619	23 1,243
3	Danish Improved	33 330	25 490	25 1,975	26 1,625	27 1,704	28 496	18 1,784	23 860	11 440	12 1,420	23 847	23 578
4	Danish Red Top	31 1,360	25 1,480	25 325	28 1,750	29 344	28 232	24 1,896	25 1,744	16 1,330	17 980	25 1,051	25 437
5	Improved Imperial	28 430	26 1,130	33 ---	28 1,750	18 960	26 1,836	27 1,440	20 1,844	16 1,990	13 1,720	24 1,764	23 860
6	Wanzleben	25 160	21 1,890	25 635	21 900	25 160	22 1,672	16 1,396	19 1,600	9 480	9 150	20 570	19 42
7	Vilmorin's Improved	22 1,210	18 300	22 1,045	20 1,250	20 1,184	18 1,752	16 624	16 472	13 1,060	14 1,700	19 225	17 1,495

The crops from the two sowings of sugar beets at the experimental farms, in 1901, have averaged as follows:—

	Tons. Lbs.
Central Experimental Farm, first sowing	29 1,541
" " second sowing	24 1,359
Experimental Farm, Nappan, first sowing	26 918
" " second sowing	26 446
" " Brandon, first sowing	24 614
" " second sowing	24 1,406
Indian Head, first sowing	23 215
" " second sowing	22 1,125
Agassiz, first sowing	13 1,838
" " second sowing	14 688

Average crop from all the plots at all the farms: first sowing, 23 tons 1,031 lbs.; second sowing, 22 tons 1,065 lbs., showing an advantage in favour of early sowing of 1 ton 26 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops during the season of 1901 are the following. (Unless otherwise stated, the yields given are all from the earlier sown plots) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Red Top Sugar..	34 640	3. Danish Improved..	33 330
2. Royal Giant...	33 600	4. Danish Red Top...	31 1,360

An average crop of 33 tons 497 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Improved Imperial..	33 ..	3. Danish Red Top (2nd sowing)...	28 1,750
2. Red Top Sugar (2nd sowing)... . .	30 225	4. Danish Improved (2nd sowing)..	26 1,625

An average crop of 29 tons 1,400 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Red Top Sugar..	30 984	3. Danish Improved (2nd sowing)..	28 496
2. Danish Red Top....	29 344	4. Improved Imperial (2nd sowing)	26 1,856

An average crop of 28 tons 1,420 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Royal Giant...	29 1,664	3. Red Top Sugar....	27 912
2. Improved Imperial....	27 1,440	4. Danish Red Top (2nd sowing)....	25 1,744

An average crop of 27 tons 1,440 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Danish Red Top (2nd sowing)....	17 980	3. Improved Imperial...	16 1,990
2. Royal Giant (2nd sowing)... . . .	17 816	4. Red Top Sugar....	15 30

An average crop of 16 tons 1,454 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops in 1901, taking the average of the results obtained at the several experimental farms, are the following :—

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Red Top Sugar...	26 1,143	3. Improved Imperial...	24 1,764
2. Danish Red Top....	25 1,051	4. Royal Giant..	24 1,419

An average crop of 25 tons 94 lbs. per acre.

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26	Carmar
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28	Great I
29	Early N
30	Rawdor
31	Earliest
32	Vanier
33	Enormo
34	Quaker
35	Brown's
36	Early H
37	Irish Co
38	Early Su
39	Delawar
40	Wonder
41	Everett
42	General
43	Reeves' I
44	Country

* Not plant

TRIAL PLOTS OF POTATOES.

Eighty-seven varieties of potatoes have been under test in the uniform trial plots during 1901. The potatoes to be planted were cut into pieces, with two or three eyes in each, and these were planted in rows 2½ feet apart, the sets being placed a foot apart in the rows. The following were the dates of planting and digging:—At Ottawa, planted May 28, dug September 5; Nappan, planted May 17, dug September 23; Brandon, planted May 18, dug October 5; Indian Head, planted May 20, dug October 3, and at Agassiz, planted May 8 and 9 and dug October 22:—

UNIFORM TEST PLOTS OF POTATOES.

