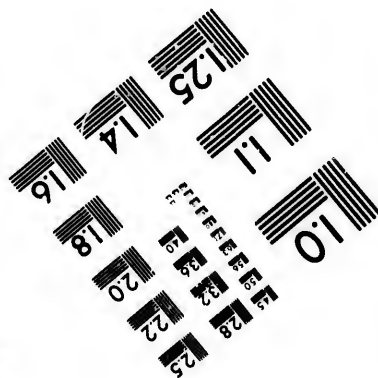
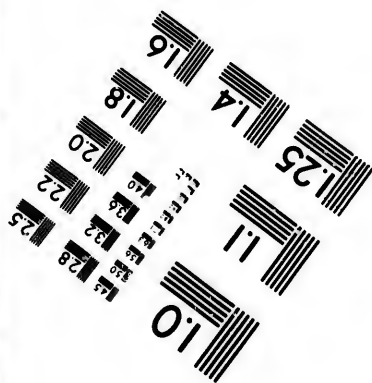
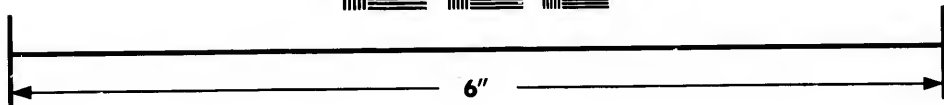
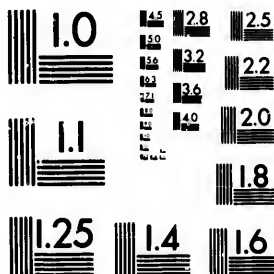


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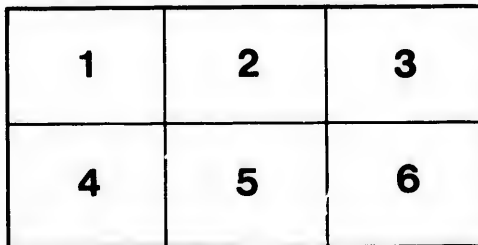
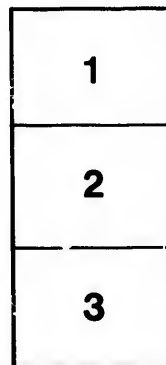
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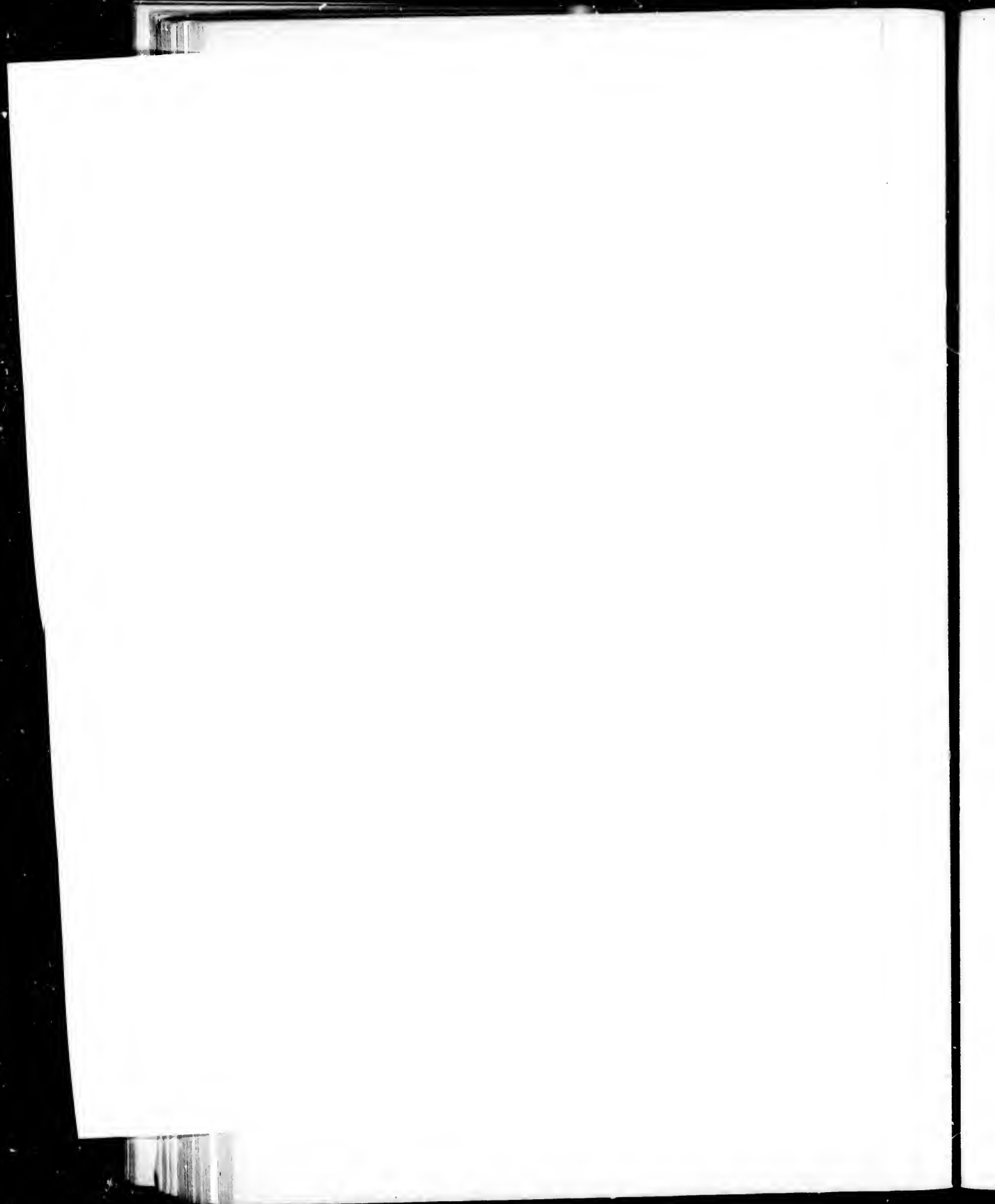
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DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA

BULLETIN No. 24

RESULTS OBTAINED IN 1895 FROM TRIAL PLOTS OF
IMPORTANT FARM CROPS

MARCH, 1896.

• PUBLISHED BY DIRECTION OF THE HON. W. H. MONTAGUE, MINISTER OF AGRICULTURE.

To the Honourable
The Minister of Agriculture.

SIR,—I have the honour to submit for your approval Bulletin 24 of the Experimental Farm series, which has been prepared by myself. In this bulletin will be found the results of a large number of experiments which have been carried on at all the experimental farms during 1895 with oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots and potatoes in uniform test plots. This work has been undertaken for the purpose of gaining information as to the relative productiveness of the many varieties under trial and their earliness of maturing.

I trust that the information submitted, covering the results obtained under most of the more important climatic variations found in the Dominion, will be useful to farmers everywhere throughout Canada.

I have the honour to be,
Your obedient servant,

WM. SAUNDERS,
Director Experimental Farms.

Ottawa, 11th March, 1895.

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RESULTS OBTAINED IN 1895
FROM
TRIAL PLOTS OF IMPORTANT FARM CROPS

BY WM. SAUNDERS, F.R.S.C., F.L.S., F.C.S.,
Director Experimental Farms.

Early in 1891 a series of uniform experiments was planned, to be carried on at all the experimental farms for growing in special plots, side by side on land of uniform character, many different sorts of oats, barley, wheat, pease, corn, mangels, carrots, turnips and potatoes. The seed of each variety selected has been of uniform quality and all from the same source, a sufficient quantity having been procured at the Central Farm and from thence distributed to the Branch Farms. Instructions were given to sow the plots of oats, barley and wheat as early as practicable after the land was in fit condition to receive the seed, and suitable directions sent as to the sowing or planting of the other plots and the quantity of seed to be used in each case. The land selected for the purpose was to be as uniform in character as could be found, all the plots of one sort to be side by side and to be sown on the same day or the day following.

The main object in view in undertaking this work was to ascertain the relative yield of these different sorts under uniform conditions and their time of ripening in the different climates in which they were grown. These tests have been continued with more or less completeness from year to year since 1891, and a large number of useful facts recorded, which have been presented at the close of each season in the Annual Reports of the Experimental Farms. This information has proved of great practical value to farmers in different parts of the Dominion many of whom have been guided in the selection of seed by the results obtained from these tests of varieties. Since there is a general desire that this information be given each year in time to aid the farmer in his work during the following season, and it does not seem practicable to complete and issue the Annual Report sufficiently early to serve that purpose, this bulletin has been prepared in which the results obtained during 1895 are given in a condensed form. In these pages there will be found side by side the crops produced from all the varieties tested at each of the experimental farms, also the average of the crops at all the farms. The average time required for the maturing of the different sorts of grain in each case is also given. The varieties are all arranged in the order of their productiveness at the Central Experimental Farm at Ottawa.

OATS.

Forty-four varieties of oats have been under trial during 1895, the size of the plots were $\frac{1}{10}$ th acre each at Brandon, Man. and Indian Head, N. W. T. and $\frac{1}{20}$ th 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:—Ottawa, 29th and 30th April; Nappan, 3rd May; Brandon, 22nd April; Indian Head, 23rd April, and Agassiz, 23rd April.

UNIFORM TEST PLOTS OF OATS.

