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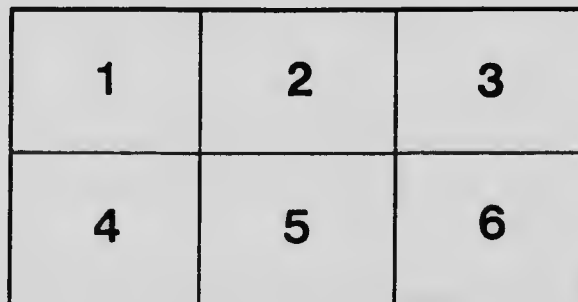
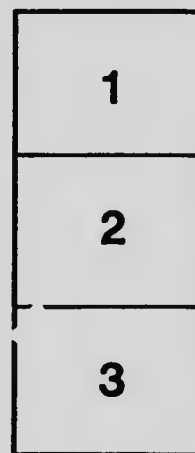
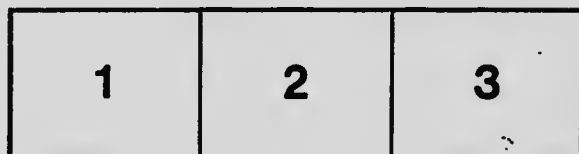
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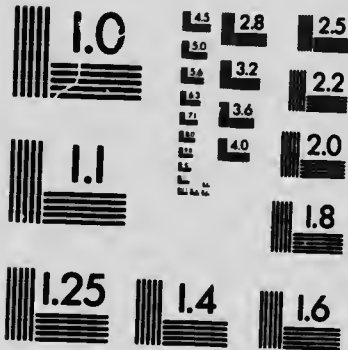
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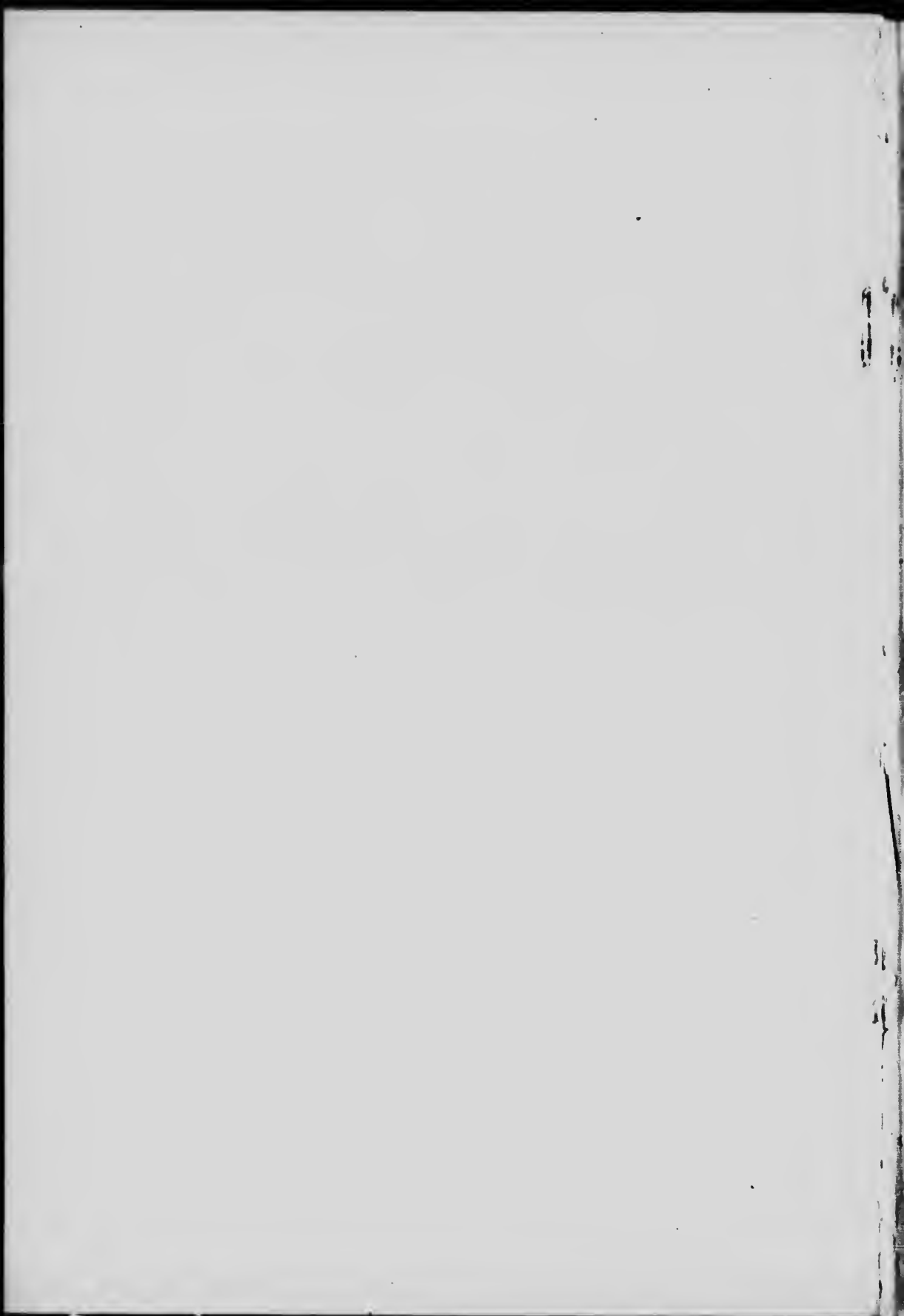
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DEPARTMENT OF AGRICULTURE

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CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA

RESULTS OBTAINED IN 1902

FROM

TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS

AND

POTATOES

BY

WILLIAM SAUNDERS, LL.D.,

*Director of Experimental Farms*

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BULLETIN No. 41

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DECEMBER, 1902

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MINISTER OF AGRICULTURE



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To the Honourable  
The Minister of Agriculture.

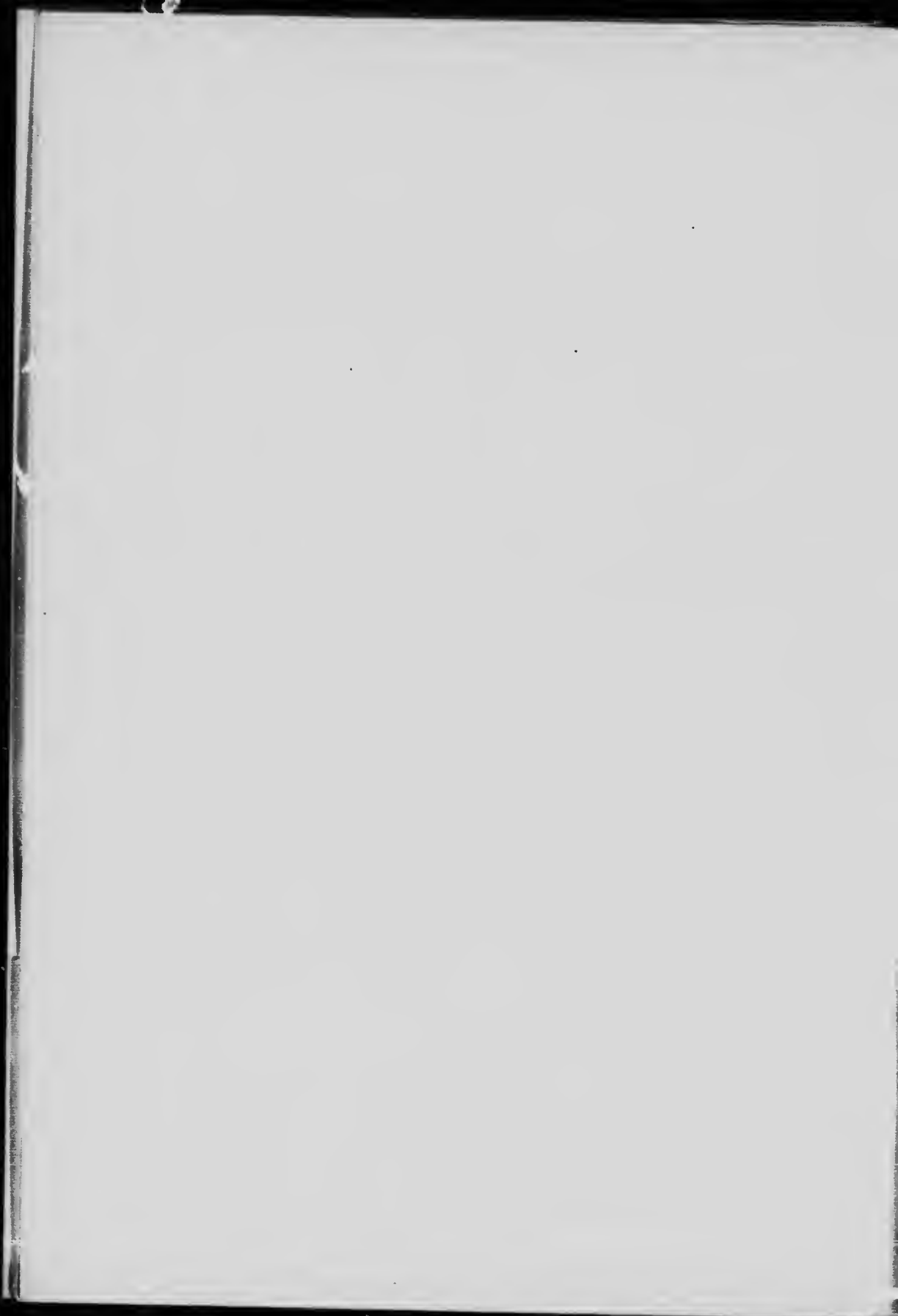
SIR,—I herewith submit for your approval Bulletin No. 41 of the Experimental Farm series, which has been prepared by myself. There are presented in this publication the results of a large number of experiments, which have been conducted at all the experimental farms in your Department during the season of 1902, 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 three to eight years' tests on such plots with varieties of oats, barley, spring wheat, pease, Indian corn, turnips and potatoes, three to seven years with plots of mangels and carrots, and four to six 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 of Experimental Farms*

OTTAWA, December 8, 1902.



**RESULTS OBTAINED IN 1902**  
**FROM TRIAL PLOTS OF**  
**GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES**

---

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

*Director of Experimental Farms.*

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During the past eight years experiments have been conducted on uniform trial plots at each of the Dominion Experimental Farms for the purpose of gaining information as to the most productive and earliest ripening varieties of grain, fodder corn, field roots and potatoes. In arranging for these plots the same varieties have been sown at each of the farms, the seed being supplied at the outset from a common stock. In each case the seed has been sown early, and, as a rule, all the different sorts of the same product have been sown on the same day or at least within two or three days so as to give to all 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 eighth of the series, the details are arranged after the same plan as in the 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 crops 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 such results can be given for a number of years the information becomes much more satisfactory and valuable.

In the experience recorded near the end of this bulletin the average crops obtained from the sowings of a number of successive years are shown, all those which have been three years under trial being placed in competition with those which have been tested for longer periods.

A break in the records of these tests has been necessary at Brandon this year owing to a very heavy rain storm or 'cloud burst' in June. This storm washed away many of the varieties of pease and barley, and others were so much injured by flooding that any comparisons of yield of varieties would be valueless. Under the circumstances the injured sorts have been omitted from this bulletin, but the particulars of their yields will be found in the annual report of the Experimental Farms for 1902.

By comparing the crops of the past year with the average of previous years it will be seen that the results of the harvest of 1902 have on the whole been very satisfactory.

### TRIAL PLOTS OF OATS.

During the season of 1902, sixty-five varieties have been under trial. The size of the plots on which they were sown at the Experimental Farms in Ottawa, Ont., Nappan, N.S., and Agassiz, B.C., was one-fortieth of an acre each, and at Brandon, Man., and Indian Head, N.W.T., they were one-twentieth of an acre each. The quantity of seed sown was in the proportion of two bushels per acre, and the dates of sowing were as follows:—At Ottawa, April 18, Nappan, April 30, Brandon, May 27-28, Indian Head, May 12, and at Agassiz, April 21.

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 1902.

In Canada the bushel of oats is 34 lbs.

### UNIFORM TEST PLOTS OF OATS.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1902.						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	Improved American.....	90	20	82	12	64	4	82	20	54	14	74	28	118	122	100	106	113	112
2	Sensation.....	83	18	100	..	70	..	63	18	55	10	74	16	116	120	99	109	112	111
3	White Russian.....	83	18	89	14	45	..	63	28	58	18	69	2	117	118	100	105	113	111
4	Siberian.....	82	12	102	12	82	2	77	2	64	4	81	20	118	124	103	112	116	114
5	Banner.....	81	6	90	20	70	20	88	8	70	30	80	17	114	116	102	107	114	111
6	Columbus.....	81	6	97	22	66	6	80	20	72	32	79	24	116	126	103	108	113	113
7	Flying Scotchman.....	80	..	88	8	47	2	57	2	59	14	66	12	117	116	100	104	110	109
8	Salzer's Big Four.....	78	28	97	22	43	28	72	2	47	12	67	32	118	120	102	110	114	113
9	New Zealand.....	77	22	103	18	62	2	75	10	64	24	76	22	123	131	103	112	123	118
10	White Giant.....	77	22	104	24	50	..	55	10	61	16	69	28	117	123	101	104	113	112
11	Holstein Prolific.....	77	22	97	22	81	6	82	2	61	10	77	..	117	125	102	106	112	112
12	Early Golden Prolific.....	77	22	102	12	82	23	65	10	60	10	77	23	117	125	101	106	115	113
13	Golden Beauty.....	76	16	91	26	56	16	75	10	67	6	53	15	113	124	101	105	115	112
14	Newmarket.....	76	16	100	..	61	6	65	30	60	30	72	30	111	118	99	105	116	110
15	Hazlett's Seizure.....	75	10	83	18	73	28	64	4	74	4	74	6	118	118	99	104	114	111
16	Buckbee's Illinois.....	75	10	92	32	82	12	68	28	63	18	76	20	116	120	103	104	114	111
17	Danish Island.....	75	10	97	22	67	2	89	14	71	16	80	6	116	124	103	105	113	112

UNIFORM TEST PLOTS OF OATS—Continued.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1902.						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.
18	Twentieth Century	72	32	91	26	*	†	61	26	72	19	117	118	118	123	100	106	110	111
19	Mennonite	73	32	102	12	77	2	65	10	62	12	76	118	120	101	110	110	115	112
20	Waverley	71	26	70	20	60	13	75	10	75	30	70	116	120	101	110	115	112	
21	White Schonen	70	20	106	30	53	8	62	12	66	20	71	118	120	102	104	112	111	
22	Joanette	70	20	87	2	74	24	66	16	64	24	72	115	120	105	112	120	114	
23	Brandon	70	20	74	4	60	20	60	..	62	32	65	118	123	103	108	113	113	
24	Cream Egyptian	70	20	84	24	61	26	42	12	68	28	65	116	118	99	105	115	111	
25	American Beauty	69	14	102	12	61	6	63	8	62	22	72	111	125	100	106	116	112	
26	Irish Victor	69	14	83	18	60	30	74	24	†	72	4	117	120	103	112	†	113	
27	Wide Awake	68	8	85	30	64	24	80	20	48	8	69	116	122	102	105	113	112	
28	Early Gothland	68	8	82	12	64	24	56	16	71	6	68	116	118	102	112	115	112	
29	American Triumph	68	8	93	28	70	30	57	22	55	..	69	117	128	103	110	115	114	
30	Abundance	67	2	89	14	72	2	80	20	60	10	73	117	117	101	105	115	111	
31	Improved Ligowo	67	2	97	22	51	6	72	24	65	30	70	114	120	101	106	113	111	
32	Goldfinder	65	30	100	..	53	28	74	4	65	10	71	118	124	102	110	115	114	
33	Lincoln	65	30	102	12	65	10	66	16	69	14	73	117	125	102	105	112	112	
34	Bavarian	64	24	100	..	61	6	74	24	56	16	71	117	120	102	105	115	112	
35	Black Beauty	64	24	87	2	60	..	66	16	72	22	70	117	113	105	108	109	110	
36	Kendal	64	24	80	..	56	6	64	24	66	10	66	117	122	102	112	112	113	
37	Salines	64	24	107	2	47	12	74	24	55	10	69	123	118	103	112	110	113	
38	Holland	64	24	82	12	57	32	49	14	72	2	65	110	123	108	108	113	115	
39	Pense	63	18	85	30	55	10	62	32	50	6	63	119	113	120	106	117	112	
40	Prolific Blk. Tartarian	63	18	95	10	51	6	63	18	63	28	67	117	123	108	114	112	115	
41	Wallis	63	18	93	28	74	24	71	26	54	14	71	122	111	122	101	110	114	
42	Early Maine	62	12	101	6	74	24	54	4	70	..	72	96	117	123	101	106	112	
43	Olive	62	12	85	30	45	20	62	32	57	22	62	30	117	120	107	113	114	
44	Master	62	12	75	10	53	8	61	26	72	12	65	..	118	122	102	110	114	
45	Russell	62	12	88	8	54	24	54	24	52	2	62	114	113	122	104	106	112	
46	Thousand Dollar	61	6	95	10	63	8	78	24	59	14	71	119	117	120	103	106	113	
47	Golden Tartarian	61	6	111	26	59	24	83	18	73	18	77	32	123	131	110	112	116	
48	Golden Giant	61	6	108	8	70	..	82	32	77	22	80	..	122	128	106	112	114	
49	Bonanza	60	..	87	2	67	32	49	14	65	..	65	30	111	123	97	104	113	
50	Milford	60	..	93	18	50	20	67	22	61	6	64	20	117	120	110	110	113	
51	Early Blossom	60	..	96	16	53	18	59	18	62	12	66	13	119	120	103	112	113	
52	Oderbruch	58	28	91	26	55	23	75	10	58	18	68	1	118	120	101	106	115	
53	Black Mesdag	58	28	82	12	53	18	57	22	58	28	62	8	106	108	101	112	109	
54	Tartar King	56	16	97	22	63	8	86	16	72	32	75	12	114	119	102	106	110	
55	Abyssinia	56	16	101	6	47	22	66	16	61	26	66	24	117	121	100	106	113	
56	California Prolific Blk	56	16	85	30	56	16	63	18	66	10	65	25	118	122	105	116	113	
57	Oxford	56	16	87	2	59	14	78	8	69	14	70	4	117	122	103	106	110	
58	King	56	16	82	12	54	14	74	24	57	32	65	6	117	125	102	108	113	
59	Rosedale	55	10	88	8	42	22	66	16	65	..	63	18	117	118	102	112	114	
60	Early Archangel	54	4	71	26	62	32	71	26	62	12	64	20	118	118	102	104	113	
61	Cromwell	54	4	105	30	†	†	56	16	59	4	68	30	118	124	*	†	112	
62	Pioneer	54	4	95	10	43	8	46	20	70	20	61	33	114	118	105	113	110	
63	Miller	54	4	90	20	47	32	71	26	59	4	64	24	117	126	100	108	112	
64	Scotch Potato	33	16	85	30	61	6	56	16	60	30	60	6	121	122	102	110	115	
65	Loughoughton	31	26	72	32	36	16	54	4	56	16	50	12	120	123	102	110	115	

\*Destroyed by flood.