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1901.													
		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	Dreer's Standard.....	506	..	345	24	509	40	576	484	16	
2	Late Puritan.....	503	48	385	..	476	40	556	48	556	36	36	495	34	
3	Early White Prize...	501	36	259	36	458	20	390	24	129	54	407	58		
4	I. X. L.....	492	48	266	12	623	20	526	56	553	18	492	31		
5	Uncle Sam.....	484	..	270	36	487	40	567	28	686	24	499	14		
6	Eurnaby Seedling....	479	36	272	48	561	..	584	32	607	12	501	2		
7	Canadian Beauty.....	479	36	404	48	473	..	520	40	470	48	469	46		
8	Sabean's Elephant....	473	..	402	36	619	40	480	..	569	48	509	1		
9	Green Mountain.....	470	48	266	12	414	20	657	4	553	18	472	20		
10	Seattle.....	462	..	345	24	337	20	520	32	541	12	441	18		
11	Vick's Extra Early...	462	..	336	36	388	40	292	16	633	36	422	38		
12	Money Maker.....	459	48	292	36	520	40	497	4	673	12	488	40		
13	American Wonder....	455	24	209	..	586	40	599	28	523	36	474	50		
14	Holborn Abundance...	453	12	360	48	414	20	531	12	651	12	482	9		
15	Burpee's Extra Early.	446	36	211	12	377	40	292	16	398	12	345	11		
16	Clay Rose.....	444	24	352	..	469	20	548	16	613	48	485	34		
17	Maggie Murphy.....	440	..	286	..	484	..	644	16	440	..	458	51		
18	Early Puritan.....	435	36	248	36	480	20	177	4	592	54	386	54		
19	Troy Seedling.....	435	36	374	..	381	20	482	8	554	24	445	30		
20	Rural Blush.....	433	24	345	48	473	..	615	..	444	24	462	19		
21	Rochester Rose.....	422	24	264	..	352	..	390	24	622	36	410	17		
22	McIntyre.....	420	12	316	48	377	40	392	32	660	..	433	26		
23	Cambridge Russet....	420	12	352	..	473	..	546	8	525	48	463	26		
24	Polaris.....	418	..	187	..	344	40	433	4	677	36	412	4		
25	Early St. George.....	418	..	308	36	421	40	428	48	448	58	405	12		
26	Carman No. 1.....	415	48	250	48	539	..	663	28	541	12	482	3		
27	State of Maine.....	413	36	222	12	597	40	578	8	519	12	466	10		
28	Great Divide.....	411	24	312	24	462	..	548	16	371	48	421	10		
29	Early Norther.....	409	12	272	48	498	40	375	28	475	12	406	16		
30	Rawdon Rose.....	407	..	336	36	418	..	309	20	484	..	390	59		
31	Earliest of All.....	407	..	187	..	308	..	371	12	396	..	333	50		
32	Vanier.....	402	36	327	48	509	40	369	4	675	24	456	54		
33	Enormous.....	402	36	352	..	542	40	373	20	506	..	435	19		
34	Quaker City.....	400	24	303	36	513	20	567	28	574	12	471	48		
35	Brown's Rot Proof....	398	12	356	24	575	40	396	48	533	30	452	7		
36	Early Harvest.....	398	12	257	24	539	..	437	20	528	..	431	59		
37	Irish Cobbler.....	396	..	290	24	476	40	486	24	314	36	392	49		
38	Early Sunrise.....	391	36	213	24	326	30	505	36	391	36	365	44		
39	Delaware.....	389	24	279	24	425	20	603	44	543	24	448	15		
40	Wonder of the World.	389	24	279	24	425	20	603	44	543	24	448	15		
41	Everett.....	385	..	294	48	462	..	381	36	475	12	399	43		
42	General Gordon.....	382	48	275	..	476	40	612	16	537	54	456	56		
43	Reeves' Rose.....	376	12	204	36	575	40	405	20	608	18	434	1		
44	Country Gentleman....	374	..	292	36	491	20	610	8	509	18	455	29		

* Not planted at Agassiz.

† Not planted at Nappan.

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UNIFORM TEST PLOTS OF POTATOES—Concluded.

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1901.											
		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.	Per acre. Bush. Lbs.	Per acre. Bush. Lbs.	Per acre. Bush. Lbs.	Per acre. Bush. Lbs.		
45	Lee's Favourite.....	369	36	220	..	414	20	396	48	614	54	403	8
46	New Queen.....	369	36	264	..	469	20	458	40	521	24	416	36
47	American Giant.....	367	24	272	48	502	20	599	52	662	12	480	55
48	Early Michigan.....	367	24	171	36	410	40	480	..	500	30	386	2
49	Sir Walter Raleigh.....	365	12	310	12	396	..	398	56	312	24	356	33
50	Flemish Beauty.....	365	12	288	12	388	40	499	12	606	6	429	28
51	Seedling No. 7.....	365	12	356	24	506	..	505	36	618	12	470	17
52	Seedling No. 230.....	360	48	308	12	465	40	569	36	624	48	465	49
53	Rural No. 2.....	354	12	360	48	352	..	315	44	352	..	346	57
54	Northern Spy.....	354	12	286	..	506	..	616	32	616	..	475	45
55	Sharpe's Seedling.....	345	24	224	24	311	40	486	24	533	30	380	16
56	Dakota Red.....	343	12	290	24	425	20	595	12	682	..	467	14
57	Swiss Snow Flake.....	338	48	352	..	480	20	548	16	673	12	478	31
58	Early Rose.....	336	36	187	..	440	..	243	12	437	38	328	53
59	Early Ohio.....	336	36	176	..	333	40	362	40	338	48	309	33
60	Pearce's Extra Early.....	336	36	297	..	495	..	379	44	347	36	371	11
61	Early Market.....	336	36	193	36	399	40	298	40	316	48	309	4
62	Irish Daisy.....	336	36	418	..	414	20	582	24	580	48	406	26
63	Early Andes.....	334	24	255	12	209	..	260	16	475	12	306	49
64	Bovee.....	334	24	191	24	462	..	416	..	629	12	406	36
65	Thorburn.....	327	48	277	12	403	20	392	32	435	36	367	18
66	Prize Taker.....	325	36	290	24	374	..	477	52	613	48	416	20
67	Rose No. 9.....	321	12	418	..	531	40	571	44	545	36	477	38
68	White Beauty.....	319	..	316	48	553	40	443	44	413	36	409	22
69	Chicago Market.....	316	48	211	12	421	40	573	52	479	46	400	40
70	Daisy.....	314	36	200	12	597	40	334	56	558	48	401	14
71	Pearce's Prize Winner.....	314	36	323	24	432	40	492	48	400	34	392	48
72	Carman No. 3.....	312	24	341	..	418	..	629	20	585	12	457	11
73	Empire State.....	308	..	233	12	484	..	524	48	594	..	428	48
74	Ohio Junior.....	308	..	275	..	311	40	300	48	365	12	312	8
75	Penn Manor.....	305	48	341	..	462	..	531	12	352	..	398	24
76	Early Six Weeks.....	303	36	220	..	392	20	392	32	343	12	330	20
77	Beauty of Hebron.....	294	48	330	..	425	20	430	56	514	48	399	10
78	Maule's Thoro'bred.....	290	24	268	24	513	20	311	28	479	46	372	40
79	Hale's Champion.....	290	24	336	36	737	..	477	52	613	48	491	8
80	Reading Giant.....	286	..	209	..	403	20	475	44	..	..	343	31
81	Lizzie's Pride.....	275	..	259	36	517	..	541	52	510	24	420	46
82	New Variety No. 1.....	270	36	253	..	414	20	590	56	629	12	431	37
83	Prolific Rose.....	264	..	319	..	590	20	366	56	385	32	385	10
84	Bill Nye.....	253	..	341	..	520	40	526	56	431	..	414	31
85	Clarke's No. 1.....	242	..	187	..	498	40	..	..	364	6	322	56
86	Brownell's Winner.....	231	..	332	12	546	20	433	4	547	48	418	5
87	Houlton Rose.....	228	48	332	12	465	40	428	48	542	18	399	83
88	Up to Date.....	226	36	211	12	212	40	..	..	426	48	269	19
89	Pride of the Market.....	173	48	341	..	421	40	458	40	430	39	365	9

