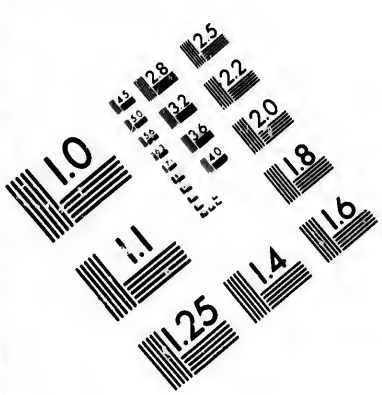

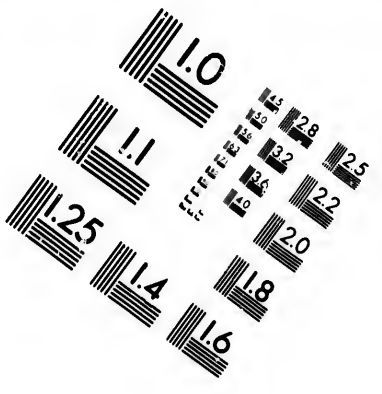

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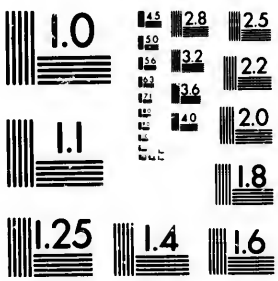

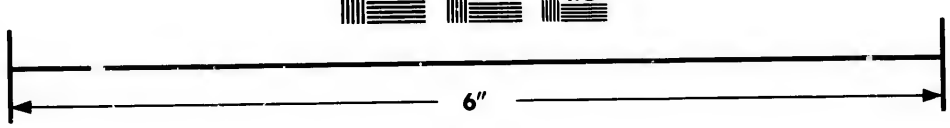

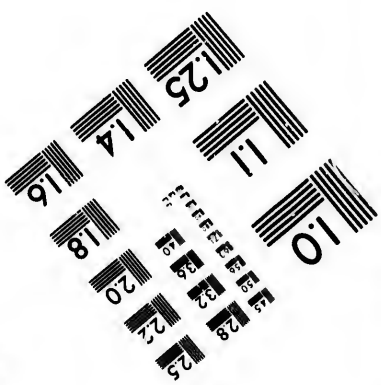

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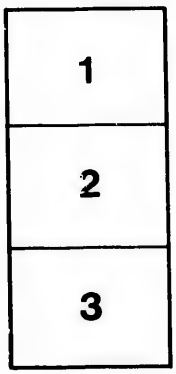

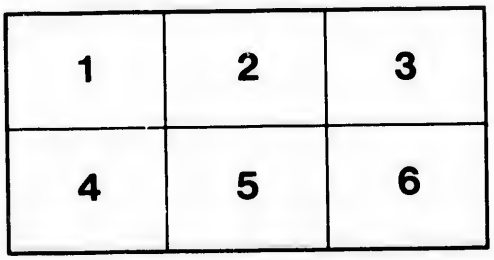

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DEPARTMENT OF AGRICULTURE

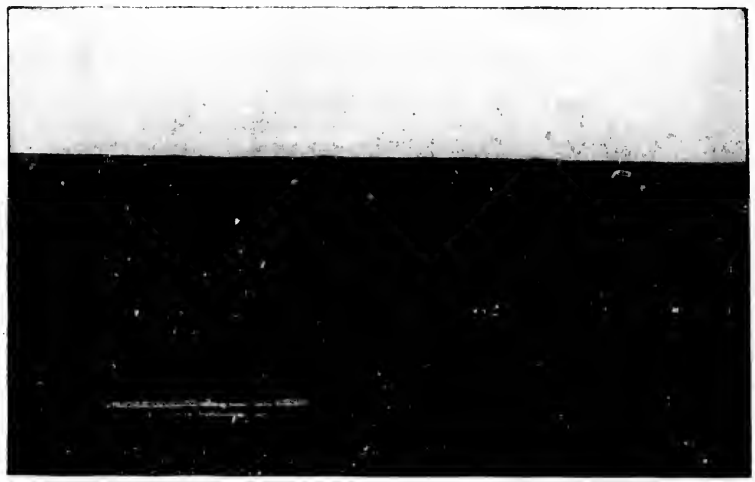
CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA

RESULTS OBTAINED IN 1900

FROM

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



Trial Plots at Experimental Farm, Brandon, Man.

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

BULLETIN No. 36.

DECEMBER, 1900

Published by Direction of the Hon. Sydney A. Fisher, Minister of Agriculture

TABLE OF CONTENTS.

To the Honourable

The Minister of Agriculture.

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

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

I have the honour to be

Your obedient servant,

WM. SAUNDERS,

Director Experimental Farms.

OTTAWA, 3rd December, 1900.

RESULTS OBTAINED IN 1900

FROM TRIAL PLOTS OF

GRAIN, FODDER CORN, FIELD ROOTS AND POTATOES

By William Saunders, LL.D., F.R.S.C., F.L.S., &c.

Director Experimental Farms.

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

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

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

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

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

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

TRIAL PLOTS OF OATS.

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

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

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

UNIFORM TEST PLOTS OF OATS.

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

UNIFORM TEST PLOTS OF OATS—*Concluded.*

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

	Per Acre. Bush.	Lbs.		Per Acre. Bush.	Lbs.
1. Black Beauty	95	16	7. Buckbee's Illinois	90	20
2. Golden Beauty	94	4	8. Lincoln	89	11
3. Wallis	92	32	9. Black Mesdag	88	8
4. Holstein Prolific	91	26	10. Wide Awake	88	8
5. Joanette	91	26	11. Bonanza	88	8
6. Danish Island	90	20	12. Bavarian	87	32

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

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

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

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

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

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

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

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

TRIAL PLOTS OF BARLEY.

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

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

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

UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

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

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

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

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

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

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

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

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

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

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

Number.	Name of Variety.	Yield per Acre at the Three Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting.			
		Ottawa, Ont.		Nappan, N.S.		Agassiz, B.C.		Average of Three Farms.		Ottawa, Ont.	Nappan, N.S.	Agassiz, B.C.	Average of Three Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.
20	Rennie's Improved	45	20	52	24	.....		.....		92	87	...	..
21	Mansfield	45	..	50	..	33	40	42	45	93	93	102	96
22	Stella	43	36	47	24	29	28	40	13	92	93	110	98
23	Garfield	43	36	43	16	32	10	39	37	95	92	102	96
24	Empire	43	36	36	32	28	16	36	12	93	93	102	96
25	Blue Long Head	43	16	25	..	37	44	35	20	91	93	102	95
26	Baxter	41	32	47	24	38	42	42	33	93	87	97	92
27	Phœnix	41	32	52	24	36	22	43	26	92	87	99	93
28	Yale	41	32	53	16	40	..	45	..	98	92	109	100
29	Brome	40	40	32	40	32	4	35	12	94	93	103	97

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

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

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

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

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

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

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

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

TRIAL PLOTS OF SPRING WHEAT.