Number.	Name of variety.	Yield at the Several Experimental Farms, Season of 1895.										Number of Days from Sowing to Harvesting.							
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
1	Banner	74	4 54	24 101	6 90	.. 48	3 73	21	98	105	124	130	120	115	115	115	115	115	115
2	Abundance	73	8 56	16 79	14 108	28 43	28 72	12	98	107	128	137	120	118	118	118	118	118	118
3	American Beauty	72	12 64	24 96	6 101	16 42	22 75	16	100	107	128	134	120	117	117	117	117	117	117
4	Improved Ligowo	70	20 54	24 81	16 87	22 40	30 67	2	99	105	128	133	118	116	116	116	116	116	116
5	Golden Beauty	69	4 69	14 83	28 104	4 47	12 74	26	101	105	129	133	121	117	117	117	117	117	117
6	Columbus	69	4 59	14 91	26 102	2 38	8 72	24	100	104	128	137	120	117	117	117	117	117	117
7	American Triumph	68	18 36	16 68	8 85	.. 34	26 58	24	100	115	134	136	125	122	122	122	122	122	122
8	White Russian	67	32 60	.. 86	16 75	.. 34	24 64	28	98	103	131	137	125	118	118	118	118	118	118
9	Bavarian	67	2 60	20 93	8 76	16 42	12 67	32	100	105	124	133	120	116	116	116	116	116	116
10	White Schonen	66	2 54	24 93	8 99	22 35	30 69	31	100	104	128	130	122	116	116	116	116	116	116
11	Wide-Awake	65	.. 52	12 77	2 89	14 28	8 62	14	102	103	134	136	120	119	119	119	119	119	119
12	Wallis	63	28 54	24 88	18 67	12 35	10 61	32	100	106	129	137	120	118	118	118	118	118	118
13	Cream Egyptian	62	22 57	2 47	22 82	32 49	14 59	25	99	103	121	130	115	113	113	113	113	113	113
14	Oderbruch	60	29 58	28 89	4 99	14 30	30 67	26	99	103	128	137	125	118	118	118	118	118	118
15	Abyssinia	60	.. 62	12 86	26 82	22 46	6 67	20	98	104	128	137	124	117	117	117	117	117	117
16	Early Golden Profit	59	24 72	12 93	8 73	18 48	18 69	16	97	106	128	137	120	117	117	117	117	117	117
17	Joanette	59	24 52	12 81	16 78	28 37	32 62	2	102	104	136	132	120	118	118	118	118	118	118
18	California Prolific Black	59	14 59	14 76	26 67	12 37	22 60	4	104	104	146	133	125	122	122	122	122	122	122
19	Lincoln	58	28 50	20 81	26 73	28 46	26 62	12	97	104	128	131	120	116	116	116	116	116	116
20	Giant Cluster	58	8 63	18 80	.. 70	.. 36	6 61	22	105	115	134	137	120	122	122	122	122	122	122
21	Flying Scotchman	58	8 36	16 81	6 86	16 36	16 59	26	93	99	124	130	115	112	112	112	112	112	112
22	Coulommiers Black	56	16 44	4 77	12 57	12 40	.. 55	2	115	116	136	141	125	126	126	126	126	126	126
23	Early Archange	56	6 44	4 88	8 88	8 48	28 65	4	88	98	126	130	118	112	112	112	112	112	112
24	Prolific Black Tartarian	56	6 48	8 74	4 72	22 40	10 58	10	104	108	146	133	118	121	121	121	121	121	121
25	Early Blossom	55	30 62	12 79	14 75	.. 45	20 63	22	103	107	134	137	121	120	120	120	120	120	120
26	Rosedale	55	30 48	28 87	2 81	16 37	32 62	8	98	104	122	137	118	115	115	115	115	115	115
27	Imported Irish	55	30 57	22 66	26 63	8 35	20 55	21	93	98	121	129	115	111	111	111	111	111	111
28	Poland	55	10 51	6 67	2 69	4 41	6 56	26	93	99	122	137	115	113	113	113	113	113	113
29	Holstein Prolific	54	4 54	24 95	20 89	24 33	18 65	18	101	106	128	137	120	118	118	118	118	118	118
30	Early Gothland	52	2 66	16 84	24 53	18 59	14 63	6	97	106	131	130	118	116	116	116	116	116	116
31	Scottish Chief	51	6 40	20 65	.. 77	22 34	24 53	28	91	97	122	133	118	112	112	112	112	112	112
32	Victoria Prize	51	6 52	32 68	8 78	28 24	24 55	6	92	98	122	129	115	111	111	111	111	111	111
33	Bonanza	51	6 44	24 44	24 85	10 44	24 54	4	94	103	122	133	120	114	114	114	114	114	114
34	Welcome	49	14 47	22 41	26 81	16 30	20 50	6	98	97	120	134	120	113	113	113	113	113	113
35	Early Etampes	48	28 54	4 57	32 50	10 36	7 49	16	102	104	146	134	120	121	121	121	121	121	121
36	Prize Cluster	48	28 43	18 60	30 73	28 36	14 52	24	93	97	122	128	115	111	111	111	111	111	111
37	White Wonder	46	6 51	16 52	2 71	16 39	24 52	6	91	97	122	130	115	111	111	111	111	111	111
38	Siberian	45	10 38	28 87	12 86	26 30	.. 57	22	94	103	128	128	115	113	113	113	113	113	113
39	Winter Grey	42	22 32	12 77	2 81	6 31	6 52	30	94	103	128	128	115	113	113	113	113	113	113
40	Hazlett's Seizure	42	12 49	14 74	4 79	14 52	32 59	22	100	97	122	133	118	114	114	114	114	114	114
41	Rennie's Prize White	40	.. 37	22 61	16 67	22 34	24 48	10	96	98	123	136	118	114	114	114	114	114	114
42	White Monarch	34	24 31	26 68	8 69	24 35	30 48	2	108	107	131	137	120	120	120	120	120	120	120
43	Scotch Hopetown	28	8 51	6 61	26 45	20 17	2 40	26	112	113	139	137	118	123	123	123	123	123	123
44	Doncaster Prize	16	16 38	8 56	16 69	4 32	2 42	16	109	106	128	137	121	120	120	120	120	120	120

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The twelve varieties of oats which have produced the largest crops during 1895 at the several experimental farms are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Banner.....	74 4	7. American Triumph.....	68 18
2. Abundance.....	73 8	8. White Russian.....	67 32
3. American Beauty.....	72 12	9. Bavarian.....	67 2
4. Improved Ligowo.....	70 20	10. White Schonen.....	66 2
5. Golden Beauty.....	69 4	11. Wide-Awake.....	65 0
6. Columbus.....	69 4	12. Wallis.....	63 28

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

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Early Golden Prolific.....	72 12	7. Abyssinia.....	62 12
2. Golden Beauty.....	69 14	8. Early Blossom.....	62 11
3. Early Gothland.....	66 16	9. Bavarian.....	60 20
4. American Beauty.....	64 24	10. White Russian.....	60 0
5. Golden Giant.....	64 4	11. Columbus.....	59 14
6. Giant Cluster.....	63 18	12. California Prolific, black....	59 14

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Banner.....	101 6	7. Columbus.....	91 26
2. American Beauty.....	96 6	8. Golden Giant.....	90 20
3. Holstein Prolific.....	95 20	9. Oderbruch.....	89 4
4. Bavarian.....	93 8	10. Wallis.....	83 18
5. White Schonen.....	93 8	11. Early Archangel.....	88 8
6. Early Golden Prolific.....	93 8	12. Siberian.....	87 12

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

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Abundance.....	108 28	7. Banner.....	90 0
2. Golden Beauty.....	104 4	8. Holstein Prolific.....	89 24
3. Columbus.....	102 2	9. Wide-Awake.....	89 14
4. American Beauty.....	101 16	10. Early Archangel.....	88 8
5. White Schonen.....	99 22	11. Improved Ligowo.....	87 22
6. Oderbruch.....	99 14	12. Siberian.....	86 26

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

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. Early Gothland.....	59 9	7. Golden Beauty.....	47 12
2. Hazlett's Seizure.....	52 32	8. Lincoln.....	46 25
3. Cream Egyptian.....	49 14	9. Abyssinia.....	46 6
4. Early Archangel.....	48 28	10. Early Blossom.....	45 20
5. Early Golden Prolific.....	48 18	11. Bonanza.....	44 24
6. Banner.....	48 3	12. Abundance.....	43 28

The twelve varieties which have produced the largest average crops on all the farms, and hence may perhaps be regarded as worthy of being placed at the head of the list for general cultivation, are:—

Per Acre.		Per Acre.	
Bush.	Lbs.	Bush.	Lbs.
1. American Beauty.....	75 16	7. Early Golden Prolific.....	69 16
2. Golden Beauty.....	74 26	8. Bavarian.....	67 32
3. Banner.....	73 21	9. Oderbruch.....	67 26
4. Abundance.....	72 12	10. Abyssinia.....	67 20
5. Columbus.....	72 4	11. Improved Ligowo.....	67 2
6. White Schonen.....	69 31	12. Holstein Prolific.....	65 18

In this latter list comprising the most promising varieties for the whole country there will be found eight out of the twelve sorts first in productiveness at Ottawa, six of the best twelve at Nappan, N.S., eight out of the best twelve at Brandon, Man., nine of the best twelve at Indian Head, N.W.T., and five of the best twelve at Agassiz, B.C.