* Not planted at Agassiz. † Not planted at Indian Head.

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The twelve varieties of potatoes which have produced the largest crops at the several experimental farms during the season of 1901 are the following :-

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.
	Bush. Lbs.		Bush. Lbs.
1. Dreer's Standard...	506 ..	7. Canadian Beauty...	479 36
2. Late Puritan...	503 48	8. Sabean's Elephant...	473 ..
3. Early White Prize...	501 36	9. Green Mountain...	470 48
4. I. X. L.	492 48	10. Seattle....	462 ..
5. Uncle Sam....	484 ..	11. Vick's Extra Early...	462 ..
6. Burnaby Seedling...	479 36	12. Money Maker...	459 48

An average crop of 481 bushels 15 lbs. per acre.

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

	Per acre.		Per acre.
	Bush. Lbs.		Bush. Lbs.
1. Rose, No. 9...	418 ..	7. Holborn Abundance...	360 48
2. Irish Daisy...	418 ..	8. Rural, No. 2....	360 48
3. Canadian Beauty...	404 48	9. Seedling, No. 7....	356 24
4. Sabean's Elephant...	402 36	10. Brown's Rot Proof...	356 24
5. Late Puritan...	385 ..	11. Clay Rose...	352 ..
6. Troy Seedling...	374 ..	12. Cambridge Russet...	352 ..

An average crop of 378 bushels 24 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.		Per acre.
	Bush. Lbs.		Bush. Lbs.
1. Hale's Champion...	737 ..	7. American Wonder...	586 40
2. I. X. L.	623 20	8. Brown's Rot Proof...	575 40
3. Sabean's Elephant...	619 40	9. Reeve's Rose...	575 40
4. Daisy...	597 40	10. Burnaby Seedling...	561 ..
5. State of Maine...	597 40	11. White Beauty...	553 40
6. Prolific Rose....	590 20	12. Brownell's Winner...	546 20

An average crop of 597 bushels 3 lbs. per acre.

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

	Per acre.		Per acre.
	Bush. Lbs.		Bush. Lbs.
1. Carman, No. 1...	683 28	7. General Gordon...	612 16
2. Green mountain...	657 4	8. Country Gentleman...	610 8
3. Maggie Murphy...	644 16	9. Delaware...	603 44
4. Carman, No. 3...	629 20	10. American Giant...	599 52
5. Northern Spy...	616 32	11. American Wonder...	599 28
6. Rural Blush...	615 ..	12. Dakota Red...	595 12

An average crop of 620 bushels 31 lbs. per acre.

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

	Per acre.		Per acre.
	Bush. Lbs.		Bush. Lbs.
1. Uncle Sam....	686 24	7. American Giant...	662 12
2. Dakota Red...	682 ..	8. McIntyre...	660 ..
3. Polariss...	677 36	9. Holborn Abundance...	651 12
4. Vanier...	675 24	10. Vick's Extra Early...	633 36
5. Money Maker...	673 12	11. Bovee...	629 12
6. Swiss Snow Flake...	673 12	12. New Variety, No. 1...	629 12

An average crop of 661 bushels 5 lbs. per acre.

The twelve varieties of potatoes which have produced the largest crops in 1901, taking the average of the results obtained at all the experimental farms, are the following :—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Sabeen's Elephant....	509	1	7. Money Maker....	488	40
2. Burnaby Seedling..	501	2	8. Clay Rose....	485	34
3. Uncle Sam....	499	14	9. Dreer's Standard..	484	16
4. Late Puritan....	495	34	10. Holborn Abundance..	482	9
5. I. X. L....	492	31	11. Carman, No. 1....	482	3
6. Hale's Champion..	491	8	12. American Giant....	480	55

An average crop of 496 bushels 1 lb. per acre.

The average crop of all the varieties of potatoes tested at each of the experimental farms was as follows:—At Ottawa, 380 bushels 21 lbs. per acre; Nappan, 294 bushels; Brandon, 468 bushels 52 lbs.; Indian Head, 480 bushels 26 lbs.; and at Agassiz, 528 bushels 30 lbs. The average return given, including all the varieties on the whole of the farms, was 430 bushels 26 lbs. per acre.

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AVERAGE OF CROPS FOR THE LAST FOUR TO SEVEN YEARS.

The results of experiments with different varieties of the more important agricultural crops 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 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 which can be given. The experiences here recorded with most of the crops under test now cover a period of from five to seven years.

SIX AND SEVEN 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 six and seven years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Banner.....	65	30	7. Columbus.....	61	11
2. American Triumph.....	64	7	8. Golden Beauty.....	60	22
3. Joannette.....	63	11	9. Oderbruch.....	60	13
4. Holstein Prolific.....	63	7	10. Improved Ligowo.....	60	11
5. American Beauty.....	61	24	11. Abundance.....	59	29
6. Golden Giant.....	61	16	12. Hazlett's Seizure.....	59	20

An average crop of 61 bushels 28 lbs. per acre.