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

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

UNIFORM TEST PLOTS OF SPRING WHEAT.

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

An average crop of 41 bushels per acre.

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

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

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

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

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

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

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

TRIAL PLOTS OF PEASE.

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

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

UNIFORM TEST PLOTS OF PEASE.

Number.	Name of Variety.	Yield per Acre at the Four Experimental Farms, Season of 1900.										Number of Days from Sowing to Harvesting				
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Agassiz, B.C.		Average of Four Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man	Agassiz, B.C.	Average of Four Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
1	Golden Vine	40	..	13	20	33	20	19	..	26	25	109	101	136	129	117
2	Fergus	38	40	10	..	33	10	24	30	26	35	112	103	131	131	119
3	Paragon	36	..	18	40	22	50	15	..	23	7	107	106	127	129	117
4	Early Britain	35	20	16	..	25	10	32	10	27	10	106	100	129	127	115
5	Duke	35	20	17	20	37	10	30	20	30	2	112	106	130	131	120
6	Fenton	33	20	13	20	29	40	30	10	26	37	111	102	131	131	119
7	Mummy	33	20	22	..	30	..	20	30	26	27	110	100	128	129	117
8	Harrison's Glory	32	40	18	.	32	30	26	..	27	17	105	101	120	129	116
9	Prince	32	..	14	..	41	40	27	20	28	45	112	101	130	127	117
10	Chancellor	31	40	22	40	31	30	24	40	27	37	103	102	129	133	117
11	New Potter	30	40	20	..	18	30	25	10	23	35	112	101	127	124	116
12	Lanark	30	40	18	..	30	..	27	20	26	30	110	101	132	122	116
13	Kent	30	20	13	20	31	..	19	40	23	35	110	101	131	133	119
14	Arthur	30	..	20	40	22	40	26	10	24	52	103	100	127	127	114
15	Oddfellow	30	..	26	40	17	10	21	..	23	42	103	100	130	126	115
16	Dover	29	20	12	..	35	30	22	20	24	47	114	102	130	131	119
17	Prussian Blue	28	40	10	..	37	30	22	40	24	42	112	101	130	133	119
18	Wisconsin Blue	28	40	12	40	..	..	27	30	22	57	112	101	....	129	114
19	White Wonder	28	..	20	40	43	..	29	10	36	12	103	100	130	133	116
20	Elephant Blue	28	..	26	40	16	30	25	50	24	15	110	102	127	127	116
21	Bright	27	20	16	40	39	..	21	40	26	10	114	101	132	132	120
22	Lge. White Marrowfat	27	20	10	..	38	30	27	50	25	55	113	101	132	133	120
23	Nelson	27	..	28	40	26	..	19	10	25	12	105	101	128	128	115
24	English Grey	26	40	21	20	30	50	24	30	25	50	106	103	130	127	116
25	Canadian Beauty	26	..	15	20	21	30	25	40	22	7	108	102	130	133	118
26	Black-eyed Marrowfat	26	..	22	40	22	40	26	..	24	20	112	102	130	128	118
27	Picton	26	..	18	.	24	40	26	..	23	40	110	101	128	127	116
28	Alma	26	..	21	20	25	10	15	..	21	52	108	101	127	127	116

UNIFORM TEST PLOTS OF PEASE—*Concluded.*

Number.	Name of Variety.	Yield per Acre at the Four Experimental Farms, Season of 1900.								Number of Days from Sowing to Harvesting				
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Agassiz, B.C.		Average of Four Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Agassiz, B.C.	Average of Four Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
29	Perth	25	40	24	40	35	..	28	..	21	20	107	101	130	127	116
30	Creeper	25	20	15	20	31	20	15	40	21	55	108	102	130	127	117
31	Daniel O'Rourke	25	20	20	40	33	50	29	10	27	15	105	102	128	122	114
32	German White	25	20	18	..	36	40	29	..	27	15	105	101	131	129	116
33	Pearl	25	20	10	..	40	..	19	40	23	45	111	106	130	133	120
34	Centennial	25	20	23	20	31	..	24	40	26	5	112	100	130	131	118
35	Gregory	24	40	10	..	26	30	24	20	21	22	105	101	132	132	117
36	King	24	..	16	..	44	..	22	20	26	35	110	102	132	128	118
37	Pride	24	..	18	40	29	50	28	20	24	17	107	102	129	127	116
38	Agnes	24	..	22	..	38	..	24	40	27	10	107	101	129	132	117
39	Archer	24	..	21	20	39	30	25	50	27	40	112	102	130	131	119
40	Mccoun	23	20	12	..	36	20	26	..	24	25	107	105	131	131	118
41	Vincent	23	20	15	20	31	20	23	..	23	15	110	101	130	127	117
42	Victoria	23	20	6	40	32	20	26	..	22	5	105	102	129	133	117
43	Crown	23	20	29	20	31	10	26	40	27	37	110	101	129	125	116
44	Trilby	22	40	15	20	42	30	25	20	26	28	109	105	131	126	118
45	Carleton	22	..	21	20	42	40	23	20	27	20	111	102	130	127	117
46	Prince Albert	22	..	12	..	35	10	16	50	21	30	111	101	129	133	118
47	Mackay	22	..	17	20	28	40	24	..	23	..	109	105	128	127	117
48	Herald	22	..	10	..	34	30	26	30	23	15	112	101	131	129	118
49	Cooper	20	40	19	20	17	40	21	..	19	40	105	101	129	129	116
50	French Canner	20	40	22	40	12	40	27	20	20	50	103	102	126	127	114
51	Bruce	20	..	13	20	34	20	29	..	24	10	112	105	131	132	120
52	Elder	19	20	15	20	32	..	18	..	21	10	106	105	129	127	117
53	Elliott	19	20	22	40	38	30	23	30	26	..	110	106	129	132	119
54	Bedford	18	..	17	20	32	40	18	50	21	27	109	106	130	133	117
55	Chelsea	18	..	11	20	39	..	21	20	22	25	110	102	131	133	119
56	Multiplier	17	20	22	..	32	50	18	..	22	32	112	102	129	124	117

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

An average crop of 29 bushels per acre.

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

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

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

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

TRIAL PLOTS OF INDIAN CORN.

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

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

UNIFORM TEST PLOTS OF INDIAN CORN.