†Not sown.

‡Nearly destroyed by wash of heavy rainstorm.

The twelve varieties of oats which have produced the largest crops during 1902, at the several Experimental Farms, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Improved American .. . . .	90	20	7. Flying Scotchman.. . . .	80	..
2. Sensation.. . . .	83	18	8. Saizer's Big Four .. . . .	78	28
3. White Russian.. . . .	83	18	9. New Zealand.. . . .	77	22
4. Siberian.. . . .	82	12	10. White Giant.. . . .	77	22
5. Banuer.. . . .	81	6	11. Holstein Prolific.. . . .	77	23
6. Columbus.. . . .	81	6	12. Early Golden Prolific.. . . .	77	22

An average crop of 80 bushels 33 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Golden Tartarian .. . . .	111	26	7. New Zealand.. . . .	103	19
2. Golden Giant.. . . .	108	8	8. American Beauty .. . . .	102	12
3. Salines.. . . .	107	2	9. Siberian.. . . .	102	12
4. Cromwell.. . . .	105	30	10. Lincoln.. . . .	102	12
5. White Schonen.. . . .	105	30	11. Early Golden Prolific.. . . .	102	12
6. White Giant.. . . .	104	24	12. Mennonite.. . . .	102	12

An average crop of 104 bushels 31 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Early Golden Prolific.. . . .	82	28	7. Wallis.. . . .	74	24
2. Buckbee's Illinois.. . . .	82	12	8. Early Maine.. . . .	74	24
3. Siberian.. . . .	82	2	9. Hazlett's Seizure .. . . .	73	28
4. Holstein Prolific.. . . .	81	6	10. Abundance.. . . .	72	2
5. Mennonite.. . . .	77	2	11. American Triumph.. . . .	70	30
6. Joannette.. . . .	74	24	12. Banner.. . . .	70	30

An average crop of 76 bushels 22 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Danish Island.. . . .	89	14	7. Holstein Prolific.. . . .	82	2
2. Banner.. . . .	88	8	8. Abundance .. . . .	80	20
3. Tartar King.. . . .	86	16	9. Columbus.. . . .	80	20
4. Golden Tartarian.. . . .	83	18	10. Wide Awake.. . . .	80	20
5. Golden Giant.. . . .	82	32	11. Thousand Dollar.. . . .	78	24
6. Improved American.. . . .	82	20	12. Oxford.. . . .	78	8

An average crop of 82 bushels 28 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Golden Giant.. . . .	77	22	7. Black Beauty.. . . .	72	22
2. Waverley.. . . .	75	30	8. Master.. . . .	72	12
3. Hazlett's Seizure.. . . .	74	4	9. Holland.. . . .	72	2
4. Golden Tartarian.. . . .	73	18	10. Danish Island.. . . .	71	16
5. Tartar King.. . . .	72	32	11. Early Gothland.. . . .	71	6
6. Columbus.. . . .	72	32	12. Banner.. . . .	70	30

An average crop of 73 bushels 4 lbs. per acre.

The twelve varieties of oats which have produced the largest crops in 1902, taking the average results obtained on all the Experimental Farms, are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Siberian.. . . . .	81	20	7. Golden Tartarian . . . . .	77	23
2. Bonner.. . . . .	80	17	8. Early Golden Prolific.. . . . .	77	23
3. Danish Island.. . . . .	80	6	9. New Zealand.. . . . .	76	22
4. Holstein Prolific.. . . . .	80	..	10. Buckbee's Illinois.. . . . .	76	20
5. Golden Giant.. . . . .	80	..	11. Mennonite.. . . . .	76	..
6. Columbus.. . . . .	79	24	12. Tartar King.. . . . .	75	12

An average crop of 78 bushels 17 lbs. per acre.

The average crop of all the varieties of oats tested at each of the Experimental Farms in 1902, was as follows :—At Ottawa, 65 bushels 19 lbs. per acre ; Nappan, 90 bushels 18 lbs. ; Brandon, 60 bushels 11 lbs. ; Indian Head, 67 bushels 30 lbs., and at Agassiz, 63 bushels 10 lbs. The average return given by the whole of the varieties of oats tested at all the farms was 70 bushels 4 lbs. per acre.

TRIAL PLOTS OF BARLEY.

During the season of 1902, fifty-one varieties of barley have been under test, twenty-one of which were two-rowed sorts and thirty six-rowed. The barley plots were of the same size as those sown with oats, the seed was used in the proportion of two bushels per acre, and the dates of sowing were as follows :—At Ottawa, Ont., April 17 ; Nappan, N.S., May 16 ; Indian Head, N.W.T., May 17, and at Agassiz, B.C., April 19.

In Canada the bushel of barley is 48 lbs.

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.					NUMBER OF DAYS FROM SOWING TO HARVESTING									
		Ottawa, Ont.		Nappan, N.S.		Indian Head, N.W.T.	Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
1	French Chevalier . . . . .	68	16	49	8	43	16	33	16	48	26	109	105	110	117	110
2	Danish Chevalier . . . . .	64	8	60	40	53	36	37	24	54	3	109	105	110	116	110
3	Canadian Thorpe . . . . .	62	24	50	40	49	8	46	32	52	14	109	102	103	112	107
4	Kinver Chevalier . . . . .	60	..	44	8	51	32	48	16	51	2	108	105	110	117	110
5	Gordon . . . . .	55	40	40	40	45	40	38	6	45	8	109	102	98	111	110
6	Fulton . . . . .	55	..	37	24	42	44	30	..	41	17	108	103	102	112	106
7	Logan . . . . .	54	8	42	24	42	24	25	10	41	5	109	103	101	112	106
8	Bolton . . . . .	53	16	37	24	45	40	29	28	41	27	105	103	101	109	105
9	Dunham . . . . .	53	16	40	..	42	4	52	44	47	4	109	102	99	116	107
10	Beaver . . . . .	52	24	43	16	51	32	33	6	45	8	105	103	110	114	108
11	Newton . . . . .	50	40	..	..	47	24	40	20	47	9	111	103	110	112	109
12	Standwell . . . . .	50	..	47	24	55	24	37	44	47	35	110	106	110	115	110
13	Victor . . . . .	48	16	47	24	43	36	31	4	42	32	105	103	101	112	105
14	Harvey . . . . .	48	16	45	..	48	36	40	30	45	33	109	102	102	111	106
15	Sidney . . . . .	46	32	45	40	59	4	59	8	47	33	108	102	99	116	106
16	Prize Prolific . . . . .	46	32	38	16	47	24	43	16	43	46	112	103	110	112	109
17	Nepean . . . . .	46	32	43	16	37	44	36	32	41	7	105	102	103	115	106
18	Clifford . . . . .	46	32	44	8	55	..	36	2	45	23	105	103	102	111	105
19	Invincible . . . . .	45	40	39	8	57	44	48	26	47	42	111	103	107	111	108
20	Jarvis . . . . .	45	..	40	..	52	24	33	36	42	39	107	103	101	111	106
21	Leslie . . . . .	39	8	33	16	48	30	35	20	39	8	109	102	98	116	106



The six varieties of two-rowed barley which have given the largest crops during 1902, at the several Experimental Farms, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush. Lbs.			Bush. Lbs.	
1. French Chevallier.. . . . .	63	16	4. Kinver Chevallier.. . . . .	60	..
2. Danish Chevallier .. . . . .	64	8	5. Gordon.. . . . .	55	40
3. Canadian Thorpe.. . . . .	62	24	6. Fulton.. . . . .	55	..

An average crop of 60 bushels 47 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush. Lbs.			Bush. Lbs.	
1. Danish Chevallier.. . . . .	60	40	4. French Chevallier .. . . . .	49	8
2. Canadian Thorpe.. . . . .	50	40	5. Victor.. . . . .	47	24
3. Newton.. . . . .	50	..	6. Standwell .. . . . .	47	24

An average crop of 50 bushels 47 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush. Lbs.			Bush. Lbs.	
1. Sidney.. . . . .	59	4	4. Clifford.. . . . .	55	..
2. Invincible.. . . . .	57	44	5. Danish Chevallier .. . . . .	53	36
3. Standwell.. . . . .	55	24	6. Jarvis.. . . . .	52	24

An average crop of 55 bushels 30 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush. Lbs.			Bush. Lbs.	
1. Dunham.. . . . .	52	44	4. Canadian Thorpe.. . . . .	46	32
2. Invincible.. . . . .	48	26	5. Prize Prolific.. . . . .	43	16
3. Kinver Chevallier.. . . . .	48	16	6. Harvey.... . . . .	40	30

An average crop of 46 bushels 35 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest crops in 1902, taking the average results on all the Experimental Farms, are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Danish Chevallier.. . . . .	54	3	4. French Chevallier .. . . . .	48	26
2. Canadian Thorpe.. . . . .	52	14	5. Invincible.. . . . .	47	42
3. Kinver Chevallier.. . . . .	51	2	6. Standwell..... . . . .	47	35

An average crop of 50 bushels 12 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at each of the Experimental Farms in 1902, was as follows :—At Ottawa, 52 bushels 3 lbs. per acre ; Nappan, 43 bushels 41 lbs. ; Indian Head, 43 bushels 34 lbs., and at Agassiz, 37 bushels 47 lbs. The average return given by the whole of the varieties of two-rowed barley tested at all the farms was 45 bushels 31 lbs. per acre.

UNIFORM TEST LOTS OF SIX-ROWED BARLEY.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1902.										NUMBER OF DAYS FROM SOWING TO HARVESTING.				
		Ottawa, Ont.		Nappan, N.S.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
1	Blue Long Head .....	74	8 40	..	62	24	32	44	52	19	108	103	101	111	106	
2	Yale.. .....	73	16 52	24	48	16	40	10	53	29	105	101	99	108	103	
3	Trooper.. .....	65	40 54	8	48	16	36	22	51	9	103	99	99	112	103	
4	Stella.. .....	65	40 58	16	48	36	37	4	52	24	105	104	101	112	105	
5	Odesa.. .....	65	.. 51	32	65	..	38	16	55	..	104	98	99	107	102	
6	Mensury.. ..	64	8 50	..	51	12	38	36	51	2	105	103	99	109	104	
7	Hulless Black.....	63	16 48	16	47	24	36	32	48	46	104	96	107	109	104	
8	Surprise .....	63	16 53	16	53	36	50	40	55	15	104	104	101	109	104	
9	Brome.. .....	60	40 50	..	49	28	37	34	52	1	107	103	101	111	105	
10	Nugent.. .....	60	40 52	24	53	36	40	..	51	37	106	104	110	111	108	
11	Pioneer.. .....	60	.. 44	8	44	8	39	38	47	1	107	101	102	107	104	
12	Hulless White.....	57	24 44	8	35	..	39	8	43	46	100	96	107	112	104	
13	Garfield.....	55	.. 58	16	52	4	37	44	50	40	104	98	99	109	102	
14	Petsclora .....	53	16 42	24	42	8	35	10	43	14	106	99	99	107	103	
15	Oderbruch .....	52	7 45	24	49	8	50	40	51	12	104	96	99	107	102	
16	Argyle.. .....	51	32 52	24	45	20	34	8	45	45	109	98	99	109	104	
17	Success.....	50	40 49	8	37	24	34	18	42	47	101	96	99	105	100	
18	Common .....	50	40 63	16	50	..	30	20	48	31	104	98	101	107	102	
19	Vanguard.....	50	40 50	..	40	20	39	18	45	8	103	99	99	109	102	
20	Rennie's Improved .....	49	8 51	32	46	32	52	24	50	..	104	99	99	107	102	
21	Excelsior.....	48	16 51	32	38	16	35	..	43	16	101	96	99	105	100	
22	Royal.....	47	24 59	8	58	36	39	2	51	12	103	99	99	107	102	
23	Albert.....	47	24 47	24	42	4	37	24	43	31	104	98	99	107	102	
24	Summit.....	47	24 43	16	60	40	55	..	51	32	103	104	103	109	105	
25	Mansfield.....	46	32 56	32	57	44	38	46	50	2	109	101	99	109	104	
26	Empire.....	46	32 55	..	62	44	32	34	49	15	106	103	101	109	105	
27	Champion.....	45	40 45	40	36	32	33	6	41	29	101	96	99	105	100	
28	Claude.....	37	24 49	8	66	32	39	8	48	6	105	103	101	109	104	
29	Phyllis.....	36	32 39	8	40	..	35	40	37	44	103	101	99	107	102	
30	Barter.....	35	.. 53	16	40	20	35	30	41	4	103	98	96	107	102	

The six varieties of six-rowed barley which have given the largest crops during 1902, at the several Experimental Farms, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.	
	Bush.	Lbs.	Bush.	Lbs.
1. Blue Long Head.. . . . .	74	8	4. Stella.. . . . .	65 40
2. Yale.. . . . .	73	16	5. Odessa.. . . . .	65 ..
3. Trooper.. . . . .	65	40	6. Mensury.. . . . .	64 8

An average crop of 68 bushels 3 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush.	Lbs.	Bush.	Lbs.
1. Common.. . . . .	63	16	4. Stella.. . . . .	58 16
2. Royal.. . . . .	59	8	5. Mansfield.. . . . .	56 32
3. Garfield.. . . . .	58	16	6. Empire.. . . . .	55 ..

An average crop of 58 bushels 23 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush.	Lbs.	Bush.	Lbs.
1. Claude.. . . . .	66	32	4. Blue Long-head.... . . . .	62 24
2. Odessa.. . . . .	65	..	5. Summit.. . . . .	60 40
3. Empire.. . . . .	62	44	6. Royal.. . . . .	58 36

An average crop of 62 bushels 37 lbs. per acre.

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

	Per acre.		Per acre.	
	Bu.	Lbs.	Bush.	Lbs.
1. Summit.. . . . .	55	..	4. Surprise.. . . . .	50 40
2. Rennie's Improved.. . . . .	52	24	5. Yale.. . . . .	40 10
3. Oderbruch.... . . . .	50	40	6. Nugent.. . . . .	40 ..

An average crop of 48 bushels 11 lbs. per acre.

The six varieties of six-rowed barley which have produced the largest crops in 1902, taking the average results obtained on all the Experimental Farms, are :

	Per acre.		Per acre.	
	Bush.	Lbs.	Bush.	Lbs.
1. Surprise.. . . . .	55	15	4. Stella.. . . . .	52 24
2. Odessa.. . . . .	55	..	5. Blue Long Head.. . . . .	52 19
3. Yale.. . . . .	53	29	6. Brome.. . . . .	52 1

An average crop of 53 bushels 23 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at each of the Experimental Farms in 1902, was as follows:—At Ottawa, 54 bushels 12 lbs. per acre; Nappan, 50 bushels 32 lbs.; Indian Head, 49 bushels 9 lbs., and at Agassiz, 39 bushels. The average return given by the whole of the varieties of six-rowed barley tested at all the farms was 48 bushels 17 lbs. per acre.

### TRIAL PLOTS OF SPRING WHEAT.

Seventy-one varieties of spring wheat were grown on the uniform trial plots during 1902. The size of the plots was one-fortieth of an acre each at Ottawa, Ont., Nappan, N.S., and Agassiz, B.C., and one-twentieth of an acre each at Brandon, Man., and Indian Head, N.W.T., 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 15, Nappan, April 26, Brandon, May 5 and 6, Indian Head, May 27, and at Agassiz, April 18.

The crops given by the different varieties have been very large at Ottawa, and extraordinary at Nappan and Agassiz. They have also been very good at the Indian Head and Brandon farms.

In Canada the bushel of wheat is 60 lbs.