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

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Wallis.....	73	7	7. Banner.....	69	3
2. White Russian.....	71	6	8. White Schonen.....	68	13
3. Oderbruch.....	70	23	9. Golden Beauty.....	68	11
4. Lincoln.....	70	..	10. Abyssinia.....	68	8
5. Cream Egyptian.....	69	14	11. American Beauty.....	67	25
6. Early Blossom.....	69	11	12. Pense, 6 yrs.....	67	25

An average crop of 69 bushels 15 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for six years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. American Beauty.....	95	32	7. Holstein Prolific.....	83	15
2. Banner.....	92	24	8. Golden Giant.....	83	4
3. Bavarian.....	92	4	9. American Triumph.....	82	9
4. Early Golden Prolific.....	85	2	10. Abundance.....	79	1
5. Golden Beauty.....	83	26	11. Columbus.....	78	6
6. White Schonen.....	83	26	12. Lincoln.....	78	1

An average crop of 84 bushels 27 lbs. per acre.

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

Average for six years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Abundance...	95	15	7. Early Golden Prolific...	89	2
2. American Beauty...	95	9	8. American Triumph...	88	31
3. Columbus...	93	22	9. Banner...	88	30
4. Holstein Prolific...	92	14	10. Bavarian...	87	22
5. Golden Beauty...	90	28	11. Early Archangel...	86	3
6. Wide Awake...	89	31	12. Abyssinia...	85	7

An average crop of 90 bushels 9 lbs. per acre.

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

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Golden Glant...	68	18	7. Holstein Prolific...	62	14
2. Banner...	65	15	8. Early Golden Prolific...	61	33
3. Lincoln...	64	28	9. Abyssinia...	61	17
4. Buckbee's Illinois, 6 yrs...	63	31	10. Bavarian...	60	27
5. Early Blossom...	63	19	11. Oderbruch...	60	23
6. Early Gothland...	62	28	12. Prolific Black Tartarian...	60	3

An average crop of 63 bushels 1 lb. per acre.

The twelve varieties of oats which have produced the largest average crop for the past six or seven 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 in Canada, are the following:—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Banner...	76	14	7. Golden Beauty...	71	22
2. American Beauty...	75	33	8. Columbus...	71	17
3. Mennonite...	75	23	9. Golden Giant...	71	3
4. Holstein Prolific...	72	31	10. Early Golden Prolific...	71	..
5. Bavarian...	72	21	11. Abundance...	70	20
6. Buckbee's Illinois...	72	4	12. American Triumph...	70	20

An average crop of 72 bushels 24 lbs. per acre.

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SIX AND SEVEN 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 six or seven years, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for seven years.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Beaver..	45	22	4. French Chevalier....	42	45
2. Canadian Thorpe...	44	24	5. Nepean...	41	9
3. Danish Chevalier..	44	..	6. Sidney...	40	38

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

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

Average for seven years.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Beaver..	44	40	4. Newton....	41	8
2. French Chevalier..	43	4	5. Canadian Thorpe..	40	40
3. Danish Chevalier..	41	41	6. Nepean....	40	..

An average crop of 41 bushels 46 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five and six years.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. French Chevalier..	46	25	4. Bolton....	43	29
2. Sidney...	45	32	5. Newton...	42	31
3. Nepean....	44	41	6. Victor, 5 yrs....	42	16

An average crop of 44 bushels 13 lbs. per acre.

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

Average for six years.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. French Chevalier..	59	41	4. Canadian Thorpe..	54	32
2. Danish Chevalier..	58	13	5. Sidney...	54	8
3. Prize Prolific....	54	33	6. Bolton....	51	19

An average crop of 55 bushels 24 lbs. per acre.

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

Average for seven years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Canadian Thorpe...	38 13	4. Danish Chevalier....	37 21
2. French Chevalier..	38 12	5. Kinver Chevalier....	37 9
3. Beaver.....	38 11	6. Prize Prolific....	36 38

An average crop of 37 bushels 33 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. French Chevalier..	46 6	4. Canadian Thorpe..	43 26
2. Beaver.....	43 39	5. Nepean.....	42 7
3. Danish Chevalier..	43 31	6. Newton.....	42 3

An average crop of 43 bushels 27 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 six or seven years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for seven years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Odessa.....	53 14	4. Pioneer.....	49 19
2. Mensury.....	52 20	5. Stella.....	45 41
3. Royal.....	50 26	6. Oderbruch.....	45 24

An average crop of 49 bushels 24 lbs. per acre.

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

Average for seven years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Mensury.....	52 29	4. Baxter.....	44 28
2. Odessa.....	45 32	5. Trooper.....	44 11
3. Oderbruch.....	45 29	6. Surprise.....	43 31

An average crop of 46 bushels 3 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for six years.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Mensury.....	54 1	4. Nugent.....	50 15
2. Trooper.....	52 25	5. Summit.....	50 2
3. Common.....	51 29	6. Surprise.....	48 31

An average crop of 51 bushels 9 lbs. per acre.

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

Average for six years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa...	61	19	4. Trooper...	58	26
2. Rennie's Improved...	60	28	5. Common...	57	3
3. Mensury...	59	41	6. Baxter...	56	17

An average crop of 58 bushels 46 lbs. per acre.

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

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury...	39	8	4. Odessa...	37	29
2. Baxter, 6 yrs...	38	7	5. Common...	37	9
3. Royal...	37	37	6. Nugent...	35	32

An average crop of 37 bushels 28 lbs. per acre.