Number.	Name of Variety.	Yield at the Several Experimental Farms Season of 1900.										Average of all Farms.	
		Ottawa, Ont.		Nappan, N.S.		Brandon Man.		Indian Head, N.W.T.		Agassiz, B.C.			
		Per acre. Tons	Lbs	Per acre Tons	Lbs	Per acre. Tons	Lbs	Per acre. Tons	Lbs	Per acre. Tons	Lbs	Per acre. Tons	Lbs
1	Rural Tho'bd White Flint	21	1280	28	750	29	1100	17	1420	18	1180	23	1606
2	Red Cob Ensilage	23	1740	24	70	15	360	13	950	26	360	20	1096
3	Early Mastodon	23	1300	23	1850	20	920	16	1110	24	1500	21	1736
4	Giant Prolific Ensilage	23	1300	23	970	16	1440	13	1720	21	570	19	1600
5	Superior Fodder	23	640	26	1900	17	1640	14	260	26	800	21	1610
6	Salzer's All Gold	23	310	20	....	13	810	11	1100	20	1360	17	1522
7	Champion White Pea	23	200	27	1550	15	800	15	1570	23	530	21	130
8	Mammoth Cuban	23	200	24	1500	14	1700	15	30	26	680	20	1622
9	Longfellow	22	110	21	1670	15	1020	16	340	15	360	18	300
10	Angel of Midnight	22	....	23	750	18	1620	18	190	17	760	19	1864
11	Canada White Flint	22	....	22	550	18	1180	15	30	15	580	18	1262
12	White Cap Yellow Dent	21	1780	22	1650	12	1520	12	610	17	320	17	782
13	Cloud's Early Yellow	21	900	25	600	15	1240	15	800	25	1010	20	1316
14	Mamm. Eight-rowed Flint	21	240	21	1670	15	1900	16	1110	18	1620	18	1708
15	Pride of the North	21	20	24	950	15	1900	12	1410	26	360	20	128
16	Selected Leaming	20	40	23	420	16	120	14	1260	16	670	18	102
17	North Dakota White	20	40	24	950	22	1100	14	260	15	800	19	630
18	Compton's Early	19	500	18	1950	20	700	16	310	15	360	17	1970
19	Early Butler	19	280	23	1850	15	1240	14	490	17	320	18	36
20	Pearce's Prolific	18	1400	20	1800	22	220	13	950	18	630	18	1400
21	King of the Earliest	18	850	23	970	19	500	13	180	21	1580	19	416
22	Sanford	17	1970	20	1550	19	1160	13	720	15	690	17	818
23	Evergreen Sugar	17	1200	22	1100	12	420	14	1260	18	960	17	188
24	Extra Early Huron	17	1000	19	500	12	1520	10	20	24	1720	16	1752
25	Kendall's Early Giant	15	1900	19	1600	16	120	11	1870	16	10	15	1900
26	Early Yellow Long Eared	13	1280	.....		22	220	18	960	21	680	.....	
27	Country Gentleman	12	1520	22	550	11	1100	11	1870	19	280	15	1064
28	Mitchell's Extra Early	12	310	13	1950	20	480	12	1410	11	1210	15	192
29	Yellow Six-weeks Extra	11	110	11	1870	10	900	9	480	17	760	12	24
30	Extra Early Szekely	10	1780	13	1950	11	1100	9	480	13	1280	11	1718
31	North Dakota Yellow	10	1780	11	....	17	100	13	180	14	1180	13	708
32	Salzer's Earliest Ripe	9	1800	9	700	8	500	9	480	14	1810	10	658

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Thoro'bred White Flint..	29	1400	4. Early Yellow Long Eared	22	220
2. North Dakota White	22	1100	5. Early Mastodon.....	20	920
3. Pearce's Prolific	22	220	6. Compton's Early.....	20	700

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

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

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

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

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

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

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

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

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

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

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

TRIAL PLOTS OF TURNIPS.

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

UNIFORM TEST PLOTS OF TURNIPS.

Number.	Name of Variety	Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Sown May 10	Sown May 22	Sown May 29	Sown June 12	Sown May 19	Sown June 2	Sown May 18	Sown May 25	Sown May 18	Sown June 1	First Sowing	Second Sowing
		Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.
1	Carter's Elephant	42 1800	25 1150	42 480	21 1725	10 64	8 1160	19 310	6 1740	17 1200	16 560	26 771	15 1667
2	Skirvings	37 1240	31 865	42 1800	26 1625	8 1160	15 1680	16 400	15 780	16 560	18 80	24 632	21 1006
3	Champion Purple Top	36 1590	26 925	33	24 675	12 1080	10 1384	19 1675	8 1040	24 1280	26 1680	25 725	19 740
4	West Norfolk Red Top	36 930	29 1400	33 1980	28 925	7 1048	12 1608	14 290	11 1040	28 1200	22 ...	24 289	20 1794
5	Sutton's Champion	36 105	34 1300	30	29 575	8 1160	11 440	13 670	16 400	17 1080	15 1240	21 203	21 791
6	Monarch	35 1940	18 795	42 480	23 1850	6 1200	8 1160	14 1235	9 990	17 1970	16 120	23 965	15 1199
7	Magnum Bonum	35 1289	30 1710	34 1300	29 1400	10 856	9 1800	8 1850	10 1825	15 1680	19 280	21 195	20 203
8	Drummond Purple Top	35 620	24 1830	38 1880	26 1625	9 216	10 328	20 545	8 1580	20 1580	19 1600	24 1768	18 192
9	Perfection Swede	33 825	28 925	35 950	25 1975	10 1120	12 1872	20 410	15 1590	36 160	31 920	27 293	22 1856
10	Shamrock Purple Top	33 825	31 37	37 745	23 1850	8 104	14 1040	14 1505	11 1040	19 280	15 800	22 1091	19 553
11	Kangaroo	33 330	29 575	40 850	26 1150	9 480	10 1120	10 70	7 415	17 1860	13 400	22 318	17 732
12	Elephant's Master	32 1835	30 1050	37 250	26 1625	7 520	9 480	11 905	13 130	26 800	22 220	23 62	20 701
13	Selected Purple Top	32 1540	28 760	33	30 1050	7 1048	11 704	15 1590	15 240	24 1280	18 80	22 1451	20 1366
14	Hall's Westbury	32 1010	23 530	38 1550	27 450	5 1088	15 1680	17 80	12 990	18 80	20 700	22 761	19 1670
15	Selected Champion	32 680	30 1050	40 1675	25 325	9 1800	15 360	15 1995	15 1590	17 320	16 560	23 494	20 1177
16	East Lothian	32 350	21 240	37 1075	28 1750	8 368	13 136	19 1000	14 560	16 1000	11 1760	22 1559	17 1689
17	Hartley's Bronze	31 1360	24 1170	42 975	25 1975	9 1800	13 400	17 350	10 235	19 1160	19 620	24 329	18 1280
18	Mammoth Clyde	31 1195	26 1790	36 600	21 1725	6 936	11 440	17 1700	13 400	25 1920	25 1040	23 1270	19 1479
19	Marquis of Lorne	31 1030	26 965	31 1525	18 1455	6 1392	11 440	15 240	14 560	16 780	16 1060	20 713	17 1016
20	New Arctic	31 1030	24 180	34 1300	22 1375	7 1576	9 480	12 315	8 350	18 520	16 1880	20 1748	16 453
21	Jumbo	31 370	27 1935	33 1650	22 1375	5 1888	19 800	8 1175	12 1395	17 320	15 1680	19 679	19 1437
22	Imperial Swede	30 390	26 1130	42 1305	29 1400	9 480	13 400	11 770	22 385	25 1920	22 1020	23 1773	22 1667
23	Pearce's Prize Winner	29 80	22 1375	37 1900	26 1625	8 1160	12 1080	14 1505	9 525	19 1380	19 620	22 5	18 245
24	Prize Purple Top	28 1750	23 860	37 250	26 800	9 1800	12 1344	15 375	13 1480	18 80	16 560	21 1651	18 1069
25	Halewood's Bronze Top	28 100	14 1370	37 1075	28 100	4 1240	11 1760	19 1675	14 20	18 1400	14 1040	21 1498	16 1258
26	Bangholm Selected	27 1440	24 510	35 125	23 1025	5 560	14 1040	17 1565	12 315	26 1680	25 820	22 1074	19 1942
27	Giant King	24 180	21 900	30 225	18 1950	10 1120	8 1160	16 1665	9 1485	17 1860	15 360	19 1810	14 1571
28	Webb's New Renown	all rotted	all rotted	27 1275	26 1625	10 1120	15 360	19 310	20 1625	15 1680	11 1980	18 569	18 596