BARLEY.

The trial of plots of barley for 1895 have included thirteen different sorts of two-rowed barley and fourteen of six-rowed. The plots were of the same size as those of the oats, the quantity of seed sown in each case was two bushels per acre, and the following were the dates of sowing: Ottawa, 2nd May; Nappan, 2nd May; Brandon, 15th May; Indian Head, 1st May, and Agassiz, 24th April.

Number.	Name of Variety.	Yield at the Several Experimental Farms, Season of 1895.										Number of Days from Sowing to Harvesting.													
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
1	Sidney	43	16 27	40	60	9	42	44	27	14	40	15	91	105	105	105	121	110	106	103	108	106	103	108	106
2	Duck-bill	37	24 30	20	30	20	57	4	45	40	4	104	104	100	123	113	108	108	108	108	108	108	108	108	108
3	Bolton	35	30 34	8	.....	46	10 30	25	36	30	94	97	.....	125	110	106	106	106	106	106	106	106	106	106	106
4	Beaver	35	27	24	50	10	52	2	36	2	40	8	97	106	105	125	113	109	109	109	109	109	109	109	109
5	French Chevalier	34	18 47	44	62	14	54	38	38	16	47	26	97	104	103	125	110	107	107	107	107	107	107	107	107
6	Newton	29	18 35	20	56	2	48	5	34	8	40	30	99	104	103	122	113	108	108	108	108	108	108	108	108
7	Prize Prolific	28	6 38	16	42	12	59	3	33	16	40	11	97	105	103	127	114	109	109	109	109	109	109	109	109
8	Danish Chevalier	27	34 42	24	41	22	54	18	39	28	41	6	98	104	104	125	113	108	108	108	108	108	108	108	108
9	Kinver Chevalier	26	42 37	4	45	30	56	22	28	16	38	42	94	108	105	127	114	109	109	109	109	109	109	109	109
10	California Prolific	26	2 29	8	57	14	48	.....	24	30	37	1	98	105	104	122	113	108	108	108	108	108	108	108	108
11	Canadian Thorpe	25	40 46	32	58	16	50	6	41	32	44	25	98	103	104	122	113	108	108	108	108	108	108	108	108
12	Thanet	21	42 35	20	43	46	54	40	32	24	37	31	97	106	103	127	114	109	109	109	109	109	109	109	109
13	Rigid	20	8 22	44	.....	48	16 26	12	39	11	.....	99	106	103	119	114	108	108	108	108	108	108	108	108	108

The sowing of Bolton was overlooked at Brandon, and the crop of Rigid was accidentally mixed with another variety in stooking, hence particulars of the yield there of these varieties cannot be given.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

Number.	Name of Variety.	Yield at the Several Experimental Farms, Season 1895.										Number of Days from Sowing to Harvesting.							
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
1	Mensury	58	6 44	28	68	46	43	36	27	44	48	32	81	93	99	116	97	97	
2	Petschora	51	42 37	44	56	42	31	29	33	16	42	15	73	92	94	112	96	94	
3	Royal	51	12 45	20	65	30	41	42	29	38	46	38	79	92	97	118	97	96	
4	Success	51	12 45	40	30	10	45	40	26	37	39	47	76	92	87	108	96	94	
5	Odessa	47	24 52	4	60	10	54	28	38	36	50	30	83	92	92	116	107	99	
6	Oderbruch	47	14 38	16	48	46	40	36	27	42	11	9	87	93	97	116	97	98	
7	Trooper	46	42 43	16	65	10	45	40	33	46	47	2	82	99	97	122	106	104	
8	Stella	46	2 34	28	53	36	41	32	32	4	11	30	78	103	105	125	106	103	
9	Vanguard	44	22 40	20	64	8	37	24	31	12	43	28	79	93	95	116	99	96	
10	Common	43	46 42	4	63	6	41	20	28	6	43	36	80	92	90	116	106	98	
11	Nugent	42	44 31	32	68	26	42	34	24	8	42	...	85	99	90	119	106	101	
12	Summit	39	28 34	8	58	46	40	30	29	33	40	29	84	103	90	122	106	102	
13	Surprise	36	12 41	32	65	10	38	26	24	14	41	9	86	103	98	122	106	102	
14	Rennie's Improved	32	14 32	44	51	32	62	14	28	16	41	24	83	94	95	128	97	99	

In these tests of varieties of barley some of the new hybrid* sorts which have been produced at the Experimental Farms made a good showing. These both in the two-rowed and six-rowed groups have had a common parentage, having all been produced from a hybrid obtained by fertilizing the Swedish two-rowed with pollen from Baxter's six-rowed and nearly all the varieties have originated from one kernel of the Swedish two-rowed thus influenced. The plant grown from this kernel produced the first year two-rowed heads entirely, but when this seed was sown the next season it sported into a number of different forms, some of which were six-rowed, some two-rowed and others intermediate in character. Types of the most promising of these were chosen and the grain has since been carefully selected to conform to these types. Sporting occurred from year to year in most of these types for several years, more in some than in others, the sports have been removed and rejected and now these types have become fairly well fixed. The hybrids in the list of two-rowed sorts are Sidney, Bolton, Beaver and Rigid, and those among the six-rowed sorts are Royal, Trooper, Stella, Vanguard, Nugent, Summit and Surprise.

*The term hybrid is used when referring to new forms produced by crossing plants which are classed by botanists as distinct species, and the word cross-bred when referring to the crosses produced between different varieties of the same species.

TWO-ROWED BARLEY.

The six varieties of two-rowed barley which have produced the largest crops during 1895 at the several experimental farms are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Sidney	43	16	4. Beaver	35	
2. Duck-bill	37	24	5. French Chevalier.....	34	18
3. Bolton.....	35	30	6. Newton	29	18

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. French Chevalier	47	44	4. Prize Prolific.....	38	16
2. Canadian Thorpe.....	46	32	5. Kinver Chevalier	37	4
3. Danish Chevalier	42	24	6. Newton	35	20

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. French Chevalier	62	14	4. California Prolific.....	57	14
2. Sidney	60	9	5. Newton	56	2
3. Canadian Thorpe	58	16	6. Beaver.....	50	10

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Prize Prolific.....	59		4. Thanet	54	40
2. Duck-bill.....	57	4	5. French Chevalier	54	38
3. Kinver Chevalier	56	22	6. Danish Chevalier	54	18

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Duck-bill	45		4. French Chevalier	38	16
2. Canadian Thorpe	41	32	5. Beaver.....	36	2
3. Danish Chevalier	39	28	6. Newton	34	8

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

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. French Chevalier	47	26	4. Newton	40	30
2. Canadian Thorpe	44	25	5. Sidney	40	15
3. Danish Chevalier	41	6	6. Prize Prolific.....	40	11

In this latter list which includes the most promising varieties for general cultivation there will be found three out of the six sorts first in productiveness at Ottawa, Ont., five of the best six at Nappan, N.S., four out of the best six at Brandon, Man., three of the best six at Indian Head, N.W.T., and four of the best six at Agassiz, B.C.

SIX-ROWED BARLEY.

The six varieties of six-rowed barley which have produced the largest crops at the several experimental farms during 1895 are the following:

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

		Per acre.			Per acre.
		Bush. Lbs.			Bush. Lbs.
1. Mensury.....	58	6	4. Success	51	12
2. Petschora.....	51	42	5. Odessa	47	24
3. Royal.....	51	12	6. Oderbruch.....	47	14

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa	52	4	4. Mensury.....	44	28
2. Successa.....	45	40	5. Trooper.....	43	16
3. Royal	45	20	6. Common.....	42	4

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Mensury.....	68	46	4. Trooper	65	10
2. Nugent	68	26	5. Surprise.....	65	10
3. Royal	65	30	6. Vanguard.....	64	8

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Rennie's Improved.....	62	14	4. Successa.....	45	40
2. Odessa	54	28	5. Mensury.....	43	36
3. Trooper	45	40	6. Nugent.....	42	34

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa	38	36	4. Petschora.....	33	16
2. Oderbruch.....	36	27	5. Stella.....	32	4
3. Trooper	33	46	6. Vanguard	31	12

The six varieties which have produced the largest crops taking the average of the results obtained on all the experimental farms, and hence may perhaps be regarded as the most promising sorts for general cultivation are:

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Odessa	50	30	4. Royal.....	46	38
2. Mensury.....	48	32	5. Common	43	36
3. Trooper	47	2	6. Vanguard.....	43	28

In this latter list of the six most promising varieties for general cultivation, there is found 3 out of the 6 sorts which are first in productiveness at Ottawa, Ont., 5 of the best 6 at Nappan, N. S., 4 of the best 6 at Brandon, Man., 3 of the best 6 at Indian Head, N. W. T., and 3 of the best 6 at Agassiz, B. C.

SPRING WHEAT.

Thirty-two varieties of spring wheat have been under trial during 1895 the size of the plots were $\frac{1}{10}$ th acre each at Brandon and Indian Head, and $\frac{1}{20}$ th acre each at Ottawa, Nappan and Agassiz. The quantity of seed sown of each sort was in the proportion of one and a half bushels per acre, and the dates of sowing were as follows: Ottawa, 30th April and 1st May, Nappan, 30th April, Brandon, 16th April, Indian Head, 16th April and Agassiz 19th April.

UNIFORM TEST PLOTS OF SPRING WHEAT.