The six varieties of six-rowed barley which have produced the largest crops for the past six or seven years, taking the average of the results obtained at all the experimental farms, are the following :—

	Per acre.			Per acre.	
	Bush.	L.		Bush.	Lbs.
1. Mensury...	51	29	4. Common...	46	38
2. Odessa...	48	19	5. Royal...	46	32
3. Trooper...	47	4	6. Oderbruch...	45	35

An average crop of 47 bushels 34 lbs. per acre.

FIVE TO SEVEN 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 to seven years are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Preston...	28	31	7. Rio Grande...	25	3
2. Wellman's Fife...	26	37	8. Pringle's Champlain...	24	48
3. Huron...	26	15	9. Monarch...	24	27
4. Goose...	26	8	10. White Fife...	23	57
5. Colorado...	25	29	11. Stanley...	23	46
6. Hungarian, 6 yrs...	25	56	12. Crown...	23	38

An average crop of 25 bushels 21 lbs. per acre.

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

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. White Connell...	34	43	7. Rio Grande..	32	23
2. Monarch, 6 yrs..	34	26	8. Advance..	32	14
3. Wellman's Fife..	34	6	9. Red Fern....	32	14
4. Preston....	33	11	10. Huron..	31	59
5. Hungarian....	33	2	11. Goose..	31	54
6. White Russian...	32	54	12. Stanley....	31	34

An average crop of 32 bushels 53 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five and six years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Goose....	40	48	7. Pringle's Champlain....	35	33
2. White Fife....	38	17	8. White Connell..	35	23
3. Crown....	37	35	9. Rio Grande..	35	5
4. Red Fife....	37	5	10. White Russian..	34	38
5. Monarch....	36	57	11. Wellman's Fife.....	34	5
6. Preston, 5 yrs..	35	41	12. Advance..	33	53

An average crop of 36 bushels 15 lbs. per acre.

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

Average for six years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Huron..	44	32	7. Percy..	42	22
2. Red Fife....	44	12	8. Stanley....	41	57
3. Wellman's Fife..	43	17	9. White Fife..	41	38
4. Beaudry....	43	2	10. Monarch..	41	17
5. Red Fern..	42	45	11. Alpha..	41	7
6. Preston....	42	43	12. Rio Grande..	40	50

An average crop of 42 bushels 28 lbs. per acre.

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

Average for six and seven years.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.*
1. Countess, 6 yrs....	30	10	7. Monarch..	28	35
2. Preston....	29	45	8. Dufferin, 6 yrs..	28	32
3. Hungarian, 6 yrs..	29	2	9. Dawn, 6 yrs..	28	30
4. Huron....	28	53	10. Alpha..	28	7
5. Vernon, 6 yrs....	28	40	11. Red Fern....	28	6
6. Red Fife....	28	37	12. Progress..	27	48

An average crop of 28 bushels 44 lbs. per acre.

The twelve varieties of spring wheat which have produced the largest crops for the past six or seven years, taking the average of the results obtained on all the experimental farms, are :—

	Per acre.		Per acre.		
	Bush. Lbs.		Bush. Lbs.		
1. Preston....	33	58	7. White Fife....	32	29
2. Wellman's Fife..	33	8	8. Hungarian....	32	10
3. Monarch....	33	8	9. White Connell..	32	6
4. Goose....	32	50	10. White Russian..	32	6
5. Huron....	32	45	11. Rio Grande....	32	6
6. Red Fife....	32	30	12. Pringle's Champlain....	31	56

An average crop of 32 bushels 36 lbs. per acre.

FOUR TO SEVEN 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 four to seven years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.		
	Bush. Lbs.		Bush. Lbs.		
1. Arthur, 6 yrs....	37	35	7. Mummy, 6 yrs....	32	55
2. Canadian Beauty, 5 yrs..	35	34	8. Black-eyed Marrowfat, 6 yrs....	32	45
3. Kent, 5 yrs....	34	33	9. Agnes, 6 yrs....	32	33
4. Paragon, 6 yrs..	34	32	10. Prussian Blue, 7 yrs....	32	22
5. Duke, 6 yrs....	33	45	11. Mackay, 6 yrs..	32	23
6. Macoun, 5 yrs....	33	44	12. Creeper, 6 yrs..	32	15

An average crop of 33 bushels 46 lbs. per acre.

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

	Per acre.		Per acre.		
	Bush. Lbs.		Bush. Lbs.		
1. Crown, 6 yrs....	39	50	7. Agnes, 5 yrs....	30	4
2. Pride, 5 yrs....	36	20	8. Carleton, 5 yrs..	30	3
3. Centennial, 6 yrs....	33	7	9. Paragon, 5 yrs..	29	15
4. New Potter, 6 yrs..	32	17	10. Multiplier, 6 yrs..	28	50
5. Black-eyed Marrowfat, 6 yrs..	32	..	11. Perth, 4 yrs..	28	45
6. Duke, 5 yrs....	30	27	12. Archer, 4 yrs..	28	25

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.		Per acre.		
	Bush. Lbs.		Bush. Lbs.		
1. Pride, 7 yrs....	45	26	7. Trilby, 6 yrs....	42	8
2. Carleton, 6 yrs..	44	50	8. Crown, 6 yrs....	41	53
3. Mummy, 7 yrs....	44	40	9. Kent, 6 yrs..	40	37
4. New Potter, 7 yrs..	42	44	10. Prussian Blue, 5 yrs....	40	6
5. White Wonder, 5 yrs..	42	22	11. Archer, 5 yrs..	40	4
6. King, 5 yrs....	42	28	12. Mackay, 6 yrs..	39	53

An average crop of 42 bushels 17 lbs. per acre.*

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Trilby, 5 yrs.	43	8	7. Archer, 4 yrs.	38	47
2. Paragon, 5 yrs.	42	50	8. Prince Albert, 5 yrs.	37	50
3. Crown, 5 yrs.	41	39	9. King, 4 yrs.	37	40
4. Carleton, 5 yrs.	40	46	10. Duke, 5 yrs.	37	38
5. White Wonder, 4 yrs.	39	27	11. Perth, 4 yrs.	37	30
6. Pride, 5 yrs.	38	52	12. Macoun, 5 yrs.	37	16