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

	Tons.	Lbs.
Central Experimental Farm, first sowing	32	1542
" " second sowing	26	420
Experimental Farm, Nappan, first sowing	36	1258
" " " second sowing	25	1322
" " Brandon, first sowing	8	82
" " " second sowing	12	523
" " Indian Head, first sowing	15	1220
" " " second sowing	12	1210
" " Agassiz, first sowing	20	1161
" " " second sowing	18	1296

Average crop from all the plots at all the farms, first sowing, 22 tons 1,441 lbs.; second sowing, 19 tons 160 lbs. per acre.

The six varieties of turnips which have given the heaviest crops at the several experimental farms during the season of 1900 are the following. (Where not otherwise stated the quantities given are all from the early sown plots.):

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Carter's Elephant	42	1800	4. West Norfolk Red Top	36	930
2. Skirvings	37	1210	5. Sutton's Champion	36	105
3. Champion Purple Top	36	1590	6. Monarch	35	1940

An average crop of 37 tons 1,267 lbs. per acre.

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

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Skirvings	42	1800	4. Monarch	42	480
2. Imperial Swede	42	1305	5. Carter's Elephant	42	480
3. Hartley's Bronze	42	975	6. Selected Champion	40	1675

An average crop of 42 tons 715 lbs per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons	Lbs.		Per Acre. Tons.	Lbs.
1. Jumbo, 2nd sowing	19	800	5. Webb's N. Renown, 2nd s.	15	360
2. Skirvings, 2nd sowing	15	1680	6. Shamrock Purple Top, 2nd sowing	14	1040
3. Hall's Westbury, 2nd sow.	15	1680			
4. Sel'd Champion, 2nd sow.	15	360			

An average crop of 15 tons 1,987 lbs. per acre.

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

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Imp. Swede, 2nd sowing	22	385	4. Perfection Swede	20	410
2. Webb's N. Renown, 2nd s	20	1625	5. Champion Purple Top	19	1675
3. Drummond Purple Top	20	545	6. Halewood's Bronze Top	19	1675

An average crop of 20 tons 1,052 lbs. per acre.

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

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Perfection Swede	36	160	4. Shamrock Purple Top, 2nd sowing	26	1680
2. West Norfolk Red Top	28	1200	5. Carter's Elephant	26	800
3. Bangholm Selected	26	1680	6. Mammoth Clyde	25	1920

An average crop of 28 tons 907 lbs. per acre.

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

	Per Acre.			Per Acre.	
	Tons.	Lbs.		Tons.	Lbs.
1. Carter's Elephant.....	28	291	4. Drummond Purple Top..	24	1768
2. Perfection Swede	27	293	5. Skirvings.....	24	632
3. Champion Purple Top...	25	723	6. Hartley's Bronze.....	24	329

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

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

TRIAL PLOTS OF MANGELS.

Twenty-two varieties of mangels have been under test during 1900, all sown on drills or on the flat in rows 2½ feet apart. Two sowings were made at each of the experimental farms, the second sowing two weeks later than the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following : At Ottawa, October 16th ; Nappan, October 24th ; Brandon, October 2nd ; Indian Head, September 28th and at Agassiz October 24th. The yield per acre has been calculated in each case from the weight of roots gathered from two rows each 66 feet long.

UNIFORM TEST PLOTS OF MANGELS.

Number.	Name of Variety	Ottawa, Ont.		Nappan, N.S.		Brandon, Man		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Sown May 16	Sown May 30	Sown May 29	Sown June 12	Sown May 19	Sown June 2	Sown May 18	Sown May 25	Sown April 25	Sown May 12	First Sowing	Second Sowing
		Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.	Per acre. Tons. Lbs.
1	Canadian Giant.....	51 630	34 310	37 250	28 1750	10 328	13 1720	24 1590	11 740	18 740	20 1580	28 708	21 1620
2	Giant Yellow Intermediate	49 340	24 1500	49 175	30 1875	12 552	11 440	20 1370	16 370	28 1960	21 1120	32 79	20 1861
3	Ward's Large Oval Shaped	47 1040	33 1650	35 1650	24 1500	9 744	13 928	12 795	15 1500	13 1720	11 1760	23 790	19 1868
4	Mammoth Long Red.....	46 400	39 540	41 1325	30 1875	13 928	13 136	19 640	21 1980	14 1040	12 640	27 67	23 1034
5	Giant Yellow Half Long..	45 1080	25 1150	37 875	28 100	10 1648	11 1232	19 1465	12 1200	26 800	19 1380	29 1973	19 1012
6	Mam. Yellow Intermediate	44 440	38 560	47 875	33 825	11 704	.....	16 335	13 715	18 1620	22 880	27 1195	26 1745
7	Gate Post.....	42 480	34 1300	40 25	30 225	10 1384	15 888	23 1670	18 1950	16 120	14 600	26 1136	22 1393
8	Half Long Sugar Rosy....	42 295	28 430	30 1875	22 1375	10 1384	11 704	12 1740	15 1500	22 1760	18 80	23 1811	19 418
9	Yellow Intermediate....	42 150	40 1510	43 625	25 1150	5 32	13 664	12 1080	18 570	14 1920	14 1040	23 761	22 987
10	Champion Yellow Globe..	42 150	35 290	41 1325	30 1875	10 1384	12 288	26 740	13 820	20 480	11 880	28 416	20 1231
11	Half Long Sugar White ..	41 1820	31 700	27 1275	26 1025	7 1840	12 1608	13 1270	15 1920	16 560	12 640	22 953	19 1579
12	Prize Mamm. Long Red..	41 1490	33 990	40 1675	25 1150	11 1760	13 400	18 860	18 1815	14 1040	17 200	25 965	21 1311
13	Gate Post Yellow	41 500	29 1400	33 1650	25 655	10 328	8 1680	18 30	11 1160	14 820	13 180	23 1066	17 1415
14	Lion Yellow Intermediate	41 500	40 1180	50 1805	32 1175	11 704	8 1688	10 1090	17 1490	11 880	14 160	25 196	22 1539
15	Giant Yellow Globe.....	41 170	27 450	43 625	39 375	12 816	12 1608	20 5	13 160	10 240	11 440	25 771	20 1467
16	Sutton's Yellow Globe....	41 170	37 580	51 1125	33 650	8 1952	11 1760	not sown	not sown	15 800	14 1920	29 512	24 727
17	Mammoth Oval Shaped...	39 210	41 500	34 475	28 1750	14 1832	15 1416	16 1840	16 1330	13 1720	11 1760	23 1615	22 1751
18	Norbiton Giant	37 910	31 1360	39 375	31 1525	12 552	12 816	17 935	19 910	18 960	15 1460	24 1946	22 414
19	Selected Mam. Long Red	37 250	30 1050	40 25	28 100	13 664	21 240	16 1350	23 590	13 1720	15 360	24 598	23 1268
20	Golden Fleshed Tankard	36 1590	31 1855	35 950	26 305	8 1954	7 1312	12 1620	12 660	15 840	14 820	21 1782	18 990
21	Yellow Fleshed Tankard..	31 865	30 60	41 5	28 1255	8 1688	8 896	7 520	12 795	18 80	13 400	21 632	18 1081
22	Warden Orange Globe ..	31 370	30 60	32 175	28 925	11 176	8 632	13 505	16 370	9 1580	10 1340	19 9 5	18 1465