Number.	Name of Variety.	Yield at the Several Experimental Farms, Season of 1895										Number of Days from Sowing to Harvesting.							
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.		Ottawa, Ont.	Nappan, N.S.	Brandon, Man.	Indian Head, N.W.T.	Agassiz, B.C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.	Days.
1	Preston	30	40 32	29	48	20	45	40	16	40	34	44	96	110	133	138	109	117 1/2	
2	Goose	28	20 27	40	42	10	33	20	15	20	29	20	103	118	133	135	112	118 1/2	
3	Old Red River	26	30 30	29	47	10	42	40	17	29	32	48	103	115	133	138	109	119 1/2	
4	Pringle's Champlain	26	20 18	20	46	30	44	30	14	40	30	4	98	113	133	136	109	117 1/2	
5	Huron	25	40 31	..	..	..	..	51	20	17	10	31	98	112	..	..	105	113 1/2
6	Wellman's Fife	25	20 25	20	34	..	..	42	40	16	40	28	103	116	139	138	119	123
7	Dion's	24	40 22	40	38	20	43	20	19	15	29	39	100	116	139	135	111	120	
8	White Russian	24	27 28	..	..	35	30	36	10	..	..	..	103	115	139	138	..	123 1/2
9	Red Fern	24	20 31	..	..	41	10	42	20	16	40	31	100	110	133	138	119	120
10	Monarch	24	36	30	36	..	15	20	27	103	139	138	122	116 1/2
11	Alpha	24	.. 24	..	..	40	20	45	30	19	30	30	98	109	134	135	106	116 1/2
12	Admiral	24	.. 30	40	42	50	35	10	20	..	30	32	97	114	134	138	111	118 1/2	
13	Advance	24	.. 26	20	46	20	43	50	21	..	32	18	98	113	134	138	111	118 1/2	
14	Emporium	24	..	..	39	30	48	40	13	50	31	30	100	..	133	138	122	123 1/2
15	Percy	23	40 28	20	41	..	..	39	40	14	20	29	97	110	125	135	109	115 1/2
16	Red Fife	23	40 24	..	..	49	..	45	..	17	25	31	101	114	133	136	112	119 1/2
17	Colorado	23	20 18	..	..	34	10	29	10	..	..	..	98	114	128	133	..	118 1/2
18	Blenheim	23	10 27	..	..	37	20	44	..	17	10	29	101	114	133	138	112	119
19	Stanley	22	43 32	20	43	30	42	..	13	20	30	47	96	113	133	135	119	119 1/2	
20	White Fife	22	39 23	40	46	40	42	10	30	55	33	21	101	116	133	140	120	122	
21	Crown	22	30 22	40	42	50	46	40	16	..	30	8	98	111	130	138	109	117 1/2	
22	Captor	22	10 27	..	..	32	30	28	..	17	50	25	95	114	139	136	111	119
23	Ladoga	21	40 24	..	..	42	10	41	35	15	10	28	108	108	128	138	104	117 1/2
24	White Cornell	21	34 29	20	44	50	35	20	14	..	29	1	103	114	133	140	122	122 1/2	
25	Campbell's White Chaff	20	20 31	40	38	50	40	20	19	10	30	4	99	109	134	136	109	117 1/2	
26	Rio Grande	20	20 22	40	11	30	41	40	33	10	31	40	105	115	133	135	128	123 1/2	
27	Beaudry	19	40 19	..	..	25	36	52	..	22	40	27	97	112	130	136	111	117 1/2
28	Black Sea	19	.. 25	..	..	38	30	41	10	..	..	..	30	55	93	108	130	136
29	Herison Bearded	18	20 31	20	41	30	44	40	21	..	31	22	98	115	139	138	109	119 1/2	
30	Golden Drop	17	20 30	40	37	50	33	10	16	30	27	6	98	109	128	139	106	116	
31	Rideau	15	50 25	20	43	..	..	43	20	19	30	29	95	108	137	136	122	119 1/2
32	Gebun	13	40 22	40	42	..	..	40	36	..	14	10	100	108	126	132	111	115 1/2

The sowing of Monarch and Emporium at Nappan, Huron at Brandon, and White Russian, Colorado and Black Sea at Agassiz, was omitted, and hence the particulars connected with these varieties are incomplete.

The twelve varieties of spring wheat which have produced the largest crops at the several experimental farms during 1895 are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per Acre.			Per Acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Preston	30	40	7. Dion's	24	40
2. Goose	28	20	8. White Russian	24	27
3. Old Red River	26	30	9. Red Fern	24	20
4. Pringle's Champlain	26	20	10. Monarch	24	
5. Huron	25	40	11. Alpha	24	
6. Wellman's Fife	25	20	12. Admiral	24	

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

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Preston.....	32 20	7. Admiral.....	30 40
2. Stanley.....	32 20	8. Golden Drop.....	30 40
3. Campbell's White Chaff.....	31 40	9. White Connell.....	29 29
4. Herisson Bearded.....	31 20	10. Percy.....	28 20
5. Huron.....	31	11. White Russian.....	28
6. Red Fern.....	31	12. Goose.....	27 40

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Red Fife.....	49	7. White Connell.....	44 50
2. Preston.....	48 20	8. Stanley.....	43 30
3. Old Red River.....	47 10	9. Rideau.....	43
4. White Fife.....	46 40	10. Admiral.....	42 50
5. Pringle's Champlain.....	46 30	11. Crown.....	42 50
6. Advance.....	46 20	12. Gehun.....	42 40

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

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Beaudry.....	52	7. Red Fife.....	45
2. Huron.....	51 20	8. Herisson Bearded.....	44 40
3. Emporium.....	48 40	9. Pringle's Champlain.....	44 30
4. Crown.....	46 40	10. Blenheim.....	44
5. Preston.....	45 40	11. Advance.....	43 50
6. Alpha.....	45 30	12. Dion's.....	43 20

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

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Rio Grande.....	33 10	7. Alpha.....	19 30
2. White Fife.....	30 55	8. Rideau.....	19 30
3. Beaudry.....	22 40	9. Dion's.....	19 15
4. Advance.....	21	10. Campbell's White Chaff.....	19 10
5. Herisson Bearded.....	21	11. Captor.....	17 50
6. Admiral.....	20	12. Red Fife.....	17 25

The twelve varieties of spring wheat which have produced the largest crops taking the average of the results obtained on all the experimental farms, and hence may perhaps be regarded as the most promising sorts for general cultivation are:—

	Per Acre. Bush. Lbs.		Per Acre. Bush. Lbs.
1. Preston.....	34 44	7. Emporium.....	31 30
2. White Fife.....	33 21	8. Herisson Bearded.....	31 22
3. Old Red River.....	32 48	9. Huron.....	31 17
4. Advance.....	32 18	10. Red Fern.....	31 6
5. Red Fife.....	31 49	11. White Russian.....	31 2
6. Rio Grande.....	31 40	12. Stanley.....	30 47

In this latter list of the twelve varieties of spring wheat which have averaged best at all the experimental farms, there are 5 out of the 12 sorts which are first in productiveness at Ottawa, Ont., 6 of the 12 best at Nappan, N. S., 6 of the 12 best at Brandon, Man., 6 of the 12 best at Indian Head, N. W. T., and 4 of the 12 best at Agassiz, B. C.

In these tests of varieties some of the new cross-bred wheats which have been produced at the experimental farms made a good showing. Preston heads the list in the last and most important series. This is a bearded variety, a cross between Ladoga and Red Fife. The other cross-bred sorts in this select list are Huron and Stanley, both having the same

parentage as Preston, the former is bearded and the latter beardless, and Advance which is a bearded cross of Ladoga with White Fifo. The other cross-bred sorts included in the larger list are Monarch, Alpha, Percy and Captor, all beardless sorts, and Admiral, Blenheim, Crown and Rideau all bearded sorts.

PEASE.

Ten varieties of pease have been under trial during 1895. The size of these plots was the same as those of the spring wheat, and the quantity of seed used per acre varied from two to three bushels depending upon the size of the pea. The dates of sowing were as follows: Ottawa, 3rd and 4th May, Nappan, 2nd May, Brandon, 17th May and Agassiz, 25th April. On account of the mixing of the varieties by a high wind at Indian Head after the plots had been cut, no returns were obtainable from that farm. Three of the plots of pease at Brandon suffered from the same cause and were so badly mixed that no accurate returns could be given. For this reason the report from Brandon covers seven varieties only.

UNIFORM TEST PLOTS OF PEASE.