An average crop of 39 bushels 26 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. White Wonder, 5 yrs.	37	22	7. Elephant Blue, 5 yrs.	33	42
2. King, 5 yrs.	37	8	8. Vincent, 5 yrs.	33	10
3. Early Britain, 5 yrs.	36	39	9. Chancellor, 5 yrs.	32	40
4. Victoria, 5 yrs.	35	27	10. Harrison's Glory, 5 yrs.	32	35
5. Perth.	34	36	11. Archer, 5 yrs.	32	33
6. Arthur, 6 yrs.	34	8	12. Prussian Blue, 5 yrs.	32	21

An average crop of 34 bushels 23 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Crown, 7 yrs.	36	40	7. Paragon, 6 yrs.	34	26
2. Pride, 7 yrs.	36	..	8. Duke, 6 yrs.	34	23
3. Carleton, 6 yrs.	35	36	9. Perth, 5 yrs.	33	53
4. Early Britain, 5 yrs.	34	53	10. Agnes, 6 yrs.	33	52
5. King, 5 yrs.	34	36	11. Archer, 5 yrs.	33	50
6. New Potter, 7 yrs.	34	30	12. Arthur, 6 yrs.	33	7

An average crop of 34 bushels 41 lbs. per acre.

FIVE TO SEVEN YEARS' EXPERIENCE WITH VARIETIES OF INDIAN CORN.

The six varieties of Indian corn which have averaged the heaviest crops at the several experimental farms, during the past five to seven years, are the following. (Where not otherwise marked, the figures given are the results of seven years' tests) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Red Cob Ensilage.	24	599	4. Cloud's Early Yellow, 5 yrs.	23	1,745
2. Rural Thoro'bred White Flint.	23	1,937	5. Selected Leaming, 6 yrs.	23	136
3. Giant Prolific Ensilage.	23	1,901	6. Champion White Pearl.	21	172

An average crop of 23 tons 748 lbs. per acre.

1. Rural
2. Red C
3. Select
An

1. Rural
2. Angel
3. Cloud's
An

1. Cloud's
2. Early F
3. Giant F

1. Early B
2. Red Cob
3. Cloud's

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1. Cloud's E
2. Red Cob
3. Rural Th

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Rural Thoro'bred White Flint....	17	1,245	4. Sanford... ..	15	1,801
2. Red Cob Ensilage..	16	1,030	5. Pride of the North... ..	15	1,529
3. Selected Leaming, 6 yrs..	16	578	6. Angel of Midnight....	15	1,326

An average crop of 16 tons 585 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Rural Thoro'bred White Flint... ..	21	1,635	4. Longfellow..	19	946
2. Angel of Midnight..	20	986	5. Red Cob Ensilage..	18	1,978
3. Cloud's Early Yellow, 5 yrs.... . .	19	1,020	6. King of the Earliest, 6 yrs... ..	18	1,517

An average crop of 19 tons 1,680 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Cloud's Early Yellow, 5 yrs... ..	15	522	4. Pride of the North... ..	13	1,250
2. Early Butler, 5 yrs....	14	976	5. Selected Leaming, 6 yrs.... . . .	13	883
3. Giant Prolific Ensilage...	13	1,842	6. Mammoth 8-rowed Flint...	13	139

An average crop of 13 tons 1,953 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Early Butler, 5 yrs....	24	750	4. Selected Leaming, 6 yrs...	21	1,942
2. Red Cob Ensilage..	23	1,652	5. King of the Earliest, 6 yrs.... . .	20	1,575
3. Cloud's Early Yellow, 5 yrs... ..	23	442	6. Pride of the North...	20	1,305

An average crop of 22 tons 949 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Cloud's Early Yellow, 5 yrs... ..	19	1,001	4. Selected Leaming, 6 yrs...	18	1,210
2. Red Cob Ensilage..	19	651	5. Early Butler, 5 yrs...	18	953
3. Rural Thoro'bred White Flint....	19	134	6. Giant Prolific Ensilage..	17	1,976

An average crop of 18 tons 1,655 lbs. per acre.

FIVE AND SIX 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 and six years, are the following. (Where not otherwise marked, the figures given are the results of six years' tests) :-

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Carter's Elephant... ..	36 317	4. Shamrock Purple Top, 5 yrs....	33 1,649
2. Selected Purple Top... ..	35 1,747	5. Hall's Westbury, 5 yrs.. . . .	33 33
3. Perfection Swede... ..	33 1,790	6. Hartley's Bronze.. . . .	32 1,670

An average crop of 33 tons 1,856 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Hartley's Bronze... ..	35 1,824	4. Carter's Elephant... ..	34 1,078
2. Halewood's Bronze Top, 5 yrs....	34 1,927	5. Shamrock Purple Top, 5 yrs.. . .	33 1,779
3. Perfection Swede... ..	34 1,569	6. Mammoth Clyde.. . . .	33 81

An average crop of 34 tons 1,043 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Hartley's Bronze... ..	24 1,315	4. Selected Purple Top... ..	23 728
2. Hall's Westbury, 5 yrs.. . . .	23 1,137	5. Prize Winner.. . . .	23 557
3. Perfection Swede... ..	23 838	6. Skirvings... ..	22 1,452

An average crop of 23 tons 245 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Perfection Swede... ..	23 362	4. Hall's Westbury, 5 yrs.. . . .	22 298
2. Halewood's Bronze Top.. . . .	22 849	5. Hartley's Bronze.. . . .	21 430
3. Selected Purple Top.. . . .	22 771	6. Shamrock Purple Top, 5 yrs.. . .	20 1,858

An average crop of 22 tons 95 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Bangholm Selected... ..	44 1,186	4. Hall's Westbury... ..	40 612
2. Halewood's Bronze Top, 5 yrs....	41 1,084	5. Perfection Swede... ..	40 450
3. Selected Purple Top.. . . .	41 497	6. Jumbo... ..	39 856

An average crop of 41 tons 564 lbs. per acre.