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

Central Experimental Farm, first sowing..... 41 tons 1175 lbs.
" " second sowing..... 33 " 337 "
Experimental Farm, Nappan, first sowing..... 40 " 234 "
" " " second sowing..... 29 " 247 "
" " Brandon, first sowing..... 10 " 1516 "
" " " second sowing..... 12 " 536 "
Experimental Farm, Indian Head, first sowing..... 16 tons 1687 lbs.
" " second sowing.. 15 " 1930 "
" Agassiz, first sowing..... 16 " 1334 "
" " second sowing..... 15 " 76 "

Average crop from all the plots at all the farms, first sowing, 25 tons 69 lbs.; second sowing, 21 tons 225 lbs. per acre.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

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

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

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

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

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

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

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

The early sown plots of mangels have given in 1900 larger crops than those later sown at all the experimental farms, excepting that at Brandon, the average of all, showing an advantage in favour of early sowing of 3 tons 844 lbs. per acre.

TRIAL PLOTS OF CARROTS.

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

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

UNIFORM TEST PLOTS OF CARROTS.

Number.	Name of Variety.	Ottawa, Ont.		Nappan, N.S.		Brandon, Man.	Agassiz, B.C.		Average of four Farms.	
		Sown May 16	Sown May 30	Sown May 29	Sown June 12	Sown June 2	Sown April 24	Sown May 11	First Sowing	Second Sowing
		Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.	Per acre, Tons. Lbs.
1	Giant White Vosges	38 1880	27 1770	25 325	15 195	5 1000	36 160	31 920	33 788	20 410
2	New White Intermediate	37 250	31 1810	23 1025	17 650	4 1240	31 480	24 400	30 1251	19 1025
3	Improved Short White	35 1280	27 320	21 75	17 155	4 1240	35 400	29 740	30 1251	19 1064
4	Half Long White	33 1155	27 1275	30 1875	15 195	5 560	33	27 120	32 1010	18 1537
5	Iverson's Champion	32 1340	26 1130	19 280	14 875	4 360	25 160	15 960	25 1260	15 1831
6	Green Top White Orthe	32 515	26 470	26 1955	12 255	5 1880	26 800	25 1480	28 1090	17 1021
7	White Vosges Large Short	31 700	25 1150	21 405	10 955	2 1280	23 420	21 1560	25 508	15 236
8	Guerande or Ox-Heart	27 615	23 1190	19 775	13 895	5 560	26 800	23 420	24 730	16 766
9	Yellow Intermediate	26 1460	24 1170	17 650	13 400	3 1480	20 1360	16 786	21 1157	14 957
10	Ontario Champion	26 800	24 15	25 325	12 255	3 160	30 1660	35 400	27 928	18 1207
11	Mamm. White Intermediate	26 140	22 550	29 80	16 505	3 600	27 120	20 1580	27 780	15 1309
12	Carter's Orange Giant	25 1810	21 1560	17 25	10 1450	4 1240	27 1440	23 1300	23 1092	15 387
13	Half Long Chantenay	25 985	24 1170	17 1475	15 1680	5 1000	20 1580	23 1960	21 680	17 952
14	Early Gem	25 820	22 550	22 1705	15 855	5 1000	28 1200	23 1520	25 1242	16 1481
15	White Belgian	22 880	21 570	18 1455	12 1575	3 1040	25 600	23 640	22 312	15 456
16	Scarlet Intermediate	19 1270	15 1185	14 1205	9 150	3 160	17 1200	12 640	17 558	10 34
17	Scarlet Nantes	17 1805	15 690	14 875	9 975	2 1720	13 400	11 880	15 360	9 1566
18	Long Orange or Surrey	17 1805	14 50	17 320	9 1305	2 1720	13 400	11 660	16 175	9 934
19	Scarlet Altringham	17 650	12 1080	19 1600	9 1305	3 600	16 560	19 1580	17 1303	11 591

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

Central Experimental Farm, first sowing..... 27 tons 745 lbs.
" " " second sowing..... 22 " 1763 "
Experimental Farm, Nappan, first sowing..... 21 " 233 "
" " " second sowing..... 13 " 244 "
" " Brandon, second sowing only.... 4 " 360 "
Experimental Farm Agassiz, first sowing..... 25 tons 302 lbs.
" " " second sowing..... 22 " 544 "

Average crop from all the plots at the four farms, omitting the second sowing at Brandon, was: first sowing 24 tons 1003 lbs; second sowing, 19 tons 850 lbs., an advantage in favor of the early sown plots of 5 tons 243 lbs. per acre.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ON

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BBANDON, MAN.

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

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

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

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

An average crop of 33 tons 440 lbs per acre.

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

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Giant White Vosges....	33	788	4. New White Intermediate.....	30	1251
2. Half Long White.....	32	1013	5. Green Top White Orthe	28	1090
3. Improved Short White.	30	1251	6. Ontario Champion.....	27	928

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

TRIAL PLOTS OF SUGAR BEETS.