Number.	Name of Variety.	Yield at the Several Experimental Farms, Season of 1895.										Number of Days from Sowing to Harvesting.				
		Ottawa, Ont.		Nappan, N. S.		Brandon, Man.		Agassiz, B. C.		Average of all Farms.		Ottawa, Ont.	Nappan, N. S.	Brandon, Man.	Agassiz, B. C.	Average of all Farms.
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.	Days.	Days.	Days.
1	Black-eyed Marrowfat.....	40	10	53	20	52	..	22	40	44	32	100	113	116	116	111
2	Mummy	39	30	40	..	53	10	22	50	58	52	99	103	109	120	107
3	Pride.....	39	..	43	40	68	..	20	..	42	40	96	95	97	110	99
4	Prince Albert.....	36	20	42	20	..	..	25	5	34	35	108	108	..	127	114
5	Centennial	34	40	42	40	..	..	21	..	32	47	101	97	..	127	108
6	Crown	33	30	55	52	60	..	50	26	25	44	12	97	96	99	116
7	New Potter.....	33	..	47	20	56	40	22	30	39	52	99	104	105	120	107
8	Multiplier.....	31	50	41	49	..	..	33	20	35	37	101	110	..	127	112
9	Golden Vine	30	30	41	..	46	20	23	20	36	32	97	97	103	120	104
10	Canadian Beauty.....	30	20	47	40	39	..	..	..	39	..	101	110	104	..	105

The six varieties of pease which have produced the largest crops at the several experimental farms during 1895 are the following :

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Black-eyed Marrowfat.....	40	10	4. Prince Albert.....	36	20
2. Mummy	39	30	5. Centennial.....	34	40
3. Pride.....	39	..	6. Crown.....	33	30

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Crown.....	55	62	4. New Potter.....	47	20
2. Black-eyed Marrowfat.....	53	20	5. Pride.....	43	40
3. Canadian Beauty.....	47	40	6. Centennial.....	42	40

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Pride.....	68		4. Mummy.....	53	10
2. Crown.....	60	50	5. Black-eyed Marrowfat.....	52	
3. New Potter.....	56	40	6. Golden Vine.....	46	20

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Multiplier.....	33	20	4. Prince Albert.....	25	5
2. Golden Vine.....	28	20	5. Prussian Blue.....	24	40
3. Crown.....	26	25	6. Mummy.....	22	50

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

	Per acre.			Per acre.	
	Bush.	Lbs.		Bush.	Lbs.
1. Black-eyed Marrowfat.....	44	32	4. New Potter.....	39	52
2. Crown.....	44	12	5. Canadian Beauty.....	39	
3. Pride.....	42	40	6. Mummy.....	38	52

INDIAN CORN.

Seventeen varieties of Indian corn have been under trial during 1895, all planted on the same day, in rows or hills three feet apart, on similar soil. The dates of planting were as follows:—Ottawa, Ont., 23rd May; Nappan, N.S., 18th May; Brandon, Man., 23rd May; Indian Head, N.W.T., 21st May, and Agassiz, B.C., 23rd May. All were cut green and put into the silo for winter feeding, the dates of cutting were:—Ottawa, Ont., 16th Sept.; Nappan, N.S., 14th Sept.; Brandon, Man., 9th Sept.; Indian Head, N.W.T., 23rd Aug.; Agassiz, B.C., 22nd Sept. 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 1895.											
		Ottawa, Ont.		Nappan, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
1	Rural Thoroughbred White Flint.....	37	470	19	500	13	500	6	600	5	800	17	1,265
2	Giant Prolific Ensilage Sweet.....	28	1,970	11	1,650	13	1,500	6	600	5	1,440	13	632
3	Sanford Flint.....	23	1,300	12	640	13	1,500	5	800	6	1,340	12	716
4	Canada White Flint.....	23	756	11	1,100	14	600	6	600	6	700	12	542
5	Champion White Pearl Dent.....	23	200	12	200	11	500	6	600	7	80	11	1,916
6	Red Cob Ensilage.....	22	1,320	14	600	15	250	6	1,800	6	1,640	13	322
7	New White Cap Yellow Dent.....	22	990	12	750	12	640	5	800	10	680	12	1,172
8	Country Gentleman.....	18	400	15	250	9	1,800	5	200	12	200	12	170
9	North Dakota.....	18	520	9	1,250	11	1,650	5	800	5	1,980	10	440
10	Compton's Early.....	17	1,200	12	1,300	15	1,800	6	1,200	6	320	11	1,564
11	Angel of Midnight.....	17	100	17	100	14	600	8	800	9	920	13	504
12	Mammoth 8-rowed Flint.....	15	1,900	11	1,100	12	200	9	500	6	1,200	11	380
13	Longfellow.....	15	1,680	12	750	14	50	8	200	7	300	11	996
14	Canadian Dent.....	14	1,150	8	1,050	11	1,100	4	400	5	500	8	1,652
15	Extra Early Huron Dent.....	14	1,150	12	640	11	...	6	...	7	520	10	462
16	Pearce's Prolific.....	14	50	9	1,250	9	1,800	3	1,200	7	740	8	1,808
17	Mitchell's Early.....	13	1,280	8	500	13	1,500	6	600	4	800	9	536

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1895 are the following:—

Central Experimental Farm, Ottawa Ont.

	Tons.	Lbs.
1. Rural Thoroughbred White Flint.....	37	470
2. Giant Prolific Ensilage Sweet.....	28	1,970
3. Sanford Flint.....	23	1,300
4. Canada White Flint.....	23	750
5. Champion White Pearl Dent.....	23	200
6. Red Cob Ensilage.....	22	1,320

Experimental Farm for the Maritime Provinces, Nappan, N. S.

	Tons.	Lbs.
1. Rural Thoroughbred White Flint.....	19	500
2. Angel of Midnight.....	17	100
3. Country Gentleman.....	15	250
4. Red Cob Ensilage.....	14	600
5. Compton's Early.....	12	1,300
6. New White Cap Yellow Dent.....	12	750

Experimental Farm for Manitoba, Brandon, Man.

	Tons.	Lbs.
1. Compton's Early.....	15	800
2. Red Cob Ensilage.....	15	250
3. Angel of Midnight.....	14	600
4. Canada White Flint.....	14	600
5. Longfellow.....	14	50
6. Sanford Flint.....	13	1,500

Experimental Farm for the North-west Territories, Indian Head, N. W. T.

	Tons.	Lbs.
1. Longfellow	6	1,200
2. Canada White Flint.....	6	600
3. Angel of Midnight	6	
4. Champion White Pearl Dent.....	5	1,400
5. Country Gentleman.....	5	1,200
6. Mitchell's Early.....	5	800

Experimental Farm for British Columbia, Agassiz, B. C.

	Tons.	Lbs.
1. Rural Thoroughbred White Flint.....	12	860
2. Country Gentleman.....	12	200
3. New White Cap Yellow Dent.	10	680
4. Angel of Midnight.....	9	920
5. Pearce's Prolific.....	7	740
6. Extra Early Huron Dent.....	7	520

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

	Tons.	Lbs.
1. Rural Thoroughbred White Flint.....	17	1,265
2. Giant Prolific Ensilage Sweet.....	13	632
3. Angel of Midnight.....	13	504
4. Red Cob Ensilage.....	13	322
5. New White Cap Yellow Dent.....	12	1,172
6. Sanford Flint.	12	716

TURNIPS.

Twelve varieties of turnips have been under trial during 1895 all sown on drills or on the flat $2\frac{1}{2}$ feet apart. Two sowings were made at each farm about two weeks apart. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were as follows. Ottawa, Ont., 8th October; Nappan, N. S., 21st October; Brandon, Man., 5th October; Indian Head, N.W.T., 4th October and Agassiz, B.C., 5th Nov. 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.	
		Sown May 11.	Sown June 12.	Sown May 25.	Sown June 8.	Sown May 22.	Sown June 8.	Sown May 25.	Sown June 4.	Sown May 20.	Sown June 3.	First Sowing.	Second Sowing.
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Hartley's Bronze	13 400	5 1,088	30 800	41 1,125	17 320	14 776	17 1,280	14 620	13 576	12 816	18 675	17 1,725
2	Lord Derby	12 1,080	13 1,720	35 1,250	31 700	14 1,304	11 704	17 500	14 1,280	10 1,120	9 1,712	18 231	16 423
3	East Lothian	11 1,034	6 1,728	33 975	23 1,470	14 1,568	13 928	18 1,200	11 800	13 400	8 896	18 635	13 1,618
4	Elephants Master	10 1,186	15 624	33 975	28 1,000	10 328	12 1,080	14 800	9 1,200	6 1,200	6 1,024	15 98	14 986
5	Purple Top Swede	9 546	12 24	34 1,825	29 1,375	18 432	14 1,040	16 1,120	15 ..	8 544	8 1,600	17 893	16 8
6	Imperial Swede	9 480	14 908	28 1,950	26 725	12 552	13 400	17 1,040	12 1,920	8 1,248	7 1,840	15 654	14 1,959
7	Carter's Elephant	8 1,688	13 1,984	28 1,000	30 800	17 1,376	11 440	16 1,600	11 1,640	12 1,344	8 720	16 1,802	15 1,517
8	Skirving's Swede	8 1,424	14 776	32 500	26 725	17 320	15 360	20 800	12 900	9 1,008	8 1,428	17 1,610	15 658
9	Champion Purple Top	8 632	17 904	28 1,950	38 200	13 400	11 440	19 1,120	9 1,260	7 80	10 1,120	14 1,067	17 394
10	Giant King	8 38	12 288	30 323	23 740	.. ..	.. ..	13 160	10 820	10 64	6 1,728	14 1,151	13 385
11	Jumbo or Monarch	7 1,312	10 64	28 523	33 1,430	21 1,560	13 400	17 1,040	12 ..	10 64	11 1,760	17 100	16 385
12	Prize Purple Top	6 408	8 1,160	33 500	24 1,870	13 1,720	13 400	17 560	12 1,200	12 640	11 1,232	16 1,166	14 372

The Giant King Swede was omitted at Brandon for the reason that the seed did not arrive in time for sowing. The crops from the successive sowings of turnips at the several experimental farms have averaged as follows:

	Tons. Lbs.
Central Experimental Farm, Ottawa, Ont., first sowing, May 11.	9 1,019
do do second sowing, June 12.	12 106
Experimental Farm, Nappan, N.S., first sowing, May 25.	31 1,214
do do second sowing, June 8.	30 317
Experimental Farm, Brandon, Man., first sowing, May 22.	15 990
do do second sowing, June 8.	13 90
Experimental Farm, Indian Head, N. W. T., first sowing, May 25.	16 935
do do second sowing, June 4.	12 385
Experimental Farm, Agassiz, B.C., first sowing, May 20.	10 621
do do second sowing, June 3.	9 656

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The six varieties of turnips which have produced the heaviest crops during the past season at the several experimental farms are the following:—

Central Experimental Farm, Ottawa.