### UNIFORM TEST PLOTS OF SPRING WHEAT.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.						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	Pringle's Champlain.....	46	40	24	20	42	20	38	38	8	115	127	113	131	124	122			
2	Rio Grande.....	44	52	20	29	50	49	59	15	46	53	120	128	114	132	123			
3	Preston.....	43	20	47	20	25	48	40	46	45	42	115	127	113	128	115			
4	Huron.....	42	40	50	20	25	40	40	35	30	38	50	122	127	114	125			
5	Red Fern.....	42	40	48	40	32	48	37	45	41	49	122	128	112	132	122			
6	Roumanian.....	42	40	48	40	46	20	47	41	30	45	14	124	128	117	131			
7	White Russian.....	42	44	33	20	32	40	44	39	12	123	131	122	131	124				
8	Herisson Bearded.....	42	39	20	34	44	43	45	40	37	123	131	113	132	126				
9	Admiral.....	42	37	20	33	50	41	20	47	30	40	24	122	128	119	123			
10	Blenheim.....	42	42	40	30	20	31	46	38	24	121	128	114	130	120				
11	Hungarian.....	40	40	52	23	50	40	40	39	18	121	128	115	131	122				
12	Dawn.....	40	40	37	20	34	20	35	50	39	28	115	127	117	127				
13	Crown.....	40	40	51	20	33	40	34	40	44	15	40	5 <sup>2</sup>	118	123				
14	Crawford.....	40	40	46	40	27	26	37	30	35	34	115	128	116	128				

UNIFORM TEST PLOTS OF SPRING WHEAT—*Concluded.*

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.						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.
15	Laurel.....	40	40	43	20	32	40	27	40	45	30	37	58	120	131	122	132	120	125
16	Bishop.....	40	40	40	40	25	40	30	40	39	15	35	23	115	127	112	129	115	120
17	Percy.....	40	40	43	20	29	20	44	39	45	39	17	115	127	112	129	120	121	
18	Countess.....	40	40	45	20	37	20	29	36	15	37	35	118	128	121	130	122	124	
19	Monarch.....	39	20	42	34	34	40	35	40	45	30	39	26	123	131	119	131	119	125
20	Plumper.....	39	20	54	24	24	20	44	40	47	15	41	55	120	128	112	128	123	122
21	Ebert.....	39	20	40	40	24	40	30	40	34	30	33	58	110	123	106	128	115	117
22	Red Fife.....	38	40	48	40	31	29	20	48	15	39	11	121	123	120	130	123	124	
23	White Fife.....	38	40	46	35	20	34	40	45	15	39	59	122	131	121	130	122	125	
24	Dion's.....	38	40	40	31	44	36	30	38	2	121	128	115	131	120	123	123	123	
25	Vernon.....	38	40	54	40	41	39	43	20	123	128	131	116	129	116	129	123	129	
26	White Chaff Campbell's.....	38	43	20	37	40	38	20	51	41	40	121	131	121	130	120	124	124	
27	Benton.....	38	50	34	25	40	44	30	38	26	122	127	114	130	124	124	123	123	
28	Byron.....	38	46	40	24	40	37	40	38	45	37	9	122	128	118	129	116	121	
29	Clyde.....	38	47	20	35	10	29	40	49	39	50	124	128	121	129	122	125	125	
30	Essex.....	38	38	27	50	29	45	45	35	43	125	128	115	132	124	125	125	125	
31	Minnesota, No. 149.....	38	38	40	32	37	20	50	30	39	18	123	131	119	133	124	126	126	
32	Australian, No. 19.....	38	38	27	40	32	40	41	15	35	31	123	131	120	130	122	125	125	
33	White Connell.....	37	20	40	32	31	39	30	36	34	122	131	119	131	119	124	124	124	
34	Japanese.....	37	20	55	20	22	26	20	30	34	122	129	106	128	115	119	124	124	
35	Robin's Rust Proof.....	37	20	42	32	20	28	20	37	15	35	27	122	131	119	131	124	125	
36	Minnesota, No. 151.....	37	20	36	40	32	40	56	30	40	47	122	131	114	130	122	127	127	
37	Australian, No. 13.....	37	20	46	40	30	40	31	20	33	35	48	124	131	114	130	122	124	
38	Colorado.....	36	40	49	20	30	20	45	40	57	30	43	54	118	127	113	132	119	122
39	Hastings.....	36	40	41	20	30	20	27	20	40	15	35	11	114	128	113	129	115	119
40	Rideau.....	36	40	37	20	31	10	33	41	45	35	59	113	128	120	130	122	122	
41	Advance.....	36	40	40	20	30	40	44	45	40	21	121	128	131	115	124	124	124	
42	Progress.....	36	40	41	20	29	10	38	20	52	39	30	122	131	119	128	119	124	
43	Minnesota, No. 169.....	36	40	35	20	30	50	33	38	30	34	52	122	131	119	133	122	125	
44	Minnesota, No. 163.....	36	40	38	29	40	35	40	42	30	36	30	123	131	117	133	122	125	
45	Mason.....	36	42	40	32	30	37	38	15	37	17	120	128	117	129	124	123	123	
46	Beaudry.....	35	20	50	27	20	35	46	15	39	47	118	128	113	131	120	122	122	
47	Fraser.....	35	20	35	20	23	20	35	41	15	34	3	108	131	111	128	115	119	
48	Norval.....	35	20	55	20	28	20	31	31	36	48	114	128	111	129	115	119	123	
49	Wellman's Fife.....	34	40	46	40	30	39	20	35	37	8	122	131	115	130	119	123	123	
50	Harold.....	34	40	38	23	40	27	20	36	45	32	5	110	127	106	128	113	117	
51	Blair.....	34	40	35	20	30	33	40	43	35	20	115	129	113	129	120	121	121	
52	Red Swedish.....	34	40	28	40	39	48	45	38	5	119	131	117	131	124	124	124	124	
53	Captor.....	34	47	20	32	30	29	49	30	38	28	118	128	119	130	116	122	122	
54	Ladoga.....	33	20	42	26	40	38	20	57	39	28	118	124	109	128	115	119	119	
55	Beauty.....	33	20	42	24	20	30	40	37	45	33	37	122	128	118	130	123	124	
56	Alpha.....	32	40	48	40	29	40	36	35	15	36	27	123	128	120	129	119	124	
57	Weldon.....	32	40	40	25	42	32	34	20	34	20	122	131	121	129	119	124	124	
58	Australian, No. 23.....	32	40	24	30	29	40	30	33	12	122	131	115	130	122	124	124	124	
59	Chester.....	31	20	36	40	33	50	28	40	43	30	34	48	121	127	113	130	122	123
60	Stanley.....	30	40	40	31	20	42	40	45	33	4	121	130	119	129	116	123	123	
61	Australian, No. 9.....	30	40	38	30	20	28	37	32	48	123	131	114	130	123	124	124	124	
62	Cartier.....	30	48	31	34	20	36	35	52	122	128	111	129	119	122	122	122	122	
63	Speltz.....	30	43	20	34	40	40	20	37	37	4	121	127	113	131	124	123	123	
64	Early Riga.....	29	20	48	28	20	34	20	49	15	37	51	114	124	110	123	118	117	
65	Australian, No. 27.....	29	20	46	40	26	20	35	48	30	37	10	123	131	116	130	118	124	
66	Angus.....	28	40	44	31	40	27	20	40	45	34	29	120	127	114	130	123	123	
67	Australian, No. 25.....	28	40	41	20	24	32	20	40	33	16	123	131	115	130	122	124	124	
68	Dufferin.....	28	49	20	31	39	20	41	37	44	120	128	113	131	115	121	121	121	
69	Australian, No. 10.....	27	20	42	36	40	31	20	48	37	4	122	131	121	130	119	125	125	
70	Goose.....	26	45	20	44	40	51	40	47	42	56	122	127	118	129	120	123	123	
71	Cassel.....	24	35	20	28	20	30	40	35	45	30	49	122	127	115	130	118	122	

\*Much injured by wash from heavy rainstorm.

The twelve varieties of spring wheat which have given the largest crops at the several Experimental Farms in 1902, are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.		
1.	Pringle's Champlain.. . . . .	46	..	7.	White Russian.. . . . .	42	..
2.	Rio Grande.. . . . .	44	..	8.	Herisson Bearded.. . . . .	42	..
3.	Preston.. . . . .	43	20	9.	Admiral.. . . . .	42	..
4.	Huron.... . . . .	42	40	10.	Bienheim.. . . . .	42	..
5.	Red Fern.. . . . .	42	40	11.	Hungarian.. . . . .	40	40
6.	Roumanian.... . . . .	42	40	12.	Dawn.. . . . .	40	40

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

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

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.		
1.	Japanese.. . . . .	55	20	7.	Crown.. . . . .	51	20
2.	Norval.. . . . .	55	20	8.	Huron.. . . . .	50	20
3.	Vernon.. . . . .	54	40	9.	Beaudry.. . . . .	50	..
4.	Plumper.. . . . .	54	..	10.	Benton.. . . . .	50	..
5.	Rio Grande.. . . . .	52	20	11.	Advance.. . . . .	49	20
6.	Hungarian.. . . . .	52	..	12.	Dufferin.. . . . .	49	20

An average crop of 52 bushels per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.		
1.	Roumanian.. . . . .	46	20	7.	Clyde.. . . . .	35	10
2.	Goose.. . . . .	44	40	8.	Speltz.. . . . .	34	40
3.	Campbell's White Chaff.. . . . .	37	40	9.	Monarch.. . . . .	34	40
4.	Countess.. . . . .	37	20	10.	Dawn.. . . . .	34	20
5.	Australian No. 10.. . . . .	36	40	11.	Benton.. . . . .	34	..
6.	White Flfe.. . . . .	35	20	12.	Herisson Bearded.. . . . .	34	..

An average crop of 37 bushels 4 lbs. per acre.

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

		Per acre. Bush. Lbs.			Per acre. Bush. Lbs.		
1.	Goose.. . . . .	51	40	7.	Plumper.. . . . .	44	40
2.	Rio Grande.. . . . .	49	..	8.	Dion's.. . . . .	44	..
3.	Preston.. . . . .	48	40	9.	Herisson Bearded.. . . . .	44	..
4.	Red Fern.. . . . .	48	..	10.	Percy.. . . . .	44	..
5.	Roumanian.. . . . .	47	..	11.	Stanley.. . . . .	42	40
6.	Colorado.. . . . .	45	40	12.	Pringle's Champlain .. . . .	42	20

An average crop of 45 bushels 58 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Rio Grande.. . . . .	59	15	7. Minnesota No. 149.. . . . .	50	30
2. Colorado.. . . . .	57	30	8. Dawn.. . . . .	50	..
3. Ladoga.. . . . .	57	..	9. Captor.. . . . .	49	30
4. Minnesota No. 181.. . . . .	56	30	10. Early Riga.. . . . .	49	15
5. Progress.. . . . .	52	..	11. Clyde.. . . . .	49	..
6. Campbell's White Chaff.. . . . .	51	..	12. Red Swedish.. . . . .	48	45

An average crop of 52 bushels 31 lbs. per acre.

The twelve varieties of spring wheat which have given the largest crops in 1902, taking the average of the results obtained on all the Experimental Farms, are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Rio Grande.. . . . .	46	53	7. Plumper.. . . . .	41	55
2. Roumanian.. . . . .	45	14	8. Red Fern.. . . . .	41	49
3. Colorado.. . . . .	43	54	9. Campbell's White Chaff . . . . .	41	40
4. Vernon.. . . . .	43	20	10. Crown.. . . . .	40	55
5. Goose.. . . . .	42	56	11. Minnesota No. 181.. . . . .	40	47
6. Preston.. . . . .	42	13	12. Herisson Bearded.. . . . .	40	37

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

The average crop of all the varieties of spring wheat tested at each of the Experimental Farms in 1902, was as follows :—At Ottawa, 36 bushels 26 lbs. per acre ; Nappan, 43 bushels 51 lbs. ; Brandon, 30 bushels 14 lbs. ; Indian Head, 35 bushels 29 lbs., and at Agassiz, 42 bushels 35 lbs. The average return given by the whole of the varieties of spring wheat at all the farms was 37 bushels 33 lbs. per acre.

## TRIAL PLOTS OF PEASE.

Fifty-seven varieties of pease were under trial in 1902. These were sown in plots of one-fortieth of an acre each at Ottawa, Ont., Nappan, N.S., and Agassiz, B.C., and one-twentieth of an acre each at Brandon, Man., and Indian Head, N.W.T. The quantity of seed used per acre has varied from two to three bushels, depending on the size of the pea. The dates of sowing were as follows :—At Ottawa, April 23, Nappan, May 7, Indian Head, May 27, and at Agassiz, April 22.

In Canada the bushel of pease is 60 lbs.

UNIFORM TEST PLOTS OF PEASE

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.										NUMBER OF DAYS FROM SOWING TO HARVESTING					
		Ottawa, Ont.		Nappan, N.S.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	
1	Cooper.....	48	40	25	20	35	20	37	10	36	37	120	120	104	114	114	
2	Mackay.....	46	40	33	40	34	20	46	10	37	27	121	121	106	119	117	
3	Pride.....	46	..	23	20	34	40	38	10	35	32	122	117	103	114	114	
4	Nelson.....	46	..	25	20	30	..	39	10	35	7	117	121	108	111	114	
5	Pearl.....	45	20	24	..	30	90	38	20	34	30	120	121	105	118	116	
6	Paragon.....	45	20	19	20	40	20	36	..	35	15	118	120	108	119	116	
7	Arthur.....	44	40	26	40	39	..	37	50	37	2	117	119	100	113	112	
8	Fenton.....	44	40	18	..	32	40	37	40	33	15	122	120	106	114	115	
9	Harrison's Glory.....	44	40	20	..	42	40	38	30	36	27	122	120	104	113	115	
10	Crown.....	43	20	26	40	45	20	31	40	36	45	121	119	108	119	117	
11	Canadian Beauty.....	43	20	27	20	33	40	35	10	34	52	121	120	108	119	117	
12	Prince Albert.....	42	40	28	40	33	..	38	40	35	45	122	120	106	116	116	
13	Alma.....	42	..	23	20	57	20	35	20	30	30	121	116	104	114	114	
14	Kent.....	42	..	26	..	27	40	35	30	32	47	121	121	108	118	117	
15	Prince.....	42	..	28	..	48	40	45	20	41	..	123	120	104	115	115	
16	Early Britain.....	41	20	29	20	38	20	33	10	35	32	122	116	103	113	113	
17	Daniel O'Rourke.....	40	40	23	20	50	..	28	..	35	3	122	120	97	111	112	
18	Golden Vine.....	40	..	27	20	25	20	41	20	33	30	120	116	108	115	115	
19	White Wonder.....	39	20	24	40	45	..	42	30	37	52	119	120	108	115	115	
20	English Grey.....	38	40	26	40	37	40	29	30	33	7	123	118	102	114	114	
21	Prussian Blue.....	38	..	26	40	35	..	36	30	34	2	120	117	104	115	114	
22	Black-eyed Marrowfat.....	37	20	26	..	32	20	34	40	32	35	125	120	105	114	116	
23	Multiplier.....	37	20	33	20	28	20	33	..	33	30	128	120	108	115	118	
24	Chancellor.....	37	20	25	20	45	20	29	10	34	17	117	119	108	118	115	
25	King.....	37	20	20	40	30	..	38	..	31	30	122	119	108	118	117	
26	Duke.....	37	20	27	20	27	40	29	40	30	30	121	120	106	125	118	
27	Carleton.....	36	..	26	..	37	..	22	10	30	17	124	121	101	122	117	
28	Elliot.....	35	20	23	20	28	..	29	..	28	55	125	120	106	118	117	
29	New Potter.....	35	20	30	..	37	..	32	..	33	35	126	120	105	114	116	
30	Trilby.....	34	40	27	20	22	20	39	30	30	58	122	120	108	114	116	
31	Creeper.....	34	40	30	..	32	..	34	30	32	48	120	120	102	112	114	
32	Agnes.....	34	40	40	..	26	40	41	40	35	45	120	120	108	111	115	
33	Vincent.....	34	..	20	..	25	..	33	40	28	10	123	120	106	116	116	
34	Fergus.....	34	..	28	..	28	20	32	30	30	43	129	121	108	118	119	
35	Dover.....	34	..	30	..	18	20	27	40	27	30	126	121	108	114	117	
36	Macoun.....	34	..	30	40	40	40	32	50	34	33	126	121	106	121	119	
37	Wisconsin Blue.....	34	..	26	..	26	20	27	..	28	20	122	120	108	121	118	
38	Archer.....	33	20	36	..	17	..	30	..	29	5	124	121	109	121	119	
39	Elephant Blue.....	32	40	23	20	18	40	31	..	26	25	122	120	103	115	115	
40	Bruce.....	32	..	28	40	53	..	35	40	32	20	121	121	108	120	118	
41	Oddfellow.....	32	..	24	40	33	20	30	50	30	13	118	120	108	118	116	
42	Large White Marrowfat.....	31	20	28	..	17	40	43	..	30	..	122	120	106	115	116	
43	Gregory.....	31	20	30	..	36	40	32	40	32	40	125	121	108	114	117	
44	Victoria.....	30	40	33	20	30	..	33	20	31	50	127	133	106	121	122	
45	Centennial.....	30	40	24	40	46	..	38	50	35	3	126	121	105	118	118	
46	Mummy.....	30	40	25	20	35	40	40	30	33	3	123	120	104	120	117	
47	French Canner.....	30	..	25	20	36	40	24	20	29	5	119	121	108	116	116	
48	Perth.....	30	..	18	..	35	20	30	40	28	30	122	118	109	114	116	
49	Bright.....	29	20	30	40	30	..	35	..	31	15	124	121	104	114	116	
50	Bedford.....	29	20	34	40	24	20	37	30	31	28	126	120	108	126	120	
51	Picton.....	29	20	30	40	33	40	37	20	32	45	121	120	105	116	116	
52	Lanark.....	28	40	25	20	40	..	33	..	31	45	127	121	105	114	117	
53	German White.....	28	40	25	20	21	..	27	20	25	35	121	116	108	111	114	
54	Elder.....	27	20	20	..	25	40	24	40	24	25	128	121	109	119	119	
55	Herald.....	26	..	..	..	..	40	29	20	28	40	128	123	108	125	121	
56	Chelsea.....	26	..	..	..	..	20	28	40	24	50	125	121	109	126	120	
57	Grass Pea.....	23	2	..	..	..	..	..	19	30	24	3	133	127	..	136	132



The twelve varieties of pease which have given the largest crops at the several Experimental Farms during 1902, are the following—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Cooper..	48	40	7. Arthur..	44 40
2. Mackay..	46	40	8. Fenton..	44 40
3. Ide..	46	..	9. Harrison's Glory..	14 40
4. Nelson..	46	..	10. Crown..	43 20
5. Pearl..	45	20	11. Canadian Beauty..	43 20
6. Paragon..	45	20	12. Prince Albert..	42 40

An average crop of 45 bushels 7 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Agnes....	40	..	7. Bright..	30 40
2. Archer..	36	..	8. Picton..	30 40
3. Bedford..	34	40	9. Creeper..	30 ..
4. Multiplier..	33	20	10. New Potter..	30 ..
5. Victoria..	33	20	11. Dover..	30 ..
6. Macoun..	30	40	12. Gregory..	30 ..