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

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

UNIFORM TEST PLOTS OF SUGAR BEETS.

Number.	Name of Variety.	Ottawa, Ont.				Nappan, N.S.				Brandon, Man.				Indian Head, N.W.T.				Average of four Farms.			
		Sown May 16.		Sown May 30.		Sown May 29.		Sown June 12.		Sown May 19.		Sown June 2		Sown May 18.		Sown May 25		First Sowing.		Second Sowing	
		Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.	Per Acre. Tons	Lbs.
1	Danish Improved	42	810	28	430	25	325	20	425	8	632	10	1384	10	970	10	10	21	1184	17	562
2	Wanzleben	40	355	31	1030	28	1225	19	1005	9	744	13	400	11	740	12	1740	22	766	19	544
3	Improved Imperial	38	1335	25	490	37	1075	23	1355	10	328	13	136	11	1295	9	1860	24	1008	17	1960
4	Red Top Sugar	37	580	26	1130	35	125	23	200	10	592	11	1232	12	930	15	1125	23	1557	19	422
5	Danish Red Top	34	805	31	1030	30	1875	25	325	10	64	14	1040	11	50	12	1620	21	1198	21	4
6	Vilmorin's Improved	27	615	22	220	22	1375	21	1725	8	368	8	632	10	1090	11	1970	17	362	16	137

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

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

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

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

An average crop of 33 tons 75 lbs. per acre

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN

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

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

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

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

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

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

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

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

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

TRIAL PLOTS OF POTATOES.

Eighty-two varieties of potatoes have been under trial in uniform test plots during 1900. The potatoes for planting were cut into pieces with two or three eyes in each and these were planted in rows 2½ feet apart, the sets being placed a foot apart in the rows. The following were the dates of planting: At Ottawa, planted on May 22nd and 23rd, dug October 9th to 11th; Nappan, planted June 6th, dug October 17th; Brandon, planted May 23rd, dug September 20th; Indian Head, planted May 14th, dug Sept. 29th, and at Agassiz, planted May 17th and 18th and dug October 1st to 4th.

UNIFORM TEST PLOTS OF POTATOES.

Number.	Name of Variety.	YIELD AT THE SEVERAL EXPERIMENTAL FARMS SEASON OF 1900.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N. W. T.		Agassiz, B.C.		Average of all Farms.	
		Per acre.		Per acre.		Per acre.		Per acre.		Per acre.		Per acre.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.
1	Vanier	576	24	484	..	253	..	452	..	212	18	395	32
2	Early Sunrise	532	24	259	36	187	..	422	30	157	27	311	47
3	Irish Cobbler	532	24	536	48	300	40	465	..	156	54	398	21
4	Rose No. 9	528	..	435	36	282	20	474	45	235	24	391	13
5	Burnaby Seedling	525	48	477	24	275	..	495	30	142	..	383	8
6	Northern Spy	525	48	492	48	304	20	465	..	237	36	405	6
7	Flemish Beauty Seedling	525	48	444	24	201	40	348	30	143	45	332	49
8	Empire State	519	12	451	..	216	20	607	15	136	..	385	57
9	Money Maker	517	..	396	..	311	40	283	..	151	10	331	46
10	General Gordon	517	..	376	22	165	..	522	45	145	..	345	13
11	Polaris	502	42	272	48	198	..	470	15	169	24	322	38
12	Late Puritan	492	48	330	..	249	20	472	45	150	..	338	58
13	American Wonder	488	24	473	..	242	..	662	..	169	24	406	57
14	Seattle	490	36	495	..	348	20	607	15	211	12	430	28
15	Rural No. 2	488	24	308	..	220	..	397	30	150	30	312	53
16	Swiss Snow-Flake	486	12	431	12	198	..	308	15	197	17	324	11
17	State of Maine	481	48	347	36	293	20	570	45	154	..	369	30
18	Vick's Extra Early	481	48	396	..	216	20	556	30	150	15	360	11
19	Sharpe's Seedling	475	12	490	..	146	40	468	15	168	18	349	41
20	New Queen	475	12	435	36	212	40	462	15	130	..	343	8
21	Rochester Rose	470	48	420	12	150	20	722	..	153	..	383	16
22	American Giant	464	12	444	24	183	20	656	..	140	..	377	35
23	Seedling No. 230	464	12	451	..	311	40	417	45	292	36	387	27
24	Early Norther	462	..	448	48	168	40	294	30	150	15	304	50
25	Early Market	462	..	444	24	256	40	379	..	280	30	364	31
26	Rural Blush	459	48	462	..	304	20	501	15	232	16	391	56
27	Dreer's Standard	457	36	451	..	260	20	418	..	152	30	347	53
28	Maule's Thoroughbred	457	36	407	..	242	..	431	15	155	..	338	34
29	Reeve's Rose	455	24	378	34	282	20	485	..	148	30	349	58
30	Brown's Rot Proof	455	24	402	36	271	20	396	..	153	12	335	42
31	I. X. L	451	..	402	36	238	20	552	30	138	30	356	35
32	Penn Manor	446	36	226	36	256	40	511	15	167	12	321	40
33	Columbus	446	36	462	..	286	..	541	..	141	30	375	25
34	Holborn Abundance	442	12	605	..	286	..	459	15	141	..	386	41
35	Clay Rose	440	..	477	24	201	40	358	15	198	..	335	4
36	Lee's Favourite	437	48	367	24	234	40	481	..	162	48	336	44