The yields at Ottawa have been light, due mainly to the prevalence of rot, which has injured the crop here for several years past.

	Tons.	Lbs.
1. Champion Purple Top, 2nd sowing..	17	904
2. Elephants Master " ..	15	624
3. Imperial Swede " ..	14	908
4. Skirving's Swede " ..	14	776
5. Carter's Elephant " ..	13	1,984
6. Lord Derby " ..	13	1,720

Experimental Farm for the Maritime Provinces, Nappan, N.S.

	Tons.	Lbs.
1. Hartley's Bronze, 2nd sowing.....	41	1,125
2. Champion Purple Top, 2nd sowing.....	36	200
3. Lord Derby, 1st "	35	1,250
4. Purple Top Swede, 1st "	34	1,825
5. Jumbo or Monarch 2nd "	33	1,450
6. East Lothian 2nd "	33	975

Experimental Farm for Manitoba, Brandon, Man.

	Tons.	Lbs.
1. Jumbo or Monarch, 1st sowing.....	21	1,560
2. Purple Top Swede "	18	432
3. Carter's Elephant "	17	1,376
4. Hartley's Bronze "	17	320
5. Skirving's Swede "	17	320
6. East Lothian "	14	1,568

Experimental Farm for the North-west Territories, Indian Head, N.W.T.

	Tons.	Lbs.
1. Skirving's Swede, 1st sowing.....	20	800
2. East Lothian "	18	1,200
3. Hartley's Bronze "	17	1,280
4. Imperial Swede, "	17	1,040
5. Jumbo or Monarch "	17	1,040
6. Prize Purple Top "	17	560

Experimental Farm for British Columbia, Agassiz, B.C.

	Tons.	Lbs.
1. Hartley's Bronze, 1st sowing.....	13	576
2. East Lothian "	13	400
3. Carter's Elephant "	12	1,344
4. Hartley's Bronze 2nd sowing.....	12	816
5. Prize Purple Top, 1st "	12	640
6. Champion Purple Top, 1st sowing.....	11	1,232

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

	Tons.	Lbs.
1. Hartley's Bronze, 1st sowing.....	18	675
2. East Lothian "	18	635
3. Lord Derby "	18	251
4. Skirving's Swede "	17	1,610
5. Purple Top Swede "	17	893
6. Jumbo or Monarch "	17	100

MANGELS.

Twelve varieties of mangels have been under trial during 1895, all sown in rows on the flat, $2\frac{1}{2}$ feet apart. Two sowings were made, the second sowing about two weeks after the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were as follows:—Ottawa, 8th October; Nappan, 19th October; Brandon, 30th September; Indian Head, 25th September and Agassiz 30th October. The yield per acre has been calculated from the weight of roots gathered from two rows each 66 feet long.

The Canadian Giant mangel was not reported on at Nappan, N. S., nor at Indian Head N. W. T.

UNIFORM TEST PLOTS OF MANGELS.

Number.	Name of Variety.	Ottawa, Ont.		Napreau, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.													
		May 11.		May 25.		June 8.		May 22.		June 4.		April 27.		May 11.		1st Sowing 2d Sowing									
		Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.						
1	Manum. Long Red (Evans).	37	976	22	880	20	1,800	36	864	28	1,024	13	160	12	560	24	643	18	960	26	1,269	20	1,045		
2	Red Fleshed Tankard.	33	728	19	1,336	24	1,652	15	1,680	12	720	11	1,910	26	800	26	800	26	800	23	1,049	17	1,631	17	1,631
3	Manum. Long Red (Sharp).	32	1,208	19	1,665	16	775	25	1,744	21	1,500	10	1,360	9	480	15	1,856	20	1,516	20	1,589	18	1,820	18	1,820
4	Giant Yellow Intermediate.	31	634	19	1,600	35	965	31	301	19	544	12	680	12	400	22	1,922	28	320	26	955	21	1,643	21	1,643
5	Champion Yellow Globe.	29	1,400	19	1,166	17	1,625	23	1,975	22	1,408	16	1,528	10	680	10	400	23	1,520	21	1,206	20	1,206	18	643
6	Manum. Long Red (Webb).	23	146	19	1,066	19	950	24	430	28	1,024	16	880	12	600	32	416	17	1,200	25	283	19	823	19	823
7	Canadian Giant.	28	1,288	23	1,220	.....	.....	29	400	26	1,856	.....	.....	.....	.....	21	1,440	25	1,216	28	1,043	25	804	25	804
8	Conqueror Yellow Globe.	28	1,090	17	848	21	1,415	17	1,150	30	436	21	1,560	12	600	21	768	15	1,680	22	1,786	16	1,967	16	1,967
9	Gate Post.	27	1,176	17	1,376	22	175	21	1,600	30	192	23	1,256	9	240	12	600	26	800	21	416	23	117	19	520
10	Red Fleshed Globe.	24	1,806	22	880	10	1,375	15	400	25	160	22	1,672	9	600	31	832	16	1,792	20	788	17	669	17	669
11	Warden Orange Globe.	24	1,268	16	268	19	475	16	15	20	128	14	1,568	11	40	8	1,920	22	1,408	27	560	19	1,254	16	1,254
12	Golden Tankard.	22	682	17	1,640	32	730	30	800	24	1,632	23	992	16	400	15	.....	26	1,856	21	240	21	1,072	21	1,134

The crops from the successive sowings of mangels at the several experimental farms have averaged as follows:—

	Tons.	Lbs.
Central Experimental Farm, Ottawa, Ont., 1st sowing.	29	566
do do, 2nd sowing.	19	753
Experimental Farm, Napreau, N.S., 1st sowing.	21	1,855
do do, 2nd sowing.	21	1,363
Brandon, Man., 1st sowing.	27	278
do do, 2nd sowing.	21	1,670
Indian Head, N.W.T., 1st sowing.	12	567
do do, 2nd sowing.	11	827
Agassiz, B.C., 1st sowing.	25	1,879
do do, 2nd sowing.	21	1,483

It will be seen that the earlier sowings have in every instance given the largest crop.

The six varieties of mangels which have produced the heaviest crops during the past season at the several experimental farms are the following:—

Central Experimental Farm, Ottawa, Ont.

	Tons.	Lbs.
1 Mammoth Long Red (Evans) 1st sowing	37	976
2 Red Fleshed Tankard "	33	528
3 Mammoth Long Red (Sharpe) "	32	1,208
4 Giant Yellow Intermediate "	31	634
5 Champion Yellow Globe "	29	1,400
6 Mammoth Long Red (Webb) "	29	146

Experimental Farm for the Maritime Provinces, Nappan, N. S.

	Tons.	Lbs.
1 Giant Yellow Intermediate 1st sowing	35	965
2 Golden Tankard "	32	790
3 Mammoth Long Red (Webb) 2nd sowing	24	450
4 Red Fleshed Tankard 1st "	24	165
5 Champion Yellow Globe 2nd "	23	1,975
6 Mammoth Long Red (Sharpe) "	23	75

Experimental Farm for Manitoba, Brandon, Man.

	Tons.	Lbs.
1 Mammoth Long Red (Evans) 1st sowing	36	864
2 Giant Yellow Intermediate "	31	304
3 Conqueror Yellow Globe "	30	456
4 Gate Post "	30	192
5 Canadian Giant "	29	400
6 Mammoth Long Red (Webb) "	28	1,024

Experimental Farm for the North-west Territories, Indian Head, N.W.T.

	Tons.	Lbs.
1 Mammoth Long Red (Webb), 1st sowing	16	880
2 Golden Tankard, " "	16	400
3 Mammoth Long Red (Evans), " "	13	160
4 Conqueror Yellow Globe, " "	12	1200
5 Red Fleshed Tankard, " "	12	720
6 Giant Yellow Intermediate, " "	12	680

Experimental Farm for British Columbia, Agassiz, B.C.

	Tons.	Lbs.
1 Mammoth Long Red (Webb), 1st sowing	32	416
2 Red Fleshed Globe, " "	31	832
3 Giant Yellow Intermediate, 2nd "	28	320
4 Canadian Giant, 1st sowing.....	27	1440
5 Warden Orange Globe, 2nd sowing.....	27	560
6 Golden Tankard, 1st sowing.....	26	1856

The six varieties of mangels which have produced the heaviest crops, taking the average of the results obtained at all the experimental farms are the following:—

	Tons.	Lbs.
1 Canadian Giant, 1st sowing.....	28	1043
2 Mammoth Long Red (Evans), 1st sowing.	26	1269
3 Giant Yellow Intermediate, " "	26	955
4 Mammoth Long Red (Webb), " "	25	283
5 Golden Tankard, " "	24	1072
6 Red Fleshed Tankard, " "	23	1049

CARROTS.