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

Per acre.		Per acre.	
Tons. Lbs.		Tons. Lbs.	
1. Purple Top Swede... ..	31 206	4. Hall's Westbury' 5 yrs.. . . .	30 579
2. Perfection Swede... ..	31 202	5. Hartley's Bronze.. . . .	29 1,700
3. Halewood's Bronze Top, 5 yrs....	30 783	6. Bangholm Selected, 5 yrs.. . . .	29 1,648

An average crop of 30 tons 853 lbs. per acre.

FIVE AND SIX 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 five or six years, are the following. (Where not otherwise marked, the figures given are the results of six years' tests) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
1,649	39	961	4. Yellow Intermediate... .. 36 1,525
33	38	1,587	5. Giant Yellow Globe... .. 35 1,609
1,670	36	1,920	6. Giant Yellow Half Long, 5 yrs.. 35 1,937

An average crop of 37 tons 440 lbs. per acre.

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

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
1,078	34	425	4. Giant Yellow Globe... .. 32 283
1,779	32	1,505	5. Giant Yellow Half Long, 5 yrs.. 32 278
81	32	420	6. Gate Post.... .. 31 1,616

An average crop of 32 tons 1,088 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
728	36	1,141	4. Gate Post, 5 yrs... .. 32 1,548
557	34	423	5. Prize Mammoth Long Red.... .. 32 1,516
1,458	33	1,638	6. Mammoth Long Red.... .. 31 1,876

An average crop of 33 tons 1,357 lbs. per acre.

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

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
298	23	808	4. Champion Yellow Globe.... .. 22 1,750
430	23	582	5. Gate Post.... .. 22 939
1,858	23	91	6. Ward's Large Oval-shaped... .. 22 832

An average crop of 22 tons 1,342 lbs. per acre.

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

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
612	34	1,934	4. Giant Yellow Half Long, 5 yrs.. 29 1,959
450	32	1,272	5. Gate Post, 6 yrs... .. 28 1,738
856	30	1,248	6. Mammoth Long Red, 5 yrs.. 28 23

An average crop of 30 tons 1,696 lbs. per acre.

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

acre. Lbs.	Per acre.		Per acre. Tons. Lbs.
	Tons.	Lbs.	
579	32	696	4. Selected Mammoth Long Red.... 30 578
1,700	32	254	5. Mammoth Yellow Intermediate. 29 1,841
1,648	21	160	6. Giant Yellow Half Long... .. 29 1,100

An average crop of 30 tons 1,771 lbs. per acre.

FIVE AND SIX 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 five or six years, are the following. (Where not otherwise marked, the figures given are the results of six years' tests) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Giant White Vosges...	30	1,193	4. Improved Short White...	29	373
2. Mammoth White Intermediate...	29	1,675	5. Iverson's Champion...	29	300
3. Half Long White...	29	556	6. Green Top White Orthe, 5 yrs..	27	21

An average crop of 29 tons 353 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Mammoth White Intermediate...	22	640	4. Green Top White Orthe...	20	1,773
2. Giant White Vosges...	21	1,385	5. Improved Short White...	20	902
3. Half Long White...	21	1,303	6. Iverson's Champion...	19	650

An average crop of 20 tons 1,442 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Giant White Vosges...	14	563	4. Mamm. White Intermediate, 5 yrs.	13	418
2. Half Long White...	14	270	5. Early Gem...	12	1,410
3. Iverson's Champion...	13	473	6. White Belgian...	12	1,080

An average crop of 13 tons 702 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Improved Short White, 5 yrs...	11	1,353	4. Mamm. White Intermediate, 5 yrs.	10	942
2. Half Long White, 5 yrs...	11	1,153	5. Green Top White Orthe, 5 yrs....	10	594
3. Iverson's Champion, 5 yrs...	11	584	6. White Belgian...	10	354

An average crop of 10 tons 1,830 lbs. per acre.

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

		Per acre.			Per acre.
		Tons. Lbs.			Tons. Lbs.
1. Improved Short White...	33	1,087	4. Green Top White Orthe...	29	1,462
2. Giant White Vosges...	31	1,664	5. Yellow Intermediate...	28	1,448
3. Half Long White...	31	968	6. Iverson's Champion...	28	999

An average crop of 30 tons 1,271 lbs. per acre.

The six varieties of carrots which have produced the largest crops during 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. Half Long White...	21	1,250	4. Mammoth White Intermediate...	20	1,705
2. Giant White Vosges...	21	1,245	5. Iverson's Champion...	20	601
3. Improved Short White...	21	637	6. Green Top White Orthe...	19	1,601

An average crop of 20 tons 1,840 lbs. per acre.

FOUR AND FIVE 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 four or five years, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Improved...	26	1,735	3. Wanzleben...	25	1,496
2. Improved Imperial....	26	968	4. Danish Red Top...	25	284

An average crop of 26 tons 40 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Red Top Sugar...	27	950	3. Improved Imperial...	26	402
2. Danish Red Top...	26	487	4. Danish Improved...	23	575

An average crop of 25 tons 1,613 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Red Top...	31	1,013	3. Red Top Sugar....	25	426
2. Danish Improved...	26	1,077	4. Wanzleben...	25	93

An average crop of 27 tons 152 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Red Top....	19	225	3. Improved Imperial...	15	1,270
2. Red Top Sugar..	16	1,446	4. Wanzleben...	15	789

An average crop of 16 tons 1,432 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Red Top, 3 yrs...	28	1,222	3. Red Top Sugar....	21	536
2. Improved Imperial....	22	528	4. Vilmorin's Improved....	20	1,696

An average crop of 23 tons 495 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Red Top...	26	246	3. Danish Improved..	22	1,091
2. Red Top Sugar..	23	172	4. Improved Imperial...	22	722

An average crop of 23 tons 1,075 lbs. per acre.