UNIFORM TEST PLOTS OF POTATOES.—*Concluded.*

Number.	Name of Variety.	Yield at the several Experimental Farms, season of 1900. Ottawa, Ont.		Nappan, N.S.		Brandon, Man		Indian Head, N. W. T.		Agassiz, B.C.		Average of all Farms.	
		Per acre. Bush.	Lbs.	Per acre. Bush.	Lbs.	Per acre. Bush.	Lbs.	Per acre. Bush.	Lbs.	Per acre. Bush.	Lbs.	Per acre. Bush.	Lbs.
37	Troy Seedling	437	48	448	..	337	20	507	..	171	36	374	21
38	Country Gentleman	435	36	463	..	190	40	495	30	165	..	329	57
39	Uncle Sam	435	36	413	36	300	40	579	45	232	16	392	22
40	Early Six Weeks	424	36	473	..	293	20	488	30	171	36	370	12
41	Carman No. 3	424	36	396	..	308	..	478	45	156	12	352	42
42	Early Harvest	422	24	418	..	297	..	443	45	174	54	350	36
43	Wonder of the World	420	12	...	..	165	..	408	45	142	..	283	59
44	Cambridge Russet	420	12	448	48	293	20	417	45	152	..	346	25
45	Thorburn	420	12	422	24	172	20	440	45	150	30	321	14
46	Green Mountain	420	12	396	..	293	20	342	30	180	24	326	29
47	Burpee's Extra Early	418	..	418	..	201	40	388	..	138	..	312	44
48	Early Rose	415	48	360	48	220	..	372	15	158	24	305	27
49	Sir Walter Raleigh	404	48	440	..	256	40	308	15	143	45	310	41
50	Everett	402	36	506	..	231	..	550	45	173	48	372	50
51	Early Puritan	400	24	484	..	238	20	408	45	169	24	340	11
52	Delaware	400	24	424	36	363	..	570	45	152	..	382	9
53	Great Divide	400	24	435	36	286	..	344	45	173	48	328	6
54	Dakota Red	400	24	451	..	374	..	436	..	232	16	378	44
55	Daisy	391	36	385	..	238	20	397	30	140	..	310	29
56	Lizzie's Pride	389	24	330	..	311	40	452	..	292	36	355	8
57	Bovee	385	..	466	24	201	40	508	30	180	24	348	23
58	Early White Prize	385	..	360	48	253	..	369	45	127	..	299	7
59	McIntyre	380	36	360	48	146	40	217	..	212	8	263	26
60	Carman No. 1	380	36	475	12	348	20	559	15	184	48	389	38
61	Pearce's Extra Early	378	24	352	..	183	20	331	..	153	..	279	33
62	Irish Daisy	374	..	589	36	304	20	573	..	173	48	402	57
63	New Variety No. 1	374	..	424	36	344	40	561	30	131	20	367	13
64	White Beauty	374	..	468	36	231	..	461	30	148	30	336	43
65	Quaker City	374	..	437	48	256	40	388	..	245	18	240	21
66	Chicago Market	369	36	354	24	209	..	462	15	145	30	304	9
67	Pearce's Prize Winner	367	24	501	36	198	..	545	30	142	30	351	..
68	Early Ohio	363	..	385	..	168	40	312	45	143	..	274	29
69	Prize Taker	356	24	413	36	253	..	502	30	157	27	336	35
70	Beauty of Hebron	347	36	433	24	238	20	598	15	142	..	351	55
71	Maggie Murphy	334	24	422	24	201	40	410	45	127	..	299	14
72	Clarke's No. 1	321	12	418	..	308	..	418	..	158	..	324	38
73	Earliest of All	319	..	354	12	249	20	408	45	141	45	294	36
74	Seedling No. 7	318	..	466	24	330	..	481	..	165	..	352	5
75	Early Michigan	300	12	330	..	267	40	312	45	...	..	302	39
76	Hale's Champion	290	34	451	..	293	20	408	45	268	24	342	24
77	Houlton Rose	272	48	334	24	293	20	424	30	184	48	301	58
78	Browncll's Winner	266	12	325	36	333	40	513	30	211	12	330	2
79	Reading Giant	244	12	330	..	238	20	354	45	297	..	292	51
80	Ohio Junior	237	36	462	..	223	40	348	30	155	..	285	21
81	Bill Nye	217	48	477	24	161	20	433	45	153	27	288	45
82	Pride of the Market	209	..	455	24	264	..	460	30	223	53	322	33

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

	Per Acre. Bush.	Lbs.		Per Acre. Bush.	Lbs.
1. Holborn Abundance	605		7. Northern Spy	492	48
2. Irish Daisy	589	36	8. Sharpe's Seedling	490	
3. Irish Cobbler	536	48	9. Vanier	484	
4. Everett	506		10. Early Puritan	484	
5. Pearce's Prize Winner	501	36	11. Bill Nye	477	24
6. Seattle	495		12. Burnaby Seedling	477	24

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

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

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

	Per Acre. Bush.	Lbs.		Per Acre. Bush.	Lbs.
1. Reading Giant	297		7. Northern Spy	237	36
2. Seedling No. 230	292	36	8. Rose No. 9	235	24
3. Lizzie's Pride	272	36	9. Uncle Sam	232	16
4. Early Market	280	30	10. Dakota Red	232	16
5. Hale's Champion	268	24	11. Rural Blush	232	16
6. Garden City	245	18	12. Pride of the Market	223	53

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

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

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Seattle	430	28	7. Uncle Sam	392	22
2. American Wonder	406	57	8. Rural Blush	391	56
3. Northern Spy	405	6	9. Rose No. 9	391	13
4. Irish Daisy	402	57	10. Carman No 1	389	38
5. Irish Cobbler	398	21	11. Seedling No. 230	387	27
6. Vanier	395	32	12. Holborn Abundance	386	41

An average crop of 398 bushels 13 lbs. per acre

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

AVERAGE OF CROPS FOR THE PAST FIVE AND SIX YEARS.

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

FIVE AND SIX YEARS' EXPERIENCE WITH VARIETIES OF OATS.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

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

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

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

Average for six years.

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN

Average for five years.

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

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

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

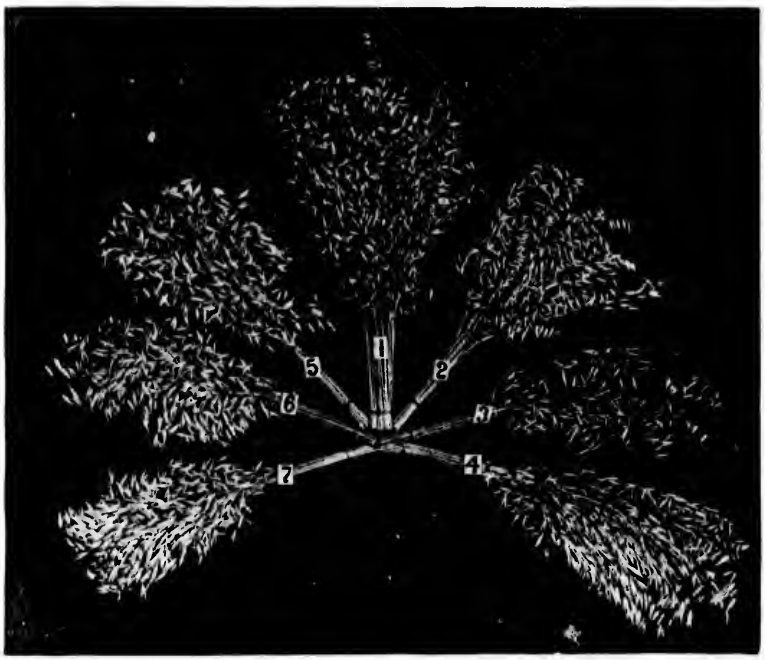
EXPERIMENTAL FARM FOR THE NORTHWEST TERRITORIES, INDIAN HEAD, N.W.T.

Average for five years.

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

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

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



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

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

Average for six years.

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

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

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

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

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

FIVE AND SIX YEARS' EXPERIENCE WITH VARIETIES OF BARLEY.

TWO-ROWED BARLEY.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

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

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

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

Average for six years.