Twelve varieties of carrots have been under test during 1895, all sown in rows on the flat, two feet apart. Two sowings were made, the second sowing about two weeks after the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were as follows:—Ottawa, 8th October; Nappan, 21st October; Brandon, 3rd October; Indian Head, 16th October and Agassiz, 28th October. The yield per acre 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.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.												
		May 11.		May 25.		June 8.		May 21.		June 8.		April 27.		May 11.										
		Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.									
1	Mammoth White Intermediate.	29	1,400	25	820	21	275	13	155	18	1,810	11	410	7	400	30	720	23	347	21	927	18	140	
2	Improved Half-Long White.	27	1,355	23	1,320	19	350	15	1,225	17	320	11	880	8	80	17	1,787	14	1,353	18	214	16	880	
3	Iverson's Champion.	26	1,130	26	1,255	20	1,800	15	1,825	11	600	10	680	9	1,200	8	1,000	9	1,347	16	46	15	1,037	
4	Early Gem.	24	262	14	1,782	19	180	6	1,775	11	1,700	13	1,720	7	400	19	1,848	21	827	17	802	14	326	
5	Selected White Belgian.	23	530	14	50	13	125	10	425	11	...	15	360	8	1,760	14	101	13	278
6	Carter's Orange Giant.	23	282	20	565	8	150	8	150	11	1,760	15	360	8	800	19	720	13	1,837	16	1,225	12	792	
7	Giant Short White Vosges.	22	1,870	20	260	8	1,765	14	975	14	600	14	600	9	960	19	1,600	17	613	15	130	16	1,112	
8	Improved Short White.	22	880	20	1,580	21	1,400	9	525	15	350	13	840	7	1,000	25	160	14	246	19	80	14	790	
9	Yellow Intermediate.	21	570	18	1,020	9	1,970	10	680	6	1,000	6	1,480	8	1,280	15	680	11	880	14	1,622	9	676	
10	Long Scarlet Altringham.	25	1,620	9	1,140	14	1,925	5	450	9	40	9	480	9	480	11	40	11	1,213	15	1,213	14	986	
11	Long Orange or Survey.	11	1,100	7	332	11	325	5	450	9	480	11	410	8	800	17	1,787	12	1,813	11	1,208	9	400	
12	Scarlet Intermediate.

The second series of plots were not sown at Indian Head, N.W.T., and the Long Scarlet Altringham was omitted from the first series on account of delay in receiving the seed. For the same reason both sowings of Selected White Belgian and Scarlet Intermediate were omitted at Agassiz. In the second sowing of Carter's Orange Giant and Yellow Intermediate at Ottawa, the seed did not germinate well and many of the young plants were destroyed by insects so that no reliable returns could be given. Both sowings of Scarlet Intermediate were accidentally omitted.

The crops from the successive sowings of carrots at the several experimental farms have averaged as follows:—

	Tons.	Lbs.		Tons.	Lbs.
Central Experimental Farm, Ottawa, Ont., 1st sowing	22	1,080	Experimental Farm, Brandon, Man., 2nd sowing	11	1,503
do do, 2nd sowing	18	153	Indian Head, N.W.T., 1st sowing	8	778
Experimental Farm, Nappan, N.S., 1st sowing	16	1,970	Agassiz, B.C., 1st sowing	19	786
do do, 2nd sowing	10	982	do do, 2nd sowing	15	907
Brandon, Man., 1st sowing	12	1,567			

It will be seen that the earlier sowings in carrots also have given the largest crops.

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The six varieties of carrots which have given the heaviest crops during the season of 1895 at the several experimental farms are the following:—

Central Experimental Farm, Ottawa, Ont.

	Tons.	Lbs.
1 Mammoth White Intermediate 1st sowing	29	1,400
2 Improved Half-long White " "	27	1,335
3 Iverson's Champion 2nd " ...	26	1,295
4 Early Gem 1st " ...	24	262
5 Selected White Belgian " " ...	23	530
6 Carter's Orange Giant " " ...	23	282

Experimental Farm for the Maritime Provinces, Nappan, N. S.

	Tons.	Lbs.
1 Improved Short White, 1st sowing.....	24	1,400
2 Mamm. White Intermediate, 1st sowing.	21	275
3 Iverson's Champion, 1st sowing... ..	20	1,800
4 Carter's Orange Giant "	20	565
5 Improved Half-long White, 1st sowing..	19	950
6 Early Gem, 1st sowing	19	190

Experimental Farm for Manitoba, Brandon, Man.

	Tons.	Lbs.
1 Mamm. White Intermediate, 1st sowing.	18	1,840
2 Improved Half-long White 1st sowing...	17	320
3 Improved Short White, 1st sowing	15	360
4 Selected White Belgian, 2nd sowing	15	360
5 Carter's Orange Giant "	15	360
6 Iverson's Champion 1st sowing.....	14	600

Experimental Farm for the North-west Territories, Indian Head, N.W.T.

	Tons.	Lbs.
1. Iverson's Champion, 1st sowing.....	9	1,200
2. Giant Short White Vosges, 1st sowing.	9	960
3. Selected White Belgian " ...	8	1,760
4. Yellow Intermediate " ...	8	1,280
5. Scarlet Intermediate " ...	8	1,280
6. Carter's Orange Giant " ...	8	800

Experimental Farm for British Columbia, Agassiz, B.C.

	Tons.	Lbs.
1. Mamm. White Intermediate, 1st sowing.	30	720
2. Improved Short White, 1st sowing.....	25	160
3. Early Gem 2nd "	21	827
4. Giant Short White Vosges, 1st sowing.	19	1,600
5. Carter's Orange Giant " ...	19	720
6. Long Scarlet Altringham " ...	18	961

it will be seen that the earlier sowings in carrots also have given the largest crops.

The six varieties of carrots which have produced the heaviest crops in 1895, taking the average of the results obtained at all the experimental farms are the following:—

		Tons.	Lbs.
1. Mamm. White Intermediate,	1st sowing	21	927
2. Improved Short White	" "	19	80
3. Improved Half-long White	" "	18	214
4. Carter's Orange Giant	" "	16	1,225
5. Giant Short White	2nd	16	1,112
6. Early Gem	1st	16	892

POTATOES.

Sixty-two varieties of potatoes were under trial in uniform plots during 1895. 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 about a foot apart in the rows. At Ottawa, Ont., the potatoes were planted 22nd to 25th May, and dug 2nd October; at Nappan, N.S., planted 23rd May, dug 24th and 25th September; at Brandon, Man., planted 28th May, dug 28th September; at Indian Head, N.W.T., planted 15th May, dug 4th October, and at Agassiz, B.C., planted 21st May, dug 11th to 14th October. The yield per acre has been calculated from the weight of tubers gathered from two rows each 66 feet long.

UNIFORM TEST PLOTS OF POTATOES.

Number.	Name of Variety.	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	American Wonder.....	385	..	340	..	.....	.....	176	..	88	..	247	15
2	Rochester Rose.....	381	8	330	..	282	20	272	..	164	16	285	57
3	Early Norther.....	378	24	260	..	392	20	204	..	164	16	279	48
4	Irish Daisy.....	366	37	325	..	275	..	196	..	176	..	267	43
5	Early White Prize.....	363	..	255	..	326	30	280	..	244	34	293	45
6	New Queen.....	363	..	250	..	311	40	152	..	129	4	241	9
7	Late Puritan.....	355	44	320	..	322	40	288	..	281	36	313	36
8	Early Harvest.....	353	55	325	..	359	20	296	..	183	20	303	31
9	Thorburn.....	352	..	170	..	363	..	188	..	183	20	251	16
10	I. X. L.....	347	36	282	30	271	20	176	..	124	49	240	25
11	Empire State.....	347	33	340	..	341	..	248	..	190	40	293	27
12	Clarke's No. 1.....	341	..	336	15	286	..	224	..	148	8	267	5
13	Early Rose.....	327	48	260	..	352	..	180	..	187	34	261	28
14	Everett.....	323	21	260	..	348	20	264	..	73	20	253	49
15	Monroe County.....	321	12	297	30	.....	.....	260	..	73	20	238	..
16	White Beauty.....	312	24	300	..	260	20	332	..	173	4	255	34
17	American Giant.....	312	24	.....	.....	.....	.....	352	..	202	56	289	6
18	Maggie Murphy.....	312	10	224	30	253	..	160	..	178	56	225	43
19	Early Six-weeks.....	310	43	147	30	333	41	118	..	156	76	219	29
20	Prize Taker.....	297	12	285	..	210	50	181	..	234	40	242	20
21	Daisy.....	290	21	192	30	293	20	184	..	220	..	236	3
22	Burpee's Extra Early	290	21	247	30	322	40	168	..	139	20	233	35
23	Early Puritan.....	290	23	189	40	319	..	196	..	117	20	222	31
24	Sharpe's Seedling.....	283	48	250	..	363	..	232	..	102	40	246	18
25	Polaris.....	281	36	300	..	374	..	224	..	99	44	255	52

Number.