FIVE TO SEVEN 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 five to seven years, are the following. (Where not otherwise marked, the figures given are the results of seven years' tests) :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Holborn Abundance...	424	51	7. Dreer's Standard..	373	34
2. Seattle...	422	59	8. Everett...	373	2
3. American Wonder...	418	8	9. State of Maine...	369	50
4. Late Puritan...	406	1	10. Polaris...	368	59
5. Seedling, No. 230...	388	8	11. Vanier...	368	30
6. Burnaby Seedling...	381	48	12. Empire State...	368	15

An average crop of 388 bushels 40 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Seedling, No. 30, 6 yrs...	436	8	7. Pearce's Prize Winner, 6 yrs...	384	24
2. Irish Daisy...	431	4	8. Pride of the Market...	384	..
3. Holborn Abundance...	422	49	9. Carman, No. 1...	383	19
4. Seattle, 6 yrs...	410	3	10. Vanier, 6 yrs...	374	33
5. American Giant, 5 yrs...	401	58	11. Dreer's Standard...	366	18
6. Hale's Champion...	389	39	12. Great Divide...	365	59

An average crop of 395 bushels 51 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Carman, No. 1...	394	57	7. Clarke's No. 1...	379	46
2. Irish Daisy, 6 yrs...	394	10	8. Late Puritan...	379	14
3. State of Maine...	389	27	9. Great Divide...	372	57
4. Delaware, 6 yrs...	388	40	10. Early Norther, 6 yrs...	365	10
5. American Wonder, 5 yrs...	387	11	11. New Variety, No. 1...	363	37
6. Dreer's Standard...	383	57	12. Pearce's Prize Winner, 6 yrs...	363	37

An average crop of 380 bushels 14 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. American Giant, 6 yrs...	494	50	7. Lee's Favourite, 6 yrs...	415	21
2. American Wonder...	458	6	8. Carman, No. 1...	408	51
3. New Variety, No. 1, 6 yrs...	436	4	9. Seedling, No. 230...	406	33
4. General Gordon, 5 yrs...	431	24	10. Lizzie's Pride...	405	20
5. Rochester Rose, 6 yrs...	430	59	11. State of Maine...	404	42
6. Northern Spy...	415	44	12. Green Mountain...	404	41

An average crop of 426 bushels 3 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Rose, No. 9, 5 yrs.	424	..	7. Vick's Extra Early.	389	10
2. Dakota Red.	404	48	8. Houlton Rose.	385	53
3. Seedling, No. 7.	402	21	9. Clay Rose.	385	3
4. Seedling, No. 230.	398	4	10. Bill Nye, 5 yrs.	374	43
5. Carman, No. 3.	391	1	11. Reeve's Rose, 5 yrs.	373	29
6. Brown's Rot Proof.	390	15	12. Irish Daisy.	366	25

An average crop of 390 bushels 26 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Seedling, No. 230.	391	43	7. Late Puritan.	369	14
2. Everett.	390	41	8. Carman, No. 1.	367	22
3. Seedling, No. 7, 5 yrs.	386	26	9. Carman, No. 3, 5 yrs.	366	40
4. Irish Daisy.	384	56	10. Rose, No. 9, 5 yrs.	366	33
5. American Wonder.	384	6	11. Seattle.	364	43
6. American Giant.	383	17	12. Empire State.	363	11

An average crop of 376 bushels 34 lbs. per acre.

SUMMARY.

The results of the testing of varieties for another year strengthens the conclusions reached in the past as to the importance of choosing the best and most productive sorts for seed if we are to realize the largest crops. Further experience also confirms the view that there are marked and fairly constant differences in the productiveness of varieties grown side by side, under similar conditions. A few points in support of this will be cited.

Of the 41 different sorts of oats which have now been under trial for six or seven years at all the Dominion experimental farms, only 18 of these have at any time appeared in the list of the best twelve. Hence many of the same varieties appear every year in the productive list. The average crop given by these 12 best sorts for the past six or seven years has been 72 bushels 24 lbs. per acre, while the remaining 29 varieties have averaged during the same time 66 bushels 2 lbs., a difference in favour of the most productive sorts of 6 bushels 22 lbs. per acre. This receives additional significance when we recall the fact that every bushel of oats added to the average crop of the Dominion puts about one million dollars into the pockets of Canadian farmers.

In barley this constancy in productiveness is even more marked. Of the 30 different sorts which have been under trial for the past six and seven years, 10 of these have appeared in the best 12 every year for the whole period and 14 only have found their way during this time into the list of the best twelve. While the 12 most productive sorts have given an average crop for the whole period of 45 bushels 30 lbs. per acre, the remaining 22 sorts have averaged for the same period 41 bushels 45 lbs., or nearly four bushels less per acre.

In the returns for the trial plots of spring wheat similar evidence is found. Of the 31 varieties of this cereal which have been tested for six or seven consecutive years, 8 of these have appeared among the 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, and comparing the best twelve for 1900 with that for 1901, we find the lists exactly the same.

Similar evidence could be furnished from the trial plots of all the other crops, but enough has been brought forward to show that the opinions advanced are well founded. Should it become a general practice among farmers to choose for sowing those varieties which have been shown to be most productive and give them reasonably fair cultivation, there is no doubt that this would result in a material increase in the average crops of the country and thus make farming increasingly profitable.