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

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

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

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

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

Average for five years.

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

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

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

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

Average for six years.

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

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

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

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

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

SIX-ROWED BARLEY.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

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

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

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

Average for six years.

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

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

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

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

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

Average for five years.

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

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

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

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

Average for six years.

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

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

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

	Per acre. Bush.	Lbs.		Per acre. Bush.	Lbs.
1. Mensury	51	9	4. Common	46	46
2. Trooper	48	10	5. Royal	46	25
3. Odessa	48	..	6. Oderbruch	46	2

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

FIVE AND SIX YEARS EXPERIENCE WITH VARIETIES OF SPRING WHEAT.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Average for six years.

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

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

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

Average for six years.

	Per acre. Bush.	Lbs.		Per acre. Bush.	Lbs.
1. Monarch	35	4	7. Hungarian	32	52
2. Wellman's Fife	35	2	8. White Russian	32	50
3. White Connell	34	50	9. Rio Grande	32	40
4. Preston	33	10	10. Red Fern	32	10
5. Huron	33	6	11. Advance	31	48
6. Goose	32	53	12. Stanley	31	48

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Average for five years.

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

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

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

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

Average for five years.

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

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

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

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

Average for six years.

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

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

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

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

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

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

THREE TO SIX YEARS' EXPERIENCE WITH VARIETIES OF PEASE.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

An average crop of 35 bushels 59 lbs. per acre.

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

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

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

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

	Per acre. Bush.	Lbs.		Per acre. Bush.	Lbs.
1. Crown.	35	28	7. Mummy	32	20
2. Carleton	34	25	8. Centennial.	32	12
3. Pride	33	52	9. Trilby.	32	9
4. New Potter	32	41	10. Archer	32	6
5. Early Britain	32	39	11. King	32	..
6. Duke	32	37	12. Paragon	31	51

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

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

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Tons.	Lbs.		Per Acre. Tons.	Lbs.
1. Thoro'bred White Flint.	21	1098	4. Compton's Early.	18	1767
2. Angel of Midnight.	21	625	5. Red Cob Ensilage.	18	1708
3. Longfellow.	19	903	6. Champion White Pearl.	18	1418

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

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

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

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

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

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

An average crop of 22 tons 152 lbs. per acre

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

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

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

FIVE YEARS' EXPERIENCE WITH VARIETIES OF TURNIPS.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

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

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

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

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

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

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

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

FOUR AND FIVE YEARS' EXPERIENCE WITH VARIETIES OF MANGELS.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

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

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

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

	Per acre. Tons.	Lbs.		Per acre. Tons.	Lbs.
1. Yellow Intermediate, 5 yrs	38	65	4. Selected Mamm. Long Red 4 yrs	33	
2. Giant Yellow Intermediate, 5 yrs	33	1902	5. Gate Post, 5 yrs	31	158
3. Giant Yellow Half Long, 4 yrs	33	80	6. Mamm. Long Red, 4 yrs.	30	1541

An average crop of 33 tons 623 lbs. per acre.

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

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

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

FOUR AND FIVE YEARS' EXPERIENCE WITH VARIETIES OF CARROTS.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

	Per acre. Tons.	Lbs.		Per acre. Tons.	Lbs.
1. Half Long White, 5 yrs.	21	1219	4. Green Top White Orthe, 4 yrs.	19	892
2. Mammoth White Intermediate, 5 yrs.	20	1688	5. Improved Short White, 5 yrs	19	193
3. Giant White Vosges, 5 yrs.	19	1522	6. Iverson's Champion, 5 yrs.	18	1635

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

	Per acre. Tons.	Lbs.		Per acre. Tons.	Lbs.
1. Improved Short White, 5 yrs	31	224	4. Green Top White Orthe 4 yrs	29	1931
2. Giant White Vosges, 5 yrs.	32	880	5. Yellow Intermediate 5 yrs.	29	329
3. Half Long White 5 yrs...	32	44	6. Mammoth White Intermediate, 5 yrs	28	1198

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

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

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

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

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

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Tons.	Lbs.		Per acre Tons.	Lbs.
1. Danish Red Top, 3 years.	32	570	3. Wanzleben, 4 years.....	25	77
2. Danish Improved, 4 yrs..	26	222	4. Red Top Sugar, 4 years..	23	1788

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

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

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

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

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

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

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

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

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

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

FOUR TO SIX YEARS' EXPERIENCE WITH VARIETIES OF POTATOES.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

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

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

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

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

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

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

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

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

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

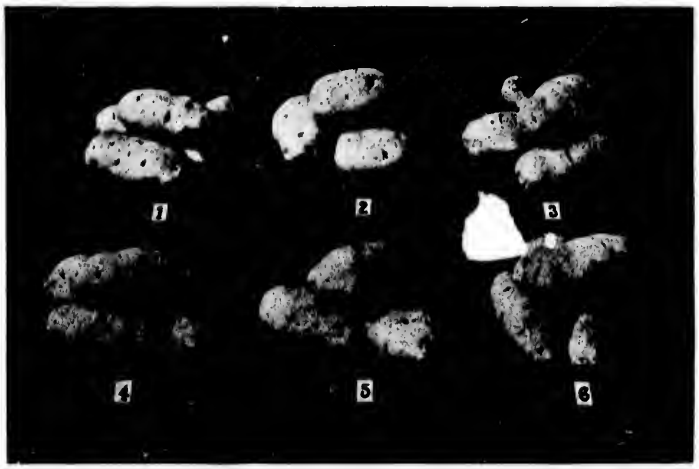
	Per acre. Bush.	Lbs.		Per acre. Bush.	Lbs.
1. American Giant, 5 yrs...	473	50	7. Brownell's Winner, 6 yrs.....	391	25
2. American Wonder, 6 yrs.	431	33	8. General Gordon, 4 yrs..	386	26
3. Rochester Rose, 5 yrs....	430	6	9. Empire State, 6 yrs	384	
4. Vick's Extra Early, 5 yrs	425	2	10. Lizzie's Pride, 6 yrs	382	40
5. Lee's Favorite, 5 yrs....	419	4	11. Northern Spy, 6 yrs....	382	10
6. New Variety No. 1, 5 yrs	405	6	12. Houlton Rose, 4 yrs....	376	51

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

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

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

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



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

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

	Per acre. Bush.	Lbs.		Per acre. Bush.	Lbs.
1. Seedling No. 230.....	376	40	7. Late Puritan.....	348	9
2. Irish Daisy.....	371	14	8. State of Maine, ...	341	21
3. American Giant	367	18	9. New Variety No. 1.....	340	41
4. American Wonder	365	40	10. Seattle	338	29
5. Empire State.....	351	27	11. Vanier	337	27
6. Carman No. 1.....	348	15	12. General Gordon.....	337	30

An average crop of 352 bushels per acre.

SUMMARY.

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

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

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

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

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