An average crop of 32 bushels 27 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Alma..	57	20	7. White Wonder..	45 ..
2. Daniel O'Rourke..	50	..	8. Harrison's Glory..	42 40
3. Prince..	48	40	9. Macoun..	40 40
4. Centennial..	46	..	10. Paragon....	40 20
5. Crown..	45	20	11. Lanark..	40 ..
6. Chancellor..	45	20	12. Arthur..	39 ..

An average crop of 45 bushels 2 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Prince..	45	20	7. Mackay..	40 10
2. Large White Marrowfat..	43	..	8. Trilby..	39 30
3. White Wonder..	42	30	9. Nelson..	39 10
4. Agnes..	41	40	10. Centennial..	38 50
5. Golden Vine..	41	20	11. Prince Albert..	38 40
6. Mummy..	40	30	12. Harrison's Glory..	38 30

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

The twelve varieties of pease which have given the largest crops in 1902, taking the average results obtained on all the Experimental Farms, are the following :—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Prince..	41	..	7. Cooper..	36	37
2. Alma..	39	30	8. Harrison's Glory..	36	27
3. White Wonder..	37	52	9. Agnes..	35	45
4. Mackay..	37	27	10. Prince Albert..	35	45
5. Arthur..	37	3	11. Pride..	35	33
6. Crown..	36	45	12. Early Britain..	35	32

An average crop of 37 bushels 6 lbs. per acre.

The average crop of all the varieties of pease tested at each of the Experimental Farms in 1902, was as follows :—At Ottawa, 36 bushels 15 lbs. per acre ; Nappan, 26 bushels 41 lbs. ; Indian Head, 32 bushels 56 lbs., and at Agassiz, 34 bushels. The average return given by the whole of the varieties at all the farms was 32 bushels 56 lbs. per acre.

#### TRIAL PLOTS OF INDIAN CORN.

The number of varieties of corn tested in 1902 was thirty-six. These were all 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, Ont., May 27. Nappan, N.S., May 30, Brandon, Man., May 31 and June 1, Indian Head, N.W.T., May 29, and at Agassiz, B.C., May 23.

The crop in each case was cut green and put into the silo for the winter feeding of stock. The dates of cutting were Ottawa, September 25, Nappan, October 30, Brandon, September 5, Indian Head, September 8, and at Agassiz, October 10. The yield per acre has been calculated in each case from the weight obtained from two rows each 66 feet long.

In Canada the ton is 2,000 lbs.

## UNIFORM TEST PLOTS OF INDIAN CORN.

Number.	NAME OF VARIETY.	YIELD PER ACRE AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1902.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Assiz, B.C.		Average of all Farms.	
		Per Tons.	Per Acres. Lbs.	Per Tons.	Per Acres. Lbs.	Per Tons.	Per Acres. Lbs.	Per Tons.	Per Acres. Lbs.	Per Tons.	Per Acres. Lbs.	Per Tons.	Per Acres. Lbs.
1	Eureka.....	32	460	25	600	16	736	7	124	13	1500	18	1884
2	North Dakota Yellow.....	31	1800	20	1250	17	1904	6	408	15	140	18	700
3	Salzer's All Gold.....	30	60	23	1300	19	16	9	1800	22	1320	21	99
4	King Philip.....	28	320	19	1270	15	1680	8	1820	18	1840	18	586
5	Early Butler.....	26	1020	22	1100	16	472	8	1080	21	680	19	70
6	Thoroughbred White Flint.....	26	360	24	1500	13	928	8	368	30	1600	20	1351
7	Mamm. Eight-rowed Flint.....	26	140	23	750	18	432	3	72	19	880	18	455
8	Country Gentleman.....	25	1700	17	650	13	400	1	1300	18	1950	15	800
9	Superior Fodder.....	25	300	22	1100	15	888	4	1768	22	660	18	143
10	White Cap Yellow Dent.....	24	1500	22	550	8	896	6	804	16	230	15	1196
11	Sanford.....	24	1280	20	700	8	104	6	1068	16	780	15	386
12	North Dakota White.....	24	840	19	1050	16	1264	4	184	17	320	16	732
13	Comptons Early.....	24	400	22	1100	15	624	8	368	18	520	17	1402
14	Giant Prolific Ensilage.....	24	400	25	600	11	1760	7	1840	22	1760	18	872
15	Pearce's Prolific.....	24	400	20	150	16	1528	8	1688	18	1180	17	1389
16	Pride of the North.....	23	1520	21	1450	14	1040	7	1708	25	1480	18	1439
17	Selected Leaming.....	23	1300	18	900	11	1760	9	348	17	100	16	182
18	Mammoth Cuban.....	22	1320	21	900	14	1832	6	1464	20	1690	17	641
19	Red Cob Ensilage.....	22	1100	22	....	11	440	6	1332	22	440	16	1862
20	Early Golden Surprise.....	22	....	17	650	13	1192	3	1656	17	650	14	1629
21	King of the Earliest.....	20	920	19	550	16	1000	7	1972	21	460	17	180
22	Champion White Pearl.....	20	700	18	850	18	696	8	206	22	880	17	1066
23	Longfellow.....	20	700	22	....	14	1040	5	296	14	1040	15	615
24	Angel of Midnight.....	20	....	19	550	15	624	4	1900	16	1660	15	547
25	Black Mexican.....	20	....	20	1250	10	1648	6	1596	16	120	14	1723
26	Yellow Six Weeks.....	19	1160	12	1830	11	968	6	1200	11	1760	12	988
27	Evergreen Sugar.....	18	1840	22	....	13	1720	6	12	18	960	15	1706
28	Early Yellow Long Eared.....	18	1620	19	1600	11	1760	6	1860	22	....	15	1768
29	Cloud's Early Yellow.....	18	960	17	1750	11	176	5	1088	18	1740	14	743
30	Canada White Flint.....	17	760	22	1100	11	1760	3	72	16	450	14	428
31	Early Mastodon.....	17	760	18	1400	14	1568	2	356	22	220	15	61
32	Mitchell's Early.....	17	760	12	200	12	1080	7	134	11	1650	12	365
33	Salzer's Earliest Ripe.....	17	100	12	750	11	1760	3	1920	15	1900	12	486
34	Extra Early Huron.....	16	1220	16	1000	11	704	4	1636	24	1500	14	1612
35	Kendall's Early Giant.....	14	1920	17	1750	13	400	3	468	17	760	13	659
36	Early August.....	3	1920	*	....	9	160	1	1696	†	....	5	259

\* Not sown. † Seed did not germinate.

The six varieties of Indian corn which have given the heaviest crops at the several Experimental Farms during 1902, are the following :-

## CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Eureka.....	32 460	4. King Philip..	28 320
2. North Dakota Yellow....	31 1,800	5. Early Butler..	26 1,020
3. Salzer's All Gold..	30 60	6. Thoro'bred White Flint..	26 360

An average crop of 29 tons 337 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant Prolific Ensilage.. . . . .	25	600	4. Salzer's All Gold.. . . . .	23	1,300
2. Eureka.... . . . .	25	600	5. Mamm. Elght-rowed Flint.... . . . .	23	750
3. Thoro'bred White Flint.. . . . .	24	1,500	6. Salzer's Superior Fodder.. . . . .	22	1,100

An average crop of 24 tons 142 lbs. per acre.

## EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Salzer's All Gold.. . . . .	19	16	4. North Dakota Yellow.. . . . .	17	1,904
2. Champlon White Pearl.. . . . .	18	696	5. Pearce's Prolific.. . . . .	16	1,528
3. Mamm. Elght-rowed Flint.. . . . .	18	432	6. North Dakota White.. . . . .	16	1,264

An average crop of 17 tons 1,640 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Salzer's All Gold.... . . . .	9	1,800	4. Pearce's Prolific.. . . . .	8	1,638
2. Selected Leaming.. . . . .	9	348	5. Early Butler.. . . . .	8	1,030
3. King Phillip.. . . . .	8	1,820	6. Thoro'bred White Flint.. . . . .	8	868

An average crop of 8 tons 1,847 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Thoro'bred White Flint.. . . . .	30	1,600	4. Giant Prolific Ensilage . . . . .	22	1,760
2. Pride of the North.. . . . .	25	1,480	5. Salzer's All Gold.. . . . .	22	1,320
3. Extra Early Huron.. . . . .	24	1,500	6. Champlon White Pearl . . . . .	22	830

An average crop of 24 tons 1,757 lbs. per acre.

The six varieties of Indian corn which have given the heaviest crops in 1902, taking the average of the results obtained on all the Experimental Farms, are the following :—

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Salzer's All Gold.. . . . .	21	99	4. Eureka.. . . . .	18	1,884
2. Thoro'bred White Flint.. . . . .	20	1,751	5. Pride of the North.. . . . .	18	1,439
3. Early Butler.. . . . .	19	70	6. Giant Prolific Ensilage.. . . . .	18	872

An average crop of 19 tons 952 lbs. per acre.

The average crop of all the varieties, cut green, of Indian corn tested at each of the Experimental Farms in 1902, was as follows :—At Ottawa, 22 tons 155 lbs. per acre ; Nappan, 20 tons 162 lbs. ; Brandon, 13 tons 1,432 lbs. ; Indian Head, 6 tons

156 lbs., and at Agassiz, 19 tons 81 lbs. The average return given by the whole of the varieties at all the farms was 16 tons 140 lbs. per acre.

### TRIAL PLOTS OF TURNIPS.

Thirty varieties of turnips were tested in 1902, 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, Ont., October 14, Nappan, N.S., October 30, Brandon, Man., October 2, Indian Head, N.W.T., October 4, and at Agassiz, B.C., October 24. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF TURNIPS.

Number.	NAME OF VARIETY.	OTTAWA, ONT.		NAPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMERS.	
		Sown May 12.	Sown May 25.	Sown May 21.	Sown June 5.	Sown May 26.	Sown June 9.	Sown May 23.	Sown June 7.	Sown May 22.	Sown June 5.	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	East Lothian.....	53 1,910	34 1,960	38 230	28 100	14 1,598	16 1,264	15 1,680	13 640	20 920	27 780	28 1,251	24 149
2	Good Luck.....	52 280	29 740	43 750	34 475	19 16	22 616	17 680	13 880	25 160	28 1,430	31 1,577	25 1,226
3	Halewood's Bronze Top.....	49 670	30 1,710	42 975	36 1,425	15 1,152	18 1,488	17 320	12 1,440	23 1,355	29 1,440	29 1,294	25 700
4	Jumbo.....	48 360	22 880	34 805	27 1,075	17 56	15 1,680	14 1,400	13 400	28 285	28 1,420	28 577	21 1,131
5	Hall's Westbury.....	46 1,720	28 1,420	45 750	37 1,275	15 624	15 1,416	15 480	11 80	28 100	30 720	30 335	24 1,342
6	Imperial Swede.....	46 1,720	28 1,420	41 830	31 1,855	9 1,272	20 1,976	16 1,960	12 1,920	23 1,520	29 740	27 1,460	24 1,516
7	Emperor Swede.....	46 1,300	36 1,260	38 725	28 1,759	11 1,760	20 1,976	16 1,960	12 1,920	23 1,520	29 740	27 1,460	24 1,516
8	Magnum Bonum.....	46 730	33 660	47 380	37 250	19 544	20 392	15 120	10 640	24 675	27 130	30 1,889	25 1,212
9	Giant King.....	46 400	30 60	47 50	34 1,795	15 360	16 1,264	16 169	11 800	23 1,850	23 1,530	29 1,364	23 689
10	Elephant's Master.....	45 1,740	25 490	49 1,000	38 1,150	13 1,984	16 2,08	14 930	6 480	23 800	26 1,460	29 901	22 1,157
11	New Century.....	45 750	21 1,560	36 600	29 475	13 1,984	17 1,640	14 1,280	12 1,600	24 1,500	30 70	27 23	23 1,069
12	Bangholm Selected.....	44 1,430	33 660	42 1,800	36 1,755	19 1,600	20 1,184	16 880	10 1,600	20 500	26 1,865	28 1,640	25 1,413
13	Marmoth Clyde.....	44 770	26 470	40 25	28 1,750	10 1,384	21 1,560	15 1,800	12 960	Not sown.	Not sown.	27 1,495	22 685
14	Prize Winner.....	44 770	26 470	40 25	28 1,750	10 1,384	21 1,560	15 1,800	12 960	Not sown.	Not sown.	27 1,495	22 685
15	Champion Purple Top.....	44 1,100	38 1,035	29 905	15 96	21 824	26 536	14 1,400	12 960	26 470	30 70	29 1,492	26 932
16	Shamrock Purple Top.....	44 1,100	31 1,690	41 1,655	31 1,405	21 1,824	26 536	14 1,400	12 960	26 470	30 70	29 1,492	26 932
17	Drummond Purple Top.....	43 1,120	29 1,730	42 1,395	36 600	18 168	20 920	15 480	11 520	22 880	30 60	28 988	25 1,366
18	Perfection Swede.....	43 790	25 820	46 1,555	38 395	18 432	23 1,784	16 160	14 800	26 1,188	28 1,090	28 1,408	25 5
19	Prize Purple Top.....	42 810	26 1,130	46 410	38 1,055	18 432	23 1,784	16 160	14 800	26 1,188	28 1,090	28 1,408	25 5
20	Kangaroo.....	42 480	28 100	45 313	34 475	18 1,224	20 920	14 1,160	12 960	25 800	26 140	28 1,567	24 1,633
21	Skirvings.....	39 1,860	19 940	37 1,900	28 1,750	25 424	18 696	13 1,960	11 80	27 440	26 140	28 1,567	24 1,633
22	Selected Purple Top.....	39 1,580	29 80	41 500	31 205	13 400	19 544	13 2,960	11 80	27 440	26 140	28 1,567	24 1,633
23	Marquis of Lorne.....	38 1,200	24 1,830	40 1,675	32 350	15 888	17 1,904	14 560	12 240	26 1,955	26 470	27 855	23 1,359
24	Monarch.....	38 1,880	25 1,150	36 1,425	37 975	12 1,344	16 1,600	14 1,610	11 80	24 675	30 920	25 993	20 485
25	Carter's Elephant.....	37 910	21 1,230	45 1,905	36 1,225	13 1,436	15 360	14 1,040	14 320	31 40	32 1,670	28 1,070	24 221
26	New Arctic.....	36 980	2 1,440	42 1,140	31 790	20 1,976	16 768	16 160	12 720	24 840	26 140	28 209	23 1,553
27	West Norfolk Red Top.....	35 1,610	19 610	44 605	35 950	15 888	16 203	12 1,560	9 960	20 425	26 240	25 1,417	20 693
28	Selected Champion.....	28 1,420	24 1,170	41 5	34 1,300	16 472	13 400	Not sown.	Not sown.	16 1,640	19 1,600	25 1,389	23 117
29	Sutton's Champion.....	22 1,540	21 1,890	50 155	42 975	17 1,112	19 280	15 1,320	10 1,680	19 240	28 1,090	25 873	24 1,167
30	Webb's New Renown.....	20 1,580	20 260	35 125	27 450	21 504	23 464	17 440	18 1,680	19 160	16 1,330	22 1,362	21 437

The crops of the two sowings of turnips at the Experimental Farms in 1902 have averaged per acre as follows :—

Central Experimental Farm, first sowing . . . . .	42	84
“ second sowing . . . . .	27	318
Experimental Farm, Nappan, first sowing . . . . .	42	667
“ Nappan, second sowing . . . . .	33	786
“ Brandon, first sowing . . . . .	16	604
“ Brandon, second sowing . . . . .	19	377
“ Indian Head, first sowing . . . . .	15	546
“ Indian Head, second sowing . . . . .	12	68
“ Agassiz, first sowing . . . . .	24	834
“ Agassiz, second sowing . . . . .	26	1,335

Average crop from all the plots at all the farms, first sowing 28 tons 196 lbs, second sowing 23 tons 1,494 lbs., showing an advantage in favour of the first sowing of 4 tons 702 lbs. per acre. It will be seen that the early sown plots have given the larger crops at all the experimental farms, excepting at Brandon and Agassiz, where the later sown crops have given the heavier yields.

The six varieties of turnips which have given the heaviest crops at the several experimental farms during the season of 1902, 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.		
1. East Lothian . . . . .	53	1,910	4. Jumbo . . . . .	48	360
2. Good Luck . . . . .	52	280	5. Hall's Westbury . . . . .	46	1,720
3. Halewood's Bronze Trop. . . . .	49	670	6. Imperial Swede . . . . .	46	1,720

An average crop of 49 tons 1,110 lbs. per acre.

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

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Sutton's Champion . . . . .	50	155	4. Giant King . . . . .	47	50
2. Elephant's Master . . . . .	49	1,000	5. Perfection Swede . . . . .	46	1,555
3. Magnum Bonum . . . . .	47	380	6. Prize Purple Top . . . . .	46	400

An average crop of 47 tons 1,589 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Champion Purple Top (2nd sowing)	26	536	4. Webb's New Renown (2nd sowing)	23	464
2. Skirvings . . . . .	25	424	5. Good Jack (2nd sowing) . . . . .	22	616
3. Perfection Swede (2nd sowing) . . . . .	23	1,784	6. Mammoth Clyde (2nd sowing) . . . . .	21	1,560

An average crop of 23 tons 1,731 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Webb's New Renown (2nd sowing)	18	1,680	4. Imperial Swede	16	1,960
2. Good Luck	17	680	5. Bangholm Selected	16	880
3. Halewood's Bronze Top	17	320	6. Perfection Swede	16	160

An average crop of 17 tons 280 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Carter's Elephant (2nd sowing)	32	1,670	4. New Century (2nd sowing)	30	70
2. Hall's Westbury (2nd sowing)	30	720	5. Shamrock Purple Top (2nd sowing)	30	60
3. Champion Purple Top (2nd sowing)	30	70	6. Imperial Swede (2nd sowing)	29	740

An average crop of 30 tons 888 lbs. per acre.

The six varieties of turnips which have produced the heaviest crops in 1902, taking the average of the results obtained on all the experimental farms, are the following:—

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Good Luck	31	1,577	4. Perfection Swede	30	77
2. Magnum Bonum	30	889	5. Champion Purple Top	29	1,492
3. Hall's Westbury	30	335	6. Giant King	29	1,754

An average crop of 30 tons 622 lbs. per acre.