26 Prid
27 Pea
28 Lee
29 Dela
30 Troy
31 Holl
32 Prid
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34 Seed
35 Grea
36 Mon
37 Chic
38 Crow
39 Idea
40 Ear
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UNIFORM TEST PLOTS OF POTATOES—*Concluded.*

Number.	Name of Variety.	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
26	Pride of the Market	279 24	275 ..	330 ..	160 ..	177 28	244 22
27	Pearce's Extra Early	279 24	181 ..	493 20	253 ..	.....	279 11
28	Lee's Favourite	275 ..	280 ..	363 ..	176 ..	176 ..	254 ..
29	Delaware	275 ..	300 ..	.....	.....	324 8	299 42
30	Troy Seedling	267 42	282 30	311 40	148 ..	271 10	256 12
31	Holborn Abundance	264 ..	350 ..	245 40	192 ..	140 48	238 29
32	Pride of the Table	261 48	302 30	322 40	124 ..	133 28	228 53
33	State of Maine	259 36	300 ..	293 20	264 ..	208 16	265 2
34	Seedling No. 214	259 36	.....	.....	172 ..	95 20	175 30
35	Great Divide	258 38	225 ..	319 ..	108 ..	140 48	210 17
36	Money Maker	256 22	260 ..	300 40	148 ..	220 ..	237 ..
37	Chicago Market	255 12	300 ..	366 40	220 ..	283 4	284 59
38	Crown Jewel	250 48	272 30	355 40	220 ..	132 ..	246 12
39	Ideal	249 33	.....	315 20	188 ..	117 20	217 33
40	Early Ohio	244 12	280 ..	308 40	196 ..	225 52	250 57
41	Algoma No. 1	244 12	220 ..	271 20	212 ..	.....	236 52
42	Early Sunrise	239 48	239 ..	263 ..	136 ..	139 20	213 30
43	Lizzie's Pride	239 48	202 30	278 40	324 ..	168 40	242 43
44	Harbinger	233 12	260 ..	253 ..	110 ..	173 4	211 51
45	London	231 ..	235 ..	280 40	304 ..	189 12	249 46
46	Freeman	231 ..	200 50	304 50	176 ..	149 36	212 21
47	Rural Blush	229 54	178 30	249 20	216 ..	239 4	222 34
48	Brownell's Winner	226 52	320 ..	223 40	152 ..	.....	226 53
49	Dreer's Standard	226 36	340 ..	352 ..	184 ..	102 40	241 3
50	Dakota Red	220 ..	295 ..	289 40	224 ..	293 42	264 28
51	Wonder of the World	.....	.....	276 40	164 ..	52 48	164 29
52	Carman No. 1	220 4	345 ..	374 ..	228 ..	293 20	292 5
53	Northern Spy	217 48	267 30	326 20	216 ..	152 32	236 2
54	Beauty of Hebron	209 ..	267 30	271 20	208 ..	294 52	250 8
55	Vanier	209 ..	.....	280 ..	280 ..	246 24	253 51
56	Early Gem	199 6	260 ..	.....	284 ..	190 40	233 21
57	Peerless junior	196 2	320 ..	190 40	136 ..	198 8	208 10
58	Victor Rose	195 7	250 ..	176 ..	200 ..	.....	205 17
59	Clay Rose	195 7	360 ..	265 20	140 ..	264 ..	232 53
60	Orphans	177 39	.....	113 40	148 ..	234 40	168 30
61	Pearce's Prize Winner	138 36	375 ..	381 20	260 ..	158 24	262 40
62	Stourbridge Glory	133 51	.....	172 20	164 ..	167 32	159 26

NOTE.—Where records of the yield of varieties are omitted, it is in most instances, due to the seed not being received in time for planting.

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

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. American Wonder	385 ..	7. Late Puritan	355 44
2. Rochester Rose	381 8	8. Early Harvest	353 55
3. Early Norther	378 24	9. Thorburn	352 ..
4. Irish Daisy	366 37	10. I. X. L.	347 36
5. Early White Prize	363 ..	11. Empire State	347 36
6. New Queen	363 ..	12. Clarke's No. 1	341 ..

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

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Pearce's Prize Winner.....	375 ..	7. Dreeer's Standard.....	340 ..
2. Clay Rose.....	360 ..	8. Clarke's No. 1.....	336 15
3. Holborn Abundance.....	350 ..	9. Rochester Rose.....	330 ..
4. Carman No. 1.....	345 ..	10. Early Harvest.....	325 ..
5. Empire State.....	340 ..	11. Irish Daisy.....	325 ..
6. American Wonder.....	340 ..	12. Brownell's Winner.....	320 ..

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Pearce's Extra Early.....	403 20	7. Sharpe's Seedling.....	363 ..
2. Early Norther.....	392 20	8. Lee's Favourite.....	363 ..
3. Pearce's Prize Winner.....	381 20	9. Early Harvest.....	359 20
4. Polaris.....	374 ..	10. Crown Jewel.....	355 40
5. Carman No. 1.....	374 ..	11. Dreeer's Standard.....	352 ..
6. Thorburn.....	363 ..	12. Early Rose.....	352 ..

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

	Per acre. Bush.		Per acre. Bush.
1. American Giant.....	352	7. Early Gem.....	284
2. White Beauty.....	332	8. Vanier.....	280
3. Lizzie's Pride.....	324	9. Early White Prize.....	280
4. London.....	304	10. Rochester Rose.....	272
5. Early Harvest.....	296	11. State of Maine.....	264
6. Late Puritan.....	288	12. Everett.....	264

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

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Delaware.....	324 8	7. Troy Seedling.....	271 10
2. Beauty of Hebron.....	294 52	8. Clay Rose.....	264 ..
3. Dakota Red.....	293 42	9. Vanier.....	246 24
4. Carman No. 1.....	293 20	10. Early White Prize.....	244 34
5. Chicago Market.....	283 4	11. Rural Blush.....	239 4
6. Late Puritan.....	281 36	12. Prize Taker.....	234 40

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

	Per acre. Bush. Lbs.		Per acre. Bush. Lbs.
1. Late Puritan.....	313 36	7. American Giant.....	289 6
2. Early Harvest.....	303 31	8. Rochester Rose.....	285 57
3. Delaware.....	299 42	9. Chicago Market.....	284 59
4. Early White Prize.....	293 45	10. Early Norther.....	279 48
5. Empire State.....	293 27	11. Pearce's Extra Early.....	279 11
6. Carman No. 1.....	292 5	12. Irish Daisy.....	267 43

CONCLUSIONS.

It has been clearly shown in the foregoing pages that there are wide variations in the volume of crop produced by different varieties of the same grain or other agricultural product even when grown side by side on similar soil and with similar treatment in every particular. This teaches the great importance of selecting the best varieties of seed for sowing such as have been shown to possess abundant vigour and great fertility, in order that the best results may be obtained.

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Turnip
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Carrot

The variations manifest in the weight of crops produced on the uniform test plots on all the experimental farms are very great. The largest and the smallest crops obtained at the Central Experimental Farm in 1895, and the differences between these are as follows:—

	Largest Crop	Smallest Crop	Difference
	per Acre.	per Acre.	in Yield per Acre.
	Bush. Lbs.	Bush. Lbs.	Bush. Lbs.
Oats.....	74·4	16·16	57·22
Barley, two-rowed.....	43·16	20·8	23·8
do six-rowed.....	58·6	32·14	25·26
Spring wheat.....	30·40	13·40	17·0
Pease.....	40·10	30·20	9·50
Potatoes.....	385·0	133·51	251·9
	Tons.	Tons.	Tons.
Indian Corn (cut green for silo).....	37·470	13·1280	23·1190
Turnips.....	13·400	6·408	7·888
Mangels.....	37·976	22·682	15·294
Carrots.....	29·1400	11·1100	18·300

While there are probably other influences which we are unable to detect or estimate which may account for some part of these differences in productiveness, there seems every reason to believe that the larger part can only be accounted for by an inherent difference in vigour and fertility in the varieties. There is no doubt that were the less productive sorts in cultivation replaced by the more prolific varieties and these grown under reasonably good conditions, that the change would bring an enormous gain to the farmers of this country. Some indication of the possibilities in this direction may be given by showing what gain would arise from a small increase per acre from the area under crop of each of the agricultural products referred to, in the single province of Ontario, taking the acreage as given in bulletin 66, 15th November, 1895, of the Ontario Bureau of Industries.

	Area under Crop in Ontario, 1895.	Estimated value per bushel.	Value of each Bushel per Acre of Increase for Ontario only.
	Acres.	cts.	\$ cts.
Oats.....	2,373,309	30	711,992 70
Barley.....	478,046	35	167,316 10
Spring wheat.....	223,957	75	167,967 75
Pease.....	799,963	55	439,979 65
Potatoes.....	184,647	20	36,929 40
		Per Ton.	Each Ton.
		\$ cts.	
Indian Corn (cut green for silo).....	148,899	1 50	223,348 50
Turnips.....	151,806	3 00	455,418 00
Mangels.....	34,383	3 00	103,149 00
Carrots.....	13,002	3 00	39,006 00

That much attention is now being given to this important subject is shown by the large and increasing demand for improved varieties of seed. The free distribution of improved sorts for test which has been carried on by the experimental farms during the past seven years has placed, in response to requests, 125,000 three-pound samples in the hands of about 70,000 farmers, and the results obtained from these samples have done much to awaken a general interest in the subject, but the possibilities indicated by the facts and figures submitted in this bulletin call for greater and more general effort so that Canadian farmers everywhere may the sooner reap the reward of increased crops and more remunerative employment offered by this line of improvement. Any increased productiveness obtained by the use of better seed would be nearly clear gain. It would add nothing to the cost of preparing the land or of seeding and but very little to that of harvesting or threshing.