## TRIAL PLOTS OF MANGELS.

Twenty-seven varieties of mangels have been under test during 1902, all were 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, Ont., October 4, Nappan, N.S., October 28, Brandon, Man., September 20, Indian Head, N.W.T., October 3, and at Agassiz, B.C., October 22. The yield per acre has been calculated in each case from the weight of roots gathered from two rows each 66 feet long.

In Canada the ton is 2,000 lbs.



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 12.	Per acre. Tons, lbs.	Sown May 20.	Per acre. Tons, lbs.	Sown May 27.	Per acre. Tons, lbs.	Sown June 10.	Per acre. Tons, lbs.	Sown May 28.	Per acre. Tons, lbs.	Sown May 6.	Per acre. Tons, lbs.	Sown May 20.	Per acre. Tons, lbs.	First Sowing.	Per acre. Tons, lbs.	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.	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	Mammoth Long Red	55	550	41	1,490	12	1,344	17	584	13	1,480	9	480	51	1,620	37	580	35	97	26	1,522			
2	Norrbton Giant	52	280	30	720	12	1,170	12	288	11	920	8	560	38	1,220	31	40	30	922	22	562			
3	Triumph Yellow Globe	51	1,950	36	930	38	65	1,590	11	1,292	13	1,600	11	80	31	760	26	865	30	709	25	104		
4	Mam. Yellow Intermediate	51	300	37	1,240	45	915	13	1,192	13	760	7	1,840	32	1,470	33	330	30	1,511	25	1,269			
5	Lion Yellow Intermediate	50	1,970	36	600	50	1,145	13	1,384	16	1,762	13	280	9	47	1,710	38	880	35	616	28	622		
6	Mammoth Oval Shaped	49	1,060	32	680	38	725	28	1,225	10	1,912	14	1,832	11	1,040	7	1,600	41	830	30	701	22	330	
7	Prize Winner Yellow Globe	47	60	32	20	40	25	36	270	13	664	15	1,152	13	40	8	1,760	36	1,530	26	800	30	73	
8	Yellow Intermediate	46	1,060	35	1,280	40	190	30	295	15	96	14	320	10	400	42	1,140	38	1,230	31	992	26	1,604	
9	Leviathan Long Red	44	1,760	35	620	31	865	30	295	15	96	13	1,000	10	160	31	40	30	1,050	36	679	24	480	
10	Selected Mammoth Long Red	44	440	30	1,710	36	1,735	37	1,225	13	669	14	1,849	12	480	9	960	45	750	37	1,900	26	519	
11	Prize Mammoth Long Red	43	1,450	25	1,150	37	1,075	31	1,325	11	176	15	1,152	13	1,240	6	1,680	41	1,820	36	270	29	1,132	
12	Warden Orange Globe	43	1,120	30	300	38	230	28	1,231	5	32	14	1,304	11	1,040	5	1,280	48	360	31	1,630	29	556	
13	Canadian Giant	42	1,470	30	1,380	38	1,290	32	1,375	11	1,496	15	360	11	1,040	9	1,440	48	360	31	1,630	29	556	
14	Gate Post	41	1,820	31	700	44	935	36	1,065	11	440	15	888	12	1,440	9	1,280	37	1,970	36	1,920	29	1,241	
15	Giant Yellow Globe	41	880	27	1,110	37	580	29	245	7	1,576	14	1,040	12	240	8	1,040	41	590	32	680	27	1,945	
16	Ward's Large Oval Shaped	40	830	26	1,130	33	1,650	26	1,625	10	388	15	1,152	15	240	6	240	43	1,285	38	230	28	1,403	
17	Selected Yellow Globe	39	540	26	1,460	47	50	37	745	13	1,944	17	1,376	14	200	10	1,600	38	800	28	430	30	1,025	
18	Half Long Sugar White	38	1,880	30	1,050	46	355	32	1,905	12	552	15	96	13	880	9	1,200	46	400	36	1,920	30	499	
19	Champion Yellow Globe	38	250	31	700	38	1,715	33	1,570	9	1,860	14	1,304	11	320	9	1,400	42	1,800	32	1,505	30	1,138	
20	Giant Sugar Mangel	36	270	33	690	39	210	34	1,960	10	1,290	14	1,776	10	1,840	8	800	40	685	28	1,000	27	1,254	
21	Gate Post Yellow	35	1,610	25	830	35	1,290	33	1,320	11	1,040	13	1,320	9	1,440	9	1,440	32	1,340	31	1,690	26	452	
22	Half Long Sugar Rose	33	1,980	25	1,810	41	590	34	970	11	1,776	13	290	7	400	36	1,990	26	800	27	571	50	1,978	
23	Yellow Fleshed Tankard	32	1,340	20	590	44	1,760	35	1,445	7	1,048	17	584	14	1,640	8	1,540	36	1,600	36	1,460	27	478	
24	Giant Yellow Half Long	25	1,150	20	320	44	1,596	36	1,425	11	1,892	15	1,152	15	640	8	1,040	45	1,060	36	1,590	28	1,263	
25	Golden Fleshed Tankard	23	200	21	900	41	1,490	33	1,485	8	1,952	13	1,230	13	880	7	880	36	1,260	32	1,670	24	1,556	
26	Red Fleshed Tankard	22	1,540	20	1,580	36	1,425	28	1,225	11	176	15	1,152	12	1,200	9	960	Not sown.	Not sown.	Not sown.	Not sown.	Not sown.	Not sown.	Not sown.
27																								

The crops from the two sowings of mangels at the Experimental Farms in 1902 have averaged per acre as follows:—

Central Experimental Farm, first sowing	41 tons.	439 lbs.	Experimental Farm, Indian Head, first sowing	13 tons.
" " second sowing	29 "	1,273 "	" " second sowing	8 "
Experimental Farm, Nappan, first sowing	40 "	495 "	Agassiz, first sowing	40 "
" " second sowing	33 "	782 "	" " second sowing	33 "
" " first sowing	11 "	1,016 "	Average crop from all the plots at all the farms: first sowing, 29 tons 273 lbs., second sowing, 23 tons 399 lbs., showing an advantage in favour of early sowing of 5 tons 1,274 lbs. per acre.	
" " second sowing	15 "	146 "		

The six varieties of mangels which have produced the heaviest crops at the several experimental farms during 1902, 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.		
1. Mammoth Long Red.....	55	550	4. Mnmm. Yellow Intermediate ..	51	390
2. Norblton Giant..	52	280	5. Lion Yellow Intermediate... ..	50	1,970
3. Triumph Yellow Globe..	51	1,950	6. Mammoth Oval Shaped..	49	1,000

An average crop of 51 tons 1,675 lbs. per acre.

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

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Lion Yellow Intermediate..	50	1,145	4. Mamm. Yellow Intermediate... ..	45	915
2. Selected Yellow Globe..	47	50	5. Giant Yellow Half Long... ..	44	1,760
3. Champlon Yellow Globe..	46	235	6. Giant Yellow Intermediate..	44	1,595

An average crop of 46 tons 950 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Selected Yellow Globe (2nd sowing)	17	1,376	4. Norblton Giant (2nd sowing) ..	17	320
2. Mamm. Long Red (2nd sowing)..	17	584	5. Lion Yellow Intermediate (2nd sowing)...	16	1,792
3. Giant Yellow Half Long (2nd sowing)...	17	534	6. Half Long Sugar Rosy..	16	1,132

An average crop of 17 tons 298 lbs per acre.

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

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Giant Yellow Intermediate..	15	600	4. Yellow Intermediate ..	14	320
2. Ward's Large Oval-shaped..	..	240	5. Selected Yellow Globe..	14	200
3. Giant Yellow Half Long..	14	1,640	6. Triumph Yellow Globe..	13	1,600

An average crop of 14 tons 1,100 lbs. per acre.

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

		Per acre.			Per acre.
		Tons.	Lbs.		
1. Mammoth Long Red..	51	1,620	4. Hulf Long Sugar White..	46	400
2. Warden Orange Globe..	48	360	5. Giant Yellow Intermediate ..	45	1,080
3. Lion Yellow Intermediate..	47	1,700	6. Selected Mamm. Long Red ..	45	750

An average crop of 47 tons 985 lbs. per acre.

The six varieties of mangels which have produced the heaviest crops in 1902, taking the average of the results obtained on all the experimental farms are :

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Lion Yellow Intermediate.. . . .	35	616	4. Selected Yellow Globe.. . . .	30	1,925
2. Mammoth Long Red.. . . .	35	97	5. Mamm. Yellow Intermediate.. . . .	30	1,511
3. Yellow Intermediate.. . . .	31	996	6. Champlon Yellow Globe .. . . .	30	1,138

An average crop of 32 tons 714 lbs per acre.

### TRIAL PLOTS OF CARROTS.

Twenty different sorts of carrots were tested during 1902, all sown on drills or on the flat 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, Ont., October 14, Nappan, N.S., October 24, Brandon, Man., October 2, Indian Head, N.W.T., October 5, and at Agassiz, B.C., October 28. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF CARROTS.

Number	Name of Variety.	OTTAWA, ONT.		VIPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMS.	
		Sown May 12.	Sown May 26.	Sown May 21.	Sown June 5.	Sown May 27.	Sown June 10.	Sown April 30.	Sown May 28.	Sown May 6.	Sown May 20.	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 Orange Giant	39 1,200	21 900	15 835	17 815	12 200	9 1,800	10 1,360	7 640	31 700	30 1,710	21 1,653	17 773
2	Mamm. White Intermediate	35 1,610	28 100	21 240	18 300	5 120	14 1,480	11 1,760	7 1,000	40 520	31 370	22 1,650	19 1,970
3	Half Long White	35 620	28 800	22 560	20 1,745	7 960	9 1,800	14 800	10 1,360	29 1,730	29 1,730	21 1,690	19 1,067
4	Improved Short White	33 900	28 760	21 900	16 340	7 80	5 1,880	13 840	10 400	40 190	39 540	23 200	19 1,984
5	Iveson's Champion	33 990	29 1,730	21 405	19 1,435	8 720	11 880	17 1,280	10 160	38 1,220	32 680	23 1,723	20 1,377
6	Giant White Voeges	33 330	27 1,770	20 1,250	17 650	9 40	9 1,800	16 1,20	8 1,040	46 400	38 1,640	25 228	20 960
7	Green Top White Orthe	31 1,360	24 1,500	21 900	20 1,085	11 1,320	13 1,280	14 1,760	8 1,760	39 540	34 1,745	23 1,576	20 1,084
8	Half Long Chantansy	31 1,030	27 780	16 565	17 815	9 1,300	12 640	14 960	9 .....	27 245	23 835	19 1,548	17 1,326
9	Ontario Champion	30 1,380	26 800	21 75	17 1,310	16 120	9 1,800	15 960	8 560	33 660	25 820	22 1,623	17 806
10	New White Intermediate	27 1,440	21 1,890	19 610	15 360	9 480	12 640	14 80	8 560	39 1,035	34 970	24 718	19 352
11	Long Yellow Stump Rooted	26 1,130	26 470	15 1,350	13 1,885	9 40	13 1,840	11 1,280	5 1,520	22 1,670	21 1,560	17 334	16 655
12	Guarande or Ox-heart	24 1,830	20 240	16 1,660	13 1,535	11 1,320	10 680	9 1,680	5 1,760	40 400	31 310	20 1,378	16 513
13	White Belgian, Large Short	24 180	20 920	19 1,930	15 360	9 1,800	9 40	11 1,760	6 960	42 1,800	39 1,200	21 1,494	18 296
14	White Belgian, Large Short	24 180	20 920	19 1,930	15 360	9 1,800	9 40	11 1,760	6 960	42 1,800	39 1,200	21 1,494	18 296
15	Yellow Intermediate	23 1,520	15 30	17 630	14 1,865	11 .....	11 1,320	10 1,000	5 1,760	23 1,190	21 1,890	18 518	15 281
16	Long Scarlet Altringham	22 1,210	22 880	14 875	12 585	7 1,840	4 800	7 640	7 400	25 160	21 1,880	16 937	14 1,247
17	Early Gem	22 1,210	22 880	14 875	12 585	7 1,840	4 800	7 640	7 400	25 160	21 1,880	16 937	14 1,247
18	Long Orange or Surrey	16 1,000	14 1,700	14 1,700	13 1,720	6 320	5 1,880	11 200	6 480	18 960	16 1,660	13 1,364	11 1,068
19	Scarlet Intermediate	16 1,000	15 690	16 1,000	14 1,700	6 1,640	10 240	8 680	7 400	20 540	18 1,620	13 1,363	13 530
20	Scarlet Nantes	14 1,040	11 1,100	15 525	13 400	3 160	4 360	6 120	4 640	17 320	16 505	11 433	9 1,801

The crops from the two sowings of carrots at the experimental farms in 1902, have averaged as follows:—

	Tons.	Lbs.
Central Experimental Farm, first sowing	27	1,885
" " second sowing	22	1,094
Experimental Farm, Nappan, first sowing	18	1,347
" " second sowing	16	860
Brandon, first sowing	8	1,908
" " second sowing	9	1,992
Indian Head, first sowing	12	700
" " second sowing	7	1,096
Experimental Farm, Agassiz, first sowing	30	1,264
" " second sowing	27	171

Average crop from all the plots at all the farms: first sowing, 19 tons 1,421 lbs.; second sowing, 16 tons 1,446 lbs.; showing an advantage in favour of the early sown plots of 2 tons 1,975 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops at the several experimental farms during the season of 1902, 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. Carter's Orange Giant.. . . . .	39	1,200	4. Improved Short White.. . . . .	33	990
2. Mamm. White Intermediate.. . . .	35	1,610	5. Iverson's Champion.. . . . .	33	990
3. Half Long White.. . . . .	35	620	6. Giant White Vosges.. . . . .	33	330

An average crop of 35 tons 290 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Half Long White.. . . . .	22	550	4. Green Top White Orthe.. . . .	21	900
2. Yellow Intermediate.. . . . .	22	220	5. Iverson's Champion.. . . . .	21	405
3. Improved Short White.. . . . .	21	900	6. Mamm. White Intermediate.. . .	21	240

An average crop of 21 tons 1,202 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. New White Intermediate.. . . . .	16	120	4. Guerande or Ox-heart (2nd sowing).. . . . .	13	840
2. Mamm. White Intermediate (2nd sowing).. . . . .	14	1,480	5. Half Long Chantenay.. . . . .	12	640
3. Green Top White Orthe (2nd sowing).. . . . .	13	1,280	6. Long Yellow Stump Rooted.. . .	12	640

An average crop of 13 tons 1,500 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Iverson's Champion.. . . . .	17	1,280	4. Green Top White Orthe.. . . .	14	1,760
2. Giant White Vosges.. . . . .	16	1,120	5. Ontario Champion.. . . . .	14	1,520
3. New White Intermediate.. . . . .	15	960	6. Half Long White.. . . . .	14	800

An average crop of 15 tons 1,240 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant White Vosges.. . . . .	46	400	4. White Vosges Large Short . . . .	40	400
2. White Belgian.. . . . .	42	1,800	5. Improved Short White.. . . . .	40	190
3. Mamm. White Intermediate.. . . .	40	520	6. Green Top White Orthe . . . . .	39	540

An average crop of 41 tons 975 lbs. per acre.

The six varieties of carrots which have produced the heaviest crops in 1902, taking the average of the results obtained on all the experimental farms, are the following:—

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant White Vosges.. . . . .	25	228	4. Green Top White Orthe.. . . .	23	1,576
2. New White Intermediate.. . . .	24	719	5. Improved Short White.. . . .	23	200
3. Iverson's Champion.... . . . .	23	1,723	6. Mamm. White Intermediate.. . .	23	1,650

Average crop of 23 tons 1,682 lbs. per acre.

### TRIAL PLOTS OF SUGAR BEETS.

Eight varieties of sugar beets have been tested during 1902, 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, Ont., October 14, Nappan, N.S., October 28, Brandon, Man., September 20, Indian Head, N.W.T., October 3, and at Agassiz, B.C., October 22. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

In Canada the ton is 2,000 lbs.

UNIFORM TEST PLOTS OF SUGAR BEETS.

Number.	NAME OF VARIETY.	OTTAWA.		NAPPAN, N.S.		BRANDON, MAN.		INDIAN HEAD, N.W.T.		AGASSIZ, B.C.		AVERAGE OF ALL FARMS.				
		Sown May.	n Acres.	Sown May 20.	Per Acre. Tons. Lbs.	Sown May 27.	Per Acre. Tons. Lbs.	Sown June 10.	Per Acre. Tons. Lbs.	Sown May 28.	Per Acre. Tons. Lbs.	Sown June 7.	Per Acre. Tons. Lbs.	First Sowing.	Second Sowing.	
1	Royal Giant .....	38	1,880/28	1,750/37	1,240/34	1,300/8	1,424/14	1,040/10	400/9	490/37	580/36	1,400/26	1,105/22	1,342		
2	Danish Improved .....	37	1,570/30	720/32	120/24	1,830/12	24/14	512/10	1,720/8	1,040/38	230/26	1,460/26	333/30	1,912		
3	Danish Red Top .....	37	1,570/33	.....	31	1,525/25	325/8	500/13	1,192/9	1,200/5	1,530/29	1,730/25	1,580/23	1,323		
4	Red Top Sugar .....	35	1,940/25	1,150/30	.....	1,380/25	820/13	928/12	24/8	560/9	.....	27	1,935/26	305/23	549/19	1,300
5	Improved Imperial .....	31	700/27	450/28	1,255/24	1,500/6	672/12	1,344/7	1,720/7	640/26	470/19	1,600/20	163/18	707		
6	Wanzleben .....	28	1,420/21	900/28	925/20	1,250/7	1,048/12	552/7	1,480/6	1,920/26	1,460/27	780/19	1,667/17	1,400		
7	Vilmorin's Improved .....	27	780/20	1,580/20	1,250/17	1,475/5	296/12	288/8	680/5	320/23	200/24	840/16	1,841/16	1,401		
8	French Very Rich .....	23	1,190/17	650/23	200/18	300/8	1,160/9	1,800/6	1,880/6	960/26	635/26	800/17	1,013/15	1,303		

The crops from the two sowings of sugar beets at the experimental farms in 1902 have averaged as follows:

	Tons.	Lbs.
Central Experimental Farm, first sowing .....	32	1,382
"                  "          second sowing.....	25	1,150
Experimental Farm, Nappan, first sowing.....	29	237
"                  "          second sowing.....	23	1,850
"                  "          "          second sowing.....	8	1,507
"                  "          "          second sowing.....	12	1,344
Indian Head, first sowing .....	8	1,205
"                  "          second sowing.....	7	610
Agassiz, first sowing.....	29	903
"                  "          second sowing.....	25	688

Average crop from all the plots at all the farms: first sowing, 21 tons, 1,447 lbs.; second sowing, 18 tons, 1,928 lbs.; showing an advantage in favour of early sowing of 2 tons, 1,519 lbs. per acre.

The four varieties of sugar beets which have produced the heaviest crops at the several experimental farms during the season of 1902, 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. Royal Giant.. . . . .	39	1,890	3. Danish Red Top.. . . . .	37	1,570
2. Danish Improved.. . . . .	37	1,570	4. Red Top Sugar.. . . . .	35	1,940

An average crop of 37 tons 1,240 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Royal Giant.. . . . .	37	1,240	3. Danish Red Top.. . . . .	31	1,525
2. Danish Improved.... . . . .	32	120	4. Red Top Sugar.. . . . .	30	1,380

An average crop of 33 tons 66 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Royal Giant (2nd sowing).. . . . .	14	1,040	3. Danish Red Top (2nd sowing) ..	13	1,192
2. Danish Improved (2nd sowing) ..	14	512	4. Red Top Sugar.. . . . .	13	928

An average crop of 13 tons 1,918 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 Improved.... . . . .	10	1,720	3. Danish Red Top.. . . . .	9	1,200
2. Royal Giant.. . . . .	10	400	4. Red Top Sugar (2nd sowing)..	9	..

An average crop of 9 tons 1,830 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Danish Improved.. . . . .	38	230	3. Danish Red Top.. . . . .	29	1,730
2. Royal Giant.. . . . .	37	580	4. Red Top Sugar.. . . . .	27	1,935

An average crop of 33 tons 619 lbs. per acre.



The four varieties of sugar beets which have produced the heaviest crops in 1902, taking the average of the results obtained on all the experimental farms are :

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Royal Giant.. . . . .	26	1,105	3. Danish Red Top.. . . . .	23	903
2. Danish Improved.. . . . .	26	333	4. Red Top Sugar.. . . . .	23	549

An average crop of 24 tons 1,722 lbs. per acre.

**TRIAL PLOTS OF POTATOES.**

Ninety varieties of potatoes have been under test during 1902. The potatoes 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, Ont., planted May 27, dug October 2; Nappan, N.S., planted May 29, dug October 3; Brandon, Man., planted May 20, dug September 30; Indian Head, N.W.T., planted May 7, dug October 2, and at Agassiz, B.C., planted May 14, dug September 22 to 30.

In Canada the bushel of potatoes is 60 lbs.

**UNIFORM TEST PLOTS OF POTATOES.**

Number.	NAME OF VARIETY.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.											
		Ottawa, On		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	Flemish Beauty.. . . . .	697	24	400	24	267	40	231	..	311	18	381	33
2	Irish Cobbler.. . . . .	646	48	385	..	352	..	289	12	361	54	406	59
3	Money Maker.. . . . .	622	36	424	36	330	..	266	12	369	..	402	29
4	Late Puritan.. . . . .	613	48	376	12	315	20	213	24	297	..	363	9
5	Troy Seedling.. . . . .	609	24	484	..	238	20	237	36	355	51	385	2
6	Irish Daisy.. . . . .	605	..	473	..	355	40	195	48	385	..	402	54
7	Dakota Red.. . . . .	594	..	517	..	223	40	226	36	360	48	384	25
8	Brown's Rot Proof.. . . . .	565	24	367	24	215	40	112	12	281	36	314	27
9	Carman No. 1.. . . . .	552	12	387	12	231	..	274	24	372	50	363	32
10	Swiss Snow Flake.. . . . .	532	24	244	12	260	20	231	..	347	..	322	59
11	Sabeen's Elephant.. . . . .	530	12	308	..	311	40	233	12	350	54	346	47
12	American Wonder.. . . . .	517	..	363	..	403	20	226	36	328	54	367	46
13	Hale's Champion.. . . . .	506	..	462	..	432	40	246	24	275	..	384	25
11	Enormous.. . . . .	501	36	495	..	557	20	169	24	327	48	410	14
15	Sharpe's Seedling.. . . . .	499	24	422	21	425	20	235	24	367	4	389	55
16	Reeves' Rose.. . . . .	497	12	356	24	278	40	261	48	310	12	340	51
17	Rawdon Rose.. . . . .	497	12	375	..	315	20	206	48	308	..	310	28
18	L.N.L.. . . . .	492	48	356	24	352	..	228	48	235	24	333	5
19	Country Gentleman.. . . . .	488	24	286	..	352	..	301	24	352	..	355	57
20	Early St. George.. . . . .	481	48	376	12	381	20	211	12	348	9	359	44
21	Quaker City.. . . . .	477	24	453	12	326	20	226	36	316	48	360	4
22	Delaware.. . . . .	473	..	334	24	429	..	202	24	306	54	349	8
23	Rochester Rose.. . . . .	473	..	444	24	271	20	228	48	289	18	341	22
24	Maule's Thoroughbred.. . . . .	473	..	303	36	421	40	255	12	386	36	368	1
25	Northern Spy.. . . . .	473	..	451	..	282	20	250	36	353	6	362	..
26	Carman No. 3.. . . . .	470	48	451	..	374	..	259	36	216	42	354	25
27	Clay Rose.. . . . .	470	48	462	..	315	20	231	..	345	67	365	1
28	Daisy.. . . . .	464	12	294	48	319	..	206	48	284	54	313	56
29	Early Norther.. . . . .	464	12	473	..	276	..	209	..	383	18	360	54

## UNIFORM TEST PLOTS OF POTATOES.

Number.	NAME OF VARIETY.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS, SEASON OF 1902.											
		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.
30	Seattle	464	12	79	36	315	20	266	..	308	..	366	38
31	Burnaby Seedling	462	..	400	24	476	40	248	36	347	50	387	6
32	Lee's Favourite	462	..	319	..	337	20	270	36	288	46	335	32
33	Early Sunrise	457	36	374	..	330	..	202	24	302	30	333	18
34	Thorburn	457	36	336	36	293	20	191	24	228	48	301	33
35	Early Harvest	457	36	259	36	363	..	266	12	342	12	337	43
36	Burpee's Extra Early	453	12	3-2	48	363	..	211	12	321	12	342	6
37	Early Puritan	448	48	374	..	293	20	182	36	361	54	332	7
38	Uncle Sam	442	12	365	12	330	..	235	24	339	54	342	32
39	Empire State	442	12	347	36	454	40	204	36	309	6	351	38
40	State of Maine	442	12	360	48	381	20	239	48	346	30	354	7
41	Penn. Manor	440	..	407	..	289	40	222	22	332	12	338	15
42	Dreer's Standard	440	..	380	36	282	20	242	..	..	..	336	14
43	Vick's Extra Early	440	..	440	..	297	..	255	12	302	30	346	56
44	Holborn Abundance	437	48	418	..	319	..	233	12	326	42	346	56
45	Early Market	435	36	391	36	271	20	182	36	369	36	330	9
46	Wonder of the World	435	36	..	..	..	..	226	36	333	16	351	49
47	Columbus	435	36	343	12	..	..	253	..	369	..	350	12
48	New Queen	431	12	343	12	381	20	288	12	309	39	350	43
49	Prize Taker	426	48	338	48	205	20	224	24	334	22	305	56
50	Polaris	426	48	297	..	322	40	187	..	344	18	315	33
51	McIntyre	426	48	446	36	278	40	204	36	354	12	342	10
52	Early Michigan	426	48	297	..	315	20	242	..	295	12	315	16
53	Early Rose	422	24	279	24	333	40	217	48	330	..	316	39
54	Canadian Beauty	420	12	490	24	336	20	209	..	351	27	361	16
55	American Giant	415	48	385	..	363	..	266	12	381	40	362	20
56	Seedling No. 7	413	36	440	..	421	40	272	48	322	18	374	4
57	White Beauty	413	36	393	48	473	..	184	48	363	..	365	38
58	Chicago Market	407	..	319	..	333	40	228	48	347	36	327	12
59	New Variety No. 1	404	48	363	..	370	20	275	..	240	54	330	48
60	Seedling No. 230	404	48	426	48	432	40	228	48	356	24	369	53
61	Rose No. 9	402	36	495	..	355	40	257	24	366	51	375	30
62	Lizzie's Pride	400	24	391	36	348	20	248	36	293	22	336	27
63	Bovee	400	24	360	48	249	20	235	24	313	20	311	51
64	Rural No. 2	396	..	451	..	341	..	180	24	238	42	321	25
65	Everett	391	36	451	12	282	20	182	36	363	..	334	9
66	General Gordon	389	24	378	24	289	40	242	..	367	37	333	25
67	Reading Giant	389	24	275	..	220	..	149	36	..	..	258	30
68	Earliest of All	385	..	261	48	304	20	268	24	345	25	312	59
69	Green Mountain	378	24	360	48	271	20	246	24	232	6	297	48
70	Rural Blush	376	12	437	48	238	20	182	36	325	36	312	6
71	Sir Walter Raleigh	374	..	422	24	311	40	154	..	317	54	316	..
72	Great Divide	367	24	495	..	418	..	253	..	341	..	374	53
73	Clarke's No. 1	360	48	323	24	297	..	..	..	286	..	316	48
74	Early Six Weeks	358	36	312	24	293	20	149	36	342	12	291	14
75	Vanier	354	12	404	48	348	20	169	24	349	58	325	20
76	Up to Date	354	12	213	24	234	40	206	48	235	10	246	51
77	Beauty of Hebron	341	..	338	48	271	20	286	..	323	24	312	6
78	Pearce's Prize Winner	334	24	468	36	278	40	215	40	321	45	323	50
79	Early Ohio	332	12	358	36	231	..	180	24	328	21	286	7
80	Maggie Murphy	321	12	352	..	286	..	228	48	243	6	286	13
81	Cambridge Russet	321	12	389	24	473	..	202	24	345	24	316	17
82	Early Andes	316	48	297	..	289	40	140	48	322	51	273	29
83	Early White Prize	314	36	418	..	447	20	193	36	331	6	340	56
84	Pearce's Extra Early	305	48	404	48	429	..	216	12	347	..	340	34
85	Pride of the Market	277	12	415	48	392	20	266	12	324	30	335	12
86	Bill Nye	275	..	451	..	337	20	187	..	368	36	321	47
87	Brownell's Winner	266	12	253	..	308	..	281	36	357	30	293	16
88	Ohio Junior	259	36	336	36	271	20	145	12	299	12	322	23
89	Houlton Rose	154	..	389	24	487	40	145	12	350	21	305	19
90	Prolific Rose	..	..	270	36	436	20	231	..	374	30	323	7

\* Not planted at Ottawa. † Not planted at Nappan. ‡ Not planted at Brandon. § Not planted at Indian Head. ¶ Not planted at Agassiz.

The twelve varieties of potatoes which have produced the largest crops at the several experimental farms during the season of 1902, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Flemish Beauty.. . . . .	697 24	7. Dakota Red . . . . .	594 ..
2. Irish Cobbler.. . . . .	646 48	8. Brown's Rot Proof.. . . . .	565 24
3. Money Maker.. . . . .	622 35	9. Carman No. 1.. . . . .	552 12
4. Late Puritan.. . . . .	613 48	10. Swiss Snowflake.. . . . .	532 24
5. Troy Seedling.. . . . .	609 24	11. Sabesn's Elephant.. . . . .	530 12
6. Irish Daisy.. . . . .	605 ..	12. American Wonder.... . . . .	517 ..

An average crop of 590 bushels 31 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Dakota Red.. . . . .	517 ..	7. Seattle.. . . . .	479 36
2. Canadian Beauty.. . . . .	499 24	8. Early Norther.. . . . .	473 ..
3. Enormous.. . . . .	495 ..	9. Irish Daisy.. . . . .	473 ..
4. Great Divide.. . . . .	495 ..	10. Pearce's Prize Winner.. . . . .	468 36
5. Rose No. 9.. . . . .	495 ..	11. Clay Rose.. . . . .	462 ..
6. Troy Seedling.. . . . .	484 ..	12. Hale's Champion.. . . . .	462 ..

An average crop of 483 bushels 38 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Enormous.. . . . .	557 20	7. Early White Prize . . . . .	447 20
2. Houlton Rose.. . . . .	487 40	8. Prolific Rose.. . . . .	436 20
3. Burnaby Seedling.. . . . .	476 40	9. Hale's Champion.. . . . .	432 40
4. White Beauty.. . . . .	473 ..	10. Delawre.. . . . .	429 ..
5. Cambridge Russet.. . . . .	473 ..	11. Seedling No. 230.. . . . .	432 40
6. Empire State.. . . . .	454 40	12. Pearce's Extra Early.. . . . .	429 ..

An average crop of 460 bushels 47 lbs. per acre.

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

Per acre.		Per acre.	
Bush. Lbs.		Bush. Lbs.	
1. Country Gentleman.. . . . .	301 24	7. Carman No. 1.. . . . .	274 24
2. Irish Cobbler.... . . . .	289 12	8. Seedling No. 7.. . . . .	272 48
3. New Queen.... . . . .	288 12	9. Lee's Favourite.. . . . .	270 36
4. Beauty of Hebron.. . . . .	286 ..	10. Earliest of All.. . . . .	268 24
5. Brownell's Winner.. . . . .	281 36	11. Money Maker.. . . . .	266 12
6. New Variety No. 1.. . . . .	275 ..	12. American Giant.. . . . .	266 12

An average crop of 278 bushels 20 lbs. per acre.

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

	Per acre			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Maule's Thoroughbred.. . . . .	386	36	7. Early Market.. . . . .	369	34
2. Irish Daisy.. . . . .	385	..	8. Columbus.. . . . .	369	..
3. Early Norther.. . . . .	383	18	9. Money Maker.. . . . .	369	..
4. American Giant.. . . . .	381	40	10. General Gordon.. . . . .	367	37
5. Prolific Rose.. . . . .	374	30	11. Sharpe's Seedling.. . . . .	367	4
6. Carman No. 1.. . . . .	372	54	12. Rose No. 9.. . . . .	366	51

An average crop of 374 bushels 25 lbs. per acre.

The twelve varieties of potatoes which have produced the largest crops in 1902, taking the average of the results obtained at all the experimental farms, are the following :—

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Enormous.. . . . .	410	14	7. Troy Seedling.. . . . .	385	2
2. Irish Cohhler.. . . . .	406	59	8. Hale's Champion.. . . . .	384	25
3. Irish Daisy.. . . . .	402	54	9. Dakota Red.. . . . .	384	25
4. Money Maker.. . . . .	402	29	10. Flemish Beauty.. . . . .	381	33
5. Sharpe's Seedling.. . . . .	389	55	11. Rose No. 9.. . . . .	375	30
6. Burnahy Seedling.. . . . .	387	6	12. Great Divide.. . . . .	374	53

An average crop of 390 bushels 27 lbs. per acre.

The average crops of all the varieties of potatoes tested in 1902, at each of the experimental farms, were as follows :—At Ottawa, 434 bushels 38 lbs. per acre; Napan, 381 bushels 4 lbs. ; Brandon, 333 bushels 5 lbs. ; Indian Head, 223 bushels 14 lbs., and at Agassiz, 326 bushels 24 lbs. The average return given by the whole of the varieties at all the farms was 339 bushels 22 lbs. per acre.

### AVERAGE OF CROPS FOR THE PAST THREE TO EIGHT 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 experience here recorded with most of the varieties under test covers a period of from six to eight years.

### THREE TO EIGHT 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 three to eight years, are the following :—

(The length of time they have been under trial is stated in each case.)

In Canada the bushel of oats is 34 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. White Giant, 5 yrs..	68	..	7. Columbus, 8 yrs..	63	27
2. Banner, 8 yrs..	67	27	8. Thousand Dollar, 5 yrs..	62	24
3. Holstein Prolific, 8 yrs..	65	..	9. American Beauty, 8 yrs..	62	22
4. Mennonite, 7 yrs..	64	32	10. Golden Beauty, 8 yrs..	62	21
5. American Triumph, 8 yrs..	64	24	11. New Zealand, 4 yrs..	61	21
6. Joannette, 8 yrs..	64	8	12. Hazlett's Selzure, 8 yrs..	61	19

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

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Salines, 4 yrs..	79	14	7. Wallis, 8 yrs..	75	26
2. New Zealand, 4 yrs..	77	32	8. Milford, 4 yrs..	75	20
3. Mennonite, 7 yrs..	77	24	9. Danish Island, 5 yrs..	74	32
4. Kendal, 3 yrs..	76	29	10. Thousand Dollar, 4 yrs..	74	7
5. Siberian, 6 yrs..	76	23	11. Lincoln, 8 yrs..	74	1
6. Black Beauty, 4 yrs..	76	16	12. White Russian, 8 yrs..	73	15

An average crop of 76 bushels 3 lbs. per acre.

## EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. American Beauty, 7 yrs..	90	5	7. White Giant, 4 yrs..	85	..
2. Banner, 7 yrs..	89	18	8. Improved American, 4 yrs..	84	29
3. Mennonite, 6 yrs..	88	18	9. Early Golden Prolific, 7 yrs....	84	25
4. Bavarian, 7 yrs..	86	33	10. Holstein Prolific, 7 yrs..	83	4
5. Buckbee's Illinois, 5 yrs..	86	22	11. Golden Tartarian, 5 yrs..	83	4
6. Danish Island, 4 yrs..	85	22	12. Golden Giant, 7 yrs..	81	8

An average of 85 bushels 28 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, 7 yrs..	93	11	7. Holstein Prolific, 7 yrs..	90	32
2. New Zealand, 3 yrs..	91	33	8. Siberian, 5 yrs..	89	4
3. Columbus, 7 yrs..	91	27	9. Banner, 7 yrs..	88	27
4. Danish Island, 4 yrs..	91	21	10. Wide Awake, 7 yrs..	88	24
5. Improved American, 6 yrs..	91	19	11. Golden Beauty, 7 yrs..	87	22
6. American Beauty, 7 yrs..	91	14	12. Thousand Dollar, 4 yrs..	86	12

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

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Black Beauty, 5 yrs..	76	19	7. Holland, 5 yrs..	67	26
2. Golden Tartarian, 6 yrs..	72	7	8. Banner, 8 yrs..	66	4
3. Danish Island, 5 yrs..	71	30	9. Lincoln, 8 yrs..	65	13
4. Sallies, 4 yrs..	70	15	10. White Giant, 5 yrs..	64	18
5. Golden Giant, 6 yrs..	70	1	11. Buckbee's Illinois, 7 yrs..	63	29
6. New Zealand, 4 yrs..	69	8	12. Early Gothland, 8 yrs..	63	29

An average crop of 68 bushels 17 lbs. per acre.

The twelve varieties of oats which have produced the largest average crops for the past three to eight 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, 8 yrs..	76	29	7. Improved American, 5 yrs..	73	19
2. Danish Island, 5 yrs..	76	9	8. Black Beauty, 4 yrs..	72	32
3. Mennonite, 7 yrs..	75	19	9. Buckbee's Illinois, 7 yrs..	72	20
4. American Beauty, 7 yrs..	75	6	10. Columbus, 8 yrs..	72	15
5. New Zealand, 4 yrs..	75	3	11. Thousand Dollar, 5 yrs..	72	15
6. Holstein Prolific, 8 yrs..	73	26	12. Golden Giant, 8 yrs..	72	6

An average crop of 74 bushels 2 lbs. per acre.

### THREE TO EIGHT 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 three to eight years, are the following:—

(The length of time they have been under trial is stated in each case.)

In Canada the bushel of barley is 48 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Canadian Thorpe, 8 yrs.. . . . .	46	36	4. French Chevallier, 8 yrs.. . . .	46	5
2. Danish Chevallier, 8 yrs.. . . .	46	25	5. Clifford, 4 yrs.. . . . .	45	37
3. Beaver, 8 yrs.. . . . .	46	16	6. Dunham, 5 yrs.. . . . .	44	40

An average crop of 46 bushels 2 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Beaver, 6 yrs.. . . . .	44	31	4. French Chevallier, 8 yrs.. . . .	43	41
2. Danish Chevallier, 8 yrs.. . . .	44	11	5. Clifford, 4 yrs.. . . . .	43	16
3. Harvey, 4 yrs.. . . . .	43	45	6. Newton, 8 yrs.. . . . .	42	13

An average crop of 43 bushels 34 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Dunham, 3 yrs.. . . . .	55	47	4. Harvey, 3 yrs.. . . . .	48	16
2. Logan, 3 yrs.. . . . .	52	27	5. French Chevallier, 6 yrs.. . . .	46	25
3. Leslie, 3 yrs.. . . . .	49	21	6. Sidney, 6 yrs.. . . . .	45	32

An average crop of 49 bushels 36 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Danish Chevallier, 7 yrs.. . . . .	57	30	4. Canadian Thorpe, 7 yrs.. . . . .	53	42
2. French Chevallier, 7 yrs.. . . . .	57	24	5. Prize Prolific, 7 yrs.. . . . .	53	32
3. Sidney, 8 yrs.... . . . .	54	47	6. Jarvis, 3 yrs.. . . . .	53	29

An average crop of 55 bushels 9 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Jarvis, 4 yrs.... . . . .	40	15	4. Dunham, 5 yrs.. . . . .	39	14
2. Harvey, 3 yrs.. . . . .	40	3	5. Kinver Chevallier, 8 yrs.. . . . .	38	28
3. Canadian Thorpe, 7 yrs.. . . . .	39	15	6. French Chevallier, 8 yrs.. . . . .	37	30

An average crop of 39 bushels 9 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest crops for the past four to eight 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 Chevallier, 8 yrs.. . . . .	46	15	4. Jarvis, 4 yrs.. . . . .	44	47
2. Clifford, 4 yrs.. . . . .	45	11	5. Canadian Thorpe, 8 yrs... . . . .	44	14
3. Dunham, 5 yrs.. . . . .	45	8	6. Harvey, 4 yrs.. . . . .	44	1

An average crop of 45 bushels 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 three to eight years, are the following :—

(The length of time they have been under trial is stated in each case.)

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa, 8 yrs.... . . . .	54	36	4. Pioneer, 8 yrs.. . . . .	50	35
2. Mensury, 8 yrs.. . . . .	53	42	5. Royal, 8 yrs.. . . . .	50	8
3. Hullless Black, 3 yrs.. . . . .	52	44	6. Stella, 8 yrs.. . . . .	48	17

An average crop of 52 bushels 8 lbs. per acre.



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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Mensury, 8 yrs..	..	52	13	4. Albert, 4 yrs..	49 38
2. Yale, 4 yrs..	..	51	42	5. Oderbruch, 8 yrs..	46 22
3. Garfield, 4 yrs..	..	50	30	6. Odessa, 8 yrs..	46 20

An average crop of 49 bushels 27 lbs. per acre.

## EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Mansfield, 3 yrs..	..	57	34	4. Nugent, 6 yrs..	50 15
2. Mensury, 6 yrs..	..	54	1	5. Summit, 6 yrs..	50 2
3. Trooper, 6 yrs..	..	52	25	6. Surprise, 6 yrs..	48 31

An average crop of 52 bushels 8 lbs. per acre.

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Claude, 3 yrs..	..	67	17	4. Trooper, 7 yrs..	57 4
2. Odessa, 7 yrs..	..	61	44	5. Royal, 7 yrs..	56 21
3. Rennie's Improved, 7 yrs..	..	58	28	6. Mansfield, 4 yrs..	56 12

An average crop of 59 bushels 29 lbs. per acre.

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Yale, 4 yrs....	..	43	36	4. Mansfield, 5 yrs..	40 ..
2. Claude, 4 yrs..	..	43	11	5. Oderbruch, 8 yrs..	39 26
3. Albert, 4 yrs..	..	42	41	6. Mensury, 8 yrs ..	39 6

An average crop of 41 bushels 29 lbs. per acre.

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Mensury, 8 yrs..	..	51	28	4. Odessa, 8 yrs..	48 46
2. Claude, 4 yrs..	..	50	21	5. Yale, 4 yrs..	48 45
3. Mansfield, 5 yrs..	..	49	22	6. Trooper, 8 yrs..	47 27

An average crop of 49 bushels 23 lbs. per acre.

### THREE TO EIGHT 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 three to eight years, are the following:—

(The length of time they have been under trial is stated in each case.)

In Canada the bushel of wheat is 60 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Roumanlan, 4 yrs.. . . . .	31	57	7. Wellman's Fife, 8 yrs.. . . . .	27	37
2. Laurel, 4 yrs.. . . . .	30	57	8. Hungarian, 7 yrs.. . . . .	27	36
3. Preston, 8 yrs.. . . . .	30	22	9. Pringle's Champlain, 8 yrs.. . . . .	27	27
4. Clyde, 4 yrs.. . . . .	29	17	10. Rio Grande, 8 yrs.. . . . .	27	25
5. Plumper, 5 years.. . . . .	28	39	11. Weldon, 4 yrs.. . . . .	27	4
6. Huron, 8 yrs.. . . . .	28	18	12. Colorado, 8 yrs.. . . . .	27	1

An average crop of 28 bushels 38 lbs. per acre.

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

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Roumanlan, 4 yrs.. . . . .	43	30	7. Red Swedish, 4 yrs.. . . . .	36	9
2. Norval, 4 yrs.. . . . .	41	10	8. Byron, 4 yrs.. . . . .	35	49
3. Laurel, 4 yrs.. . . . .	40	40	9. Hungarian, 7 yrs.. . . . .	35	45
4. Clyde, 4 yrs.. . . . .	40	10	10. Wellman's Fife, 8 yrs.. . . . .	35	40
5. Weldon, 4 yrs.. . . . .	37	20	11. Monarch, 7 yrs.. . . . .	35	31
6. Plumper, 5 yrs.. . . . .	36	24	12. White Connell, 8 yrs.. . . . .	35	23

An average crop of 37 bushels 47 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN

	Per acre. Bush. Lbs.			Per acre. Bush. Lbs.	
1. Roumanlan, 3 yrs.. . . . .	45	27	7. Red Fife, 7 yrs.. . . . .	36	13
2. Goose, 7 yrs.. . . . .	41	21	8. Clyde, 3 yrs.. . . . .	35	37
3. White Fife, 7 yrs.. . . . .	37	52	9. White Connell, 7 yrs.. . . . .	34	54
4. Laurel, 3 yrs.. . . . .	37	13	10. Rio Grande, 7 yrs.. . . . .	34	28
5. Crown, 7 yrs.. . . . .	37	1	11. White Russian, 7 yrs.. . . . .	34	27
6. Monarch, 7 yrs.. . . . .	36	47	12. Preston, 6 yrs.. . . . .	34	9

An average crop of 37 bushels 7 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Roumanian, 3 yrs.. . . . .	46	13	7. Weldon, 3 yrs.. . . . .	42 20
2. Huron, 7 yrs.... . . . .	43	53	8. Red Fife, 7 yrs.. . . . .	42 5
3. Preston, 7 yrs.. . . . .	43	34	9. Stanley, 7 yrs.. . . . .	42 3
4. Red Fern, 7 yrs.. . . . .	43	30	10. Rio Grande, 7 yrs.. . . . .	42 ..
5. Wellman's Fife, 7 yrs.. . . . .	42	43	11. Beaudry, 7 yrs.. . . . .	41 53
6. Percy, 7 yrs.... . . . .	42	36	12. Pringle's Champlain, 7 yrs.. . . . .	41 23

An average crop of 42 bushels 51 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Roumanian, 4 yrs.. . . . .	37	5	7. Crawford, 4 yrs.. . . . .	33 20
2. Red Swedish, 4 yrs.. . . . .	35	57	8. Laurel, 4 yrs.. . . . .	33 23
3. Early Riga, 4 yrs.. . . . .	34	59	9. Colorado, 6 yrs.. . . . .	33 20
4. Clyde, 4 yrs.. . . . .	34	47	10. Fraser, 4 yrs.. . . . .	33 4
5. Blair, 5 yrs.. . . . .	34	46	11. Plumper, 5 yrs.. . . . .	33 3
6. Ebert, 4 yrs.. . . . .	33	43	12. Dawn, 8 yrs.. . . . .	33 ..

An average crop of 34 bushels 13 lbs. per acre.

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

	Per acre.		Per acre.	
	Bush. Lbs.		Bush. Lbs.	
1. Roumanian, 4 yrs.. . . . .	40	50	7. Huron, 8 yrs.. . . . .	33 37
2. Laurel, 4 yrs.. . . . .	35	32	8. Wellman's Fife, 8 yrs.. . . . .	33 36
3. Preston, 8 yrs.. . . . .	34	59	9. Weldon, 4 yrs.. . . . .	33 36
4. Moose, 8 yrs.. . . . .	34	14	10. White Fife, 8 yrs.. . . . .	33 23
5. Rio Grande, 8 yrs.. . . . .	33	59	11. Clyde, 4 yrs.. . . . .	33 20
6. Monarch, 7 yrs.. . . . .	33	55	12. Red Fife, 8 yrs.. . . . .	33 16

An average crop of 34 bushels 31 lbs. per acre.

### THREE TO EIGHT YEARS' EXPERIENCE WITH VARIETIES OF PEASE.

The twelve varieties of pease which have averaged the heaviest crops at the several experimental farms during the past three to eight years, are the following :—  
(The length of time they have been under trial is stated in each case.)

In Canada the bushel of pease is 60 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Arthur, 7 yrs.. . . . .	38	37	7. Pearl, 4 yrs . . . . .	34	7
2. Canadian Beauty, 6 yrs.. . . .	36	41	8. Macoua, 6 yrs.. . . . .	33	46
3. Paragon, 7 yrs.. . . . .	36	5	9. Nelson, 5 yrs.. . . . .	33	44
4. Kent, 6 yrs.. . . . .	35	52	10. Golden Vine, 6 yrs.. . . . .	33	30
5. Mackay, 7 yrs.. . . . .	34	25	11. Prussian Blue, 8 yrs.. . . . .	33	27
6. Duke, 7 yrs..... . . . .	34	16	12. Black-eyed Marrowfat, 7 yrs ..	33	24

An average crop of 34 bushels 49 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Crown, 7 yrs.. . . . .	38	11	7. Oddfellow, 5 yrs.. . . . .	31	19
2. Pride, 6 yrs.. . . . .	34	10	8. Black-eyed Marrowfat, 7 yrs..	31	8
3. Early Britain, 5 yrs.. . . . .	32	55	9. Nelson, 5 yrs.. . . . .	31	4
4. New Potter, 7 yrs.. . . . .	31	57	10. Chancellor, 5 yrs.. . . . .	30	8
5. Centennial, 7 yrs.. . . . .	31	55	11. Archer, 5 yrs.. . . . .	29	56
6. Agnes, 6 yrs.. . . . .	31	43	12. Duke, 6 yrs.. . . . .	29	56

An average crop of 32 bushels 2 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Pride, 7 yrs.. . . . .	45	26	7. King, 5 yrs.. . . . .	42	28
2. Carleton, 6 yrs.. . . . .	44	50	8. Trilby, 6 yrs.. . . . .	42	8
3. Mummy, 7 yrs.. . . . .	44	40	9. Crown, 6 yrs.. . . . .	41	53
4. Chelsea, 3 yrs.. . . . .	43	7	10. German White, 4 yrs.. . . . .	41	27
5. New Potter, 7 yrs.. . . . .	42	44	11. Kent, 6 yrs.. . . . .	40	37
6. White Wonder, 5 yrs.. . . . .	42	42	12. Prussian Blue, 5 yrs.. . . . .	40	6

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

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Paragon, 6 yrs..	42	25	7. Picton, 4 yrs..	39	4
2. Crown, 6 yrs..	42	16	8. Chancellor, 5 yrs..	38	50
3. White Wonder, 5 yrs..	40	33	9. Centennial, 6 yrs..	38	33
4. Carleton, 6 years..	40	8	10. Lanark, 4 yrs..	38	27
5. Gregory, 5 yrs..	39	45	11. Pride, 6 yrs..	38	10
6. Trilby, 6 yrs..	39	40	12. Oddfellow, 5 yrs..	38	8

An average crop of 39 bushels 40 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Bruce, 4 yrs..	39	15	7. King, 6 yrs..	37	17
2. English Gray, 4 yrs..	38	35	8. Pearl, 4 yrs..	37	5
3. Fergus, 5 yrs..	38	22	9. German White, 5 yrs..	37	2
4. White Wonder, 6 yrs..	38	13	10. Prussian Blue, 6 yrs..	36	30
5. Gregory, 5 yrs..	38	4	11. Lanark, 5 yrs..	36	14
6. Picton, 5 yrs..	37	52	12. Early Britain, 6 yrs..	36	4

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

The twelve varieties of pease which have produced the largest crops for the past three years 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	53	7. New Potter, 7 yrs..	34	37
2. Pride, 7 yrs..	36	6	8. Paragon, 7 yrs..	34	33
3. Carleton, 6 yrs..	35	13	9. King, 6 yrs..	34	31
4. Picton, 5 yrs..	35	9	10. White Wonder, 6 yrs..	34	28
5. Early Britain, 6 yrs..	35	7	11. Pearl, 4 yrs..	34	21
6. Chancellor, 5 yrs..	34	55	12. German White, 5 yrs..	34	19

An average crop of 35 bushels 1 lb. per acre.

### THREE TO EIGHT 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 three to eight years, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Super Fodder, 3 yrs. . . . .	24	593	4. Red Cob Ensilage, 8 yrs. . .	24	162
2. Salzer's All Gold, 3 yrs. . . .	24	583	5. Giant Prolific Ensilage, 8 yrs..	23	1,963
3. Thoro'bred White Flint, 8 yrs....	24	480	6. Selected Leaming, 7 yrs.. . .	23	303

An average crop of 24 tons 15 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Early Mastodon, 5 yrs. . . . .	21	1,380	4. Thoro'bred White Flint, 8 yrs..	18	1,027
2. Superior Fodder, 3 yrs. . . . .	21	1,083	5. Mammoth Cuban, 5 yrs. . . . .	18	894
3. Salzer's All Gold, 3 yrs. . . . .	19	1,000	6. Red Cob Ensilage, 8 yrs. . . . .	17	401

An average crop of 19 tons 964 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Thoro'bred White Flint, 8 yrs.. .	20	1,547	4. Longfellow, 8 yrs. . . . .	18	1,708
2. Early Mastodon, 5 yrs. . . . .	19	1,605	5. Champion White Pearl, 3 yrs.. .	18	1,320
3. Angel of Midnight, 8 yrs. . . . .	19	569	6. Salzer's All Gold, 3 yrs. . . . .	18	1,106

An average crop of 19 tons 642 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Superior Fodder, 3 yrs.. . . . .	14	314	4. Early Mastodon, 5 yrs.. . . .	13	429
2. Cloud's Early Yellow, 6 yrs.. . . .	13	1,366	5. Giant Prolific Ensilage, 3 yrs ..	13	342
3. Early Butler, 6 yrs.... . . . .	13	993	6. Mammoth Cuban, 5 yrs.. . . .	13	1,870

An average crop of 13 tons 866 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Early Butler, 6 yrs.. . . . .	23	1,763	4. Cloud's Early Yellow, 6 yrs.. . .	22	568
2. Red Cob Ensilage, 8 yrs.. . . .	23	1,277	5. Superior Fodder, 3 yrs.. . . .	21	1,010
3. Early Mastodon, 5 yrs.. . . . .	22	1,563	6. Pride of the North, 8 yrs.. . .	21	759

An average crop of 22 tons 1,157 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Early Mastodon, 5 yrs.. . . . .	20	164	4. Thoro'bred White Flint, 8 yrs..	19	536
2. Salzer's All Gold, 3 yrs.. . . . .	19	1,795	5. Red Cob Ensilage, 8 yrs.. . . .	19	53
3. Superior Fodder, 3 yrs.. . . . .	19	1,630	6. Early Butler, 6 yrs.. . . . .	18	1,143

An average crop of 19 tons 887 lbs. per acre.

### THREE TO EIGHT 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 three to eight years, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Magnum Bonum, 3 yrs. . . . .	38 1,223	4. Carter's Elephant, 8 yrs. . . . .	36 641
2. Elephant's Master, 3 yrs. . . . .	36 1,742	5. Drummond Purple Top, 5 yrs. . . . .	36 336
3. Purple Top Swede, 8 yrs. . . . .	35 720	6. Imperial Swede, 4 yrs. . . . .	35 1,610

An average crop of 36 tons 1,379 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Kangaroo, 3 yrs. . . . .	39 1,585	4. Elephant's Master, 3 yrs. . . . .	39 375
2. Selected Champion, 3 yrs. . . . .	39 1,035	5. New Arctic, 4 yrs. . . . .	37 1,116
3. Imperial Swede, 4 yrs. . . . .	39 979	6. Monarch, 4 yrs. . . . .	37 415

An average crop of 38 tons 1,584 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Perfection Swede, 7 yrs. . . . .	23 973	4. Purple Top Swede, 8 yrs. . . . .	22 1,705
2. Skirvings, 8 yrs. . . . .	23 74	5. Hail's Westbury, 6 yrs. . . . .	22 517
3. Prize Winner, 7 yrs. . . . .	23 16	6. Mammoth Clyde, 7 yrs. . . . .	22 153

An average crop of 22 tons 1,573 lbs. per acre.



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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Webb's New Renown, 4 yrs.. . . .	23	647	4. Halewood's Bronze Top, 6 yrs.	21	1,062
2. Perfection Swede, 7 yrs.. . . .	22	333	5. Monarch, 4 yrs.. . . .	21	954
3. Drummond Purple Top, 5 yrs.. . .	21	1,094	6. Purple Top Swede, 8 yrs.. . . .	21	670

An average crop of 21 tons 1,793 lbs. per acre.

## EXPERIMENTAL FARM FOR BRITISH COLUMBIA, ACASSIZ, B.C.

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Bangholm Selected, 6 yrs.. . . .	41	1,299	4. Halewood's Bronze Top, 6 yrs..	39	477
2. Perfection Swede, 7 yrs.. . . .	39	1,164	5. Hall's Westbury, 6 yrs.. . . .	38	1,297
3. Purple Top Swede, 8 yrs.. . . .	39	852	6. Jumbo, 8 yrs.. . . .	38	177

An average crop of 39 tons 544 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Perfection Swede, 7 yrs.. . . .	31	794	4. Halewood's Bronze Top, 6 yrs..	30	1,015
2. Imperial Swede, 4 yrs.. . . .	30	1,734	5. Hall's Westbury, 6 yrs.. . . .	30	719
3. Purple Top Swede, 8 yrs.. . . .	30	1,530	6. Bangholm Selected, 6 yrs.. . .	29	1,812

An average crop of 30 tons 1,267 lbs. per acre.

### THREE TO SEVEN YEARS' EXPERIENCE WITH VARIETIES OF MANGELS.

The six varieties of mangels which have averaged the heaviest crops at the several experimental farms, during the past three to seven years, are the following:—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Prize Winner Yellow Globe, 3 yrs.	43 1340	4. Half Long Sugar Rosy, 3 yrs..	40 128
2. Half Long Sugar White, 3 yrs....	40 575	5. Gate Post, 7 yrs.. . . . .	39 1,655
3. Lion Yellow Intermediate, 4 yrs..	40 452	6. Mammoth Long Red, 7 yrs.. ..	39 1,153

An average crop of 40 tons 1,217 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Prize Winner Yellow Globe, 3 yrs.	39 1,475	4. Giant Yellow Intermediate, 7 yrs	35 1,449
2. Lion Yellow Intermediate, 4 yrs..	38 1,516	5. Half Long Sugar White, 3 yrs..	34 585
3. Mamm. Yellow Intermediate, 5 yrs.	36 1,271	6. Giant Yellow Half Long.. . . .	34 525

An average crop of 36 tons 1,137 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Selected Mamm. Long Red, 6 yrs..	32 1,926	4. Prize Mamm. Long Red, 7 yrs..	30 607
2. Yellow Intermediate, 7 yrs.. . . .	31 948	5. Gate Post, 7 yrs.. . . . .	30 596
3. Giant Yellow Intermediate, 7 yrs.	31 426	6. Mamm. Long Red, 7 yrs.. . . .	29 1,691

An average crop of 31 tons 32 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Giant Yellow Half Long, 6 yrs..	21	1,758	4. Ward's Large Oval-shaped, 6 yrs	21	442
2. Yellow Intermediate, 7 yrs.. . . .	21	1,552	5. Champion Yellow Globe, 7 yrs..	21	403
3. Selected Mamm. Long Red, 6 yrs.	21	1,087	6. Gate Post, 7 yrs.. . . . .	21	158

An average crop of 21 tons 899 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Yellow Intermediate, 7 yrs.. . . .	36	468	4. Selected Mamm. Long Red, 6 yrs	33	165
2. Giant Yellow Intermediate, 7 yrs.	34	959	5. Canadian Giant, 7 yrs.. . . .	31	1,956
3. Lion Yellow Intermediate, 4 yrs.	33	1,790	6. Mam. Yellow Intermediate, 4 yrs	31	1,310

An average crop of 33 tons 1,108 lbs. per acre.

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

	Per acre.			Per acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Yellow Intermediate, 7 yrs.. . .	32	577	4. Gate Post, 7 yrs.. . . . .	30	1,984
2. Giant Yellow Intermediate, 7 yrs.	31	1,463	5. Selected Mamm. Long Red, 6 yrs	30	847
3. Lion Yellow Intermediate, 4 yrs.	31	237	6. Mammoth Long Red, 7 yrs....	30	643

An average crop of 31 tons 292 lbs. per acre.

### THREE TO SEVEN YEARS' EXPERIENCE WITH VARIETIES OF CARROTS.

The six varieties of carrots which have averaged the heaviest crops at the several experimental farms, during the past three to seven years, are the following :—

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 4 yrs..	35 1,363	4. Half Long White, 7 yrs.. ....	30 279
2. Giant White Vosges, 7 yrs.. ..	30 1,927	5. Improved Short White, 7 yrs ..	29 1,604
3. Mamm. White Intermediate, 7 yrs.	30 1,380	6. Iverson's Champion, 7 yrs.. ..	29 1,541

An average crop of 31 tons 349 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 4 yrs.	23 1,844	4. Giant White Vosges, 7 yrs.. ..	21 1,080
2. Mamm. White Intermediate, 7 yrs.	22 297	5. Ontario Champion, 5 yrs.. .. .	21 741
3. Half Long White, 7 yrs.. .. .	21 1,481	6. Green Top White Orthe, 6 yrs..	20 1,961

An average crop of 21 tons 1,901 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Mamm. White Intermediate, 7 yrs.	18 855	4. Ontario Champion, 5 yrs.. .. .	13 1,456
2. Long Yellow Stump Rooted, 3 yrs.	14 1,407	5. Giant White Vosges, 7 yrs.. ..	13 1,311
3. New White Intermediate, 4 yrs..	14 1,150	6. Half Long White, 7 yrs.. .. .	13 1,060

An average crop of 14 tons 1,540 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 3 yrs..	14 1,856	4. White Vosges Large Short, 3 yrs	12 1,194
2. Long Yellow Stump Rooted, 3 yrs.	13 861	5. Iverson's Champion, 7 yrs.. ..	12 700
3. Ontario Champion, 5 yrs.. . . . .	13 809	6. Half Long White, 7 yrs.. . . .	12 94

An average crop of 13 tons 252 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Improved Short White, 7 yrs.. . .	34 993	4. Half Long White, 7 yrs.. . . .	31 505
2. Giant White Vosges, 7 yrs.. . . .	33 1,769	5. New White Intermediate, 4 yrs.	31 495
3. Green Top White Orthe, 5 yrs.. . .	31 642	6. Ontario Champion, 7 yrs.. . . .	30 1,512

An average crop of 32 tons 319 lbs. per acre.

The six varieties of carrots 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. Tons. Lbs.		Per acre. Tons. Lbs.
1. New White Intermediate, 4 yrs ..	24 142	4. Improved Short White, 7 yrs ..	21 1,163
2. Giant White Vosges, 7 yrs.....	22 359	5. Ontario Champion, 5 yrs.....	21 1,122
3. Half Long White, 7 yrs.. . . . .	21 1,484	6. Mam.White Intermediate, 7 yrs	21 835

An average crop of 22 tons 184 lbs. per acre.

## FOUR TO SIX YEARS' EXPERIENCE WITH VARIETIES OF SUGAR BEETS.

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

The length of time they have been under trial is stated in each case.

In Canada the ton is 2,000 lbs.

### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.		Per acre.		
	Tons.	Lbs.		Tons.	
	Lbs.	Lbs.		Lbs.	
1. Danish Improved, 6 yrs.. . . . .	28	1,759	3. Improved Imperial, 6 yrs.. . . .	27	538
2. Danish Red Top, 5 yrs.. . . . .	27	1,341	4. Red Top Sugar, 6 yrs.. . . . .	26	1,240

An average crop of 27 tons 1,232 lbs. per acre.

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

	Per acre.		Per acre.		
	Tons.	Lbs.		Tons.	
	Lbs.	Lbs.		Lbs.	
1. Red Top Sugar, 6 yrs.. . . . .	23	22	3. Improved Imperial, 6 yrs.... . .	26	1,211
2. Danish Red Top, 5 yrs.. . . . .	27	695	4. Danish Improved, 6 yrs . . . . .	25	1,353

An average crop of 26 tons 1,820 lbs. per acre.

### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.		Per acre.		
	Tons.	Lbs.		Tons.	
	Lbs.	Lbs.		Lbs.	
1. Danish Red Top, 5 yrs.. . . . .	27	1,849	3. Red Top Sugar, 6 yrs.. . . . .	23	510
2. Danish Improved, 6 yrs.. . . . .	24	1,071	4. Wanzleben, 6 yrs.. . . . .	22	1,836

An average crop of 24 tons 1,311 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 5 yrs.. . . . .	17 420	3. Danish Improved, 6 yrs . . . . .	14 793
2. Red Top Sugar, 6 yrs.. . . . .	15 872	4. Improved Imperial, 6 yrs.. . . . .	14 678

An average crop of 15 tons 691 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 4 yrs.. . . . .	28 1,849	3. Improved Imperial, 5 yrs.. . . . .	23 116
2. Danish Improved, 5 yrs.. . . . .	24 195	4. Red Top Sugar, 5 yrs.. . . . .	22 1,216

An average crop of 24 tons 1,344 lbs. per acre.

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

	Per acre. Tons. Lbs.		Per acre. Tons. Lbs.
1. Danish Red Top, 5 yrs.. . . . .	25 1,631	3. Red Top Sugar, 6 yrs.. . . . .	23 372
2. Danish Improved, 6 yrs.. . . . .	23 1,034	4. Improved Imperial, 6 yrs.. . . . .	22 496

An average crop of 23 tons 1,383 lbs. per acre.

### THREE TO EIGHT 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 three to eight years, are the following. The length of time which they have been under trial is stated in each case :—

In Canada the bushel of potatoes is 60 lbs.

#### CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Swiss Snow Flake, 3 yrs.. . . .	452	28	7. McIntyre, 3 yrs.. . . .	409	12
2. Late Puritan, 8 yrs.. . . .	431	59	8. Country Gentleman, 4 yrs.. . .	403	4
3. American Wonder, 8 yrs.. . . .	430	29	9. Uncle Sam, 5 yrs.. . . .	402	36
4. Seattle, 8 yrs.. . . .	423	8	10. Flemish Beauty, 8 yrs.. . . .	397	56
5. Holborn Abundance, 8 yrs.. . . .	426	23	11. Burnaby Seedling, 8 yrs.. . . .	391	49
6. Penn Manor, 4 yrs.. . . .	411	24	12. Reeves' Rose, 6 yrs.. . . .	391	5

An average crop of 414 bushels 43 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Irish Daisy, 8 yrs.. . . .	436	18	7. Pearce's Prize Winner, 7 yrs..	396	26
2. Seedling No. 230, 7 yrs.. . . .	434	48	8. Irish Cobbler, 6 yrs.. . . .	393	55
3. Holborn Abundance, 8 yrs.. . . .	422	13	9. Pride of the Market, 8 yrs..	387	58
4. Seattle, 7 yrs.. . . .	419	59	10. Seedling No. 7, 6 yrs.. . . .	385	40
5. Hale's Champion, 7 yrs.. . . .	399	59	11. Bill Nye, 6 yrs.. . . .	384	40
6. American Giant, 6 yrs.. . . .	399	8	12. Carman No. 1, 8 yrs.. . . .	383	48

An average crop of 403 bushels 44 lbs. per acre.

#### EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Maule's Thoroughbred, 5 yrs....	407	..	7. Great Divide, 8 yrs.. . . .	378	35
2. Seedling No. 7, 6 yrs.. . . .	405	47	8. Burnaby Seedling, 7 yrs . . .	377	2
3. Delaware, 7 yrs.. . . .	398	..	9. Empire State, 7 yrs.. . . .	376	..
4. American Wonder, 6 yrs.. . . .	389	53	10. Carman No. 1, 8 yrs.. . . .	374	27
5. Irish Daisy, 7 yrs.. . . .	388	40	11. I. X. L., 8 yrs.. . . .	374	27
6. State of Maine, 8 yrs.. . . .	388	26	12. Hale's Champion, 7 yrs.. . . .	372	41

An average crop of 385 bushels 55 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, 7 yrs.. . . . .	462	10	7. New Variety, No. 1, 7 yrs.. . .	413	3
2. Uncle Sam, 6 yrs.. . . . .	449	40	8. Rochester Rose, 7 yrs.. . . .	402	7
3. Bovee, 5 yrs.. . . . .	444	43	9. General Gordon, 6 yrs.. . . .	399	50
4. Carman No. 3, 6 yrs.. . . . .	440	10	10. Northern Spy, 8 yrs.. . . .	395	3
5. Country Gentleman, 3 yrs.. . .	435	41	11. Lee's Favourite, 7 yrs.. . . .	394	40
6. American Wonder, 8 yrs.. . . .	429	10	12. Carman No. 1, 8 yrs.. . . .	392	3

An average crop of 421 bushels 32 lbs. per acre.

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Uncle Sam, 5 yrs.. . . . .	438	51	7. Seedling No. 7, 7 yrs.. . . .	389	..
2. Rose No. 9, 6 yrs.. . . . .	414	33	8. Bovee, 5 yrs.. . . . .	382	23
3. McIntyre, 3 yrs.. . . . .	408	47	9. Clay Rose, 8 yrs.. . . . .	380	9
4. Swiss Snow Flake, 3 yrs.. . . .	405	50	10. Houlton Rose, 6 yrs.. . . . .	379	59
5. Dakota Red, 8 yrs.. . . . .	399	18	11. Vick's Extra Early, 6 yrs.. . .	374	43
6. Seedling No. 230, 7 yrs.... . .	392	13	12. Brown's Rot Proof, 6 yrs.. . .	372	43

An average crop of 395 bushels 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 three to eight years are :

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Uncle Sam, 3 yrs.. . . . .	391	22	7. Bovee, 5 yrs.. . . . .	370	10
2. Irish Daisy, 7 yrs.. . . . .	387	2	8. Country Gentleman, 4 yrs.. . .	369	6
3. Seedling No. 7, 6 yrs.. . . . .	384	20	9. Rose No. 9, 6 yrs.. . . . .	369	..
4. American Wonder, 8 yrs.. . . .	382	12	10. Late Puritan, 8 yrs.. . . . .	368	28
5. American Giant, 7 yrs.. . . . .	379	50	11. Carman No. 1, 8 yrs.. . . . .	366	53
6. Seedling No. 230, 7 yrs.. . . . .	379	45	12. Seattle, 7 yrs.. . . . .	364	53

An average crop of 376 bushels 5 lbs. per acre.

## CONCLUSIONS.

The experience of another year with comparative trial plots of many different varieties of grain, fodder corn, field roots and potatoes affords striking confirmation of the correctness of the results and conclusions which have been reached from season to season for the past eight years from the study of this interesting and important series of experiments.

The evidence produced shows that there are great differences in the relative productiveness of varieties, when grown side by side under similar conditions, hence the importance to farmers of choosing for seed those which give the heaviest crops, so that farming in Canada may thus be made more profitable.

- In bulletin No. 40, published a year ago, in which was given the results of similar trial plots for 1901, no varieties of grain were admitted into the comparative list for a series of years unless they had been under trial for five or more years. Under this arrangement only 41 of the 64 sorts under test were considered. In this issue all those which have been three years or longer under trial are placed in competition, and the number of years they have been under test is stated in each case. As a result of this new arrangement some of the more promising of the more recently introduced sorts have found their way into the list of the 12 varieties which have given the largest crops throughout the Dominion. It is noteworthy, however, that in most instances the larger number in these lists consists of varieties which have been under trial for seven or eight years, and these are for the most part the same sorts as appeared among the best twelve in 1901 and previous years.

The general adoption of this plan throughout the bulletin has brought new names into most of the groups, but the preponderance maintained by the most productive sorts of past years shows the persistence of their productive character.

Having gained much experience during the past eight years with the many varieties under trial, it is proposed during the coming season to reduce the number of sorts being tested by discontinuing those which have failed to attain to a desirable standard and retaining only the very best in each series. By this means the names of those sorts which long experience has shown to be the most profitable to grow will be brought more prominently into notice, thus permitting a more ready selection of varieties of the highest excellence.

