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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.

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 $\frac{1}{16}$ 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.		
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.
1	Banner.....	74	4 54	24 101	6 90	.. 48	3 73	21	98	105	124	130	120 115 $\frac{1}{2}$	
2	Abundance.....	73	8 56	16 79	14 108	28 43	28 72	12	98	107	125	137	120 118 $\frac{1}{2}$	
3	American Beauty.....	72	12 64	24 96	6 101	16 42	22 75	16	100	107	128	134	120 117 $\frac{1}{2}$	
4	Improved Ligowo.....	70	20 54	24 81	16 87	22 40	30 67	2	99	105	125	133	118 116 $\frac{1}{2}$	
5	Golden Beauty.....	69	4 69	14 83	28 104	4 47	12 74	26	101	105	129	133	121 117 $\frac{1}{2}$	
6	Columbus.....	69	4 59	14 91	26 102	2 38	8 72	4	100	104	128	137	120 117 $\frac{1}{2}$	
7	American Triumph.....	68	18 36	16 68	8 85	.. 34	26 58	24	100	115	134	136	125 122 $\frac{1}{2}$	
8	White Russian.....	67	32 60	.. 86	16 75	.. 34	24 64	28	98	103	131	137	125 118 $\frac{1}{2}$	
9	Bavarian.....	67	2 60	20 93	8 76	16 42	12 67	32	100	105	124	133	120 116 $\frac{1}{2}$	
10	White Schonen.....	66	2 54	24 93	8 99	22 35	30 69	31	100	104	128	130	122 116 $\frac{1}{2}$	
11	Wide Awake.....	65	.. 52	12 77	2 89	14 28	8 62	14	102	103	134	136	120 119	
12	Wallis.....	63	28 54	24 88	18 67	12 35	10 61	32	100	106	129	137	120 118 $\frac{1}{2}$	
13	Cream Egyptian.....	62	22 57	2 47	22 82	32 49	14 59	25	99	103	121	130	115 113 $\frac{1}{2}$	
14	Oderbruch.....	60	20 58	28 89	4 99	14 30	30 67	26	99	103	128	137	125 118 $\frac{1}{2}$	
15	Abyssinia.....	60	.. 62	12 86	26 82	22 46	6 67	20	98	104	128	137	121 117 $\frac{1}{2}$	
16	Early Golden Prolific.....	59	24 72	12 93	8 73	18 48	18 69	16	97	106	128	137	120 117 $\frac{1}{2}$	
17	Joanette.....	59	24 52	12 81	16 78	28 37	32 62	2	102	104	136	132	120 118 $\frac{1}{2}$	
18	California Prolific Black.....	59	14 59	14 76	26 67	12 37	22 60	4	104	104	146	133	125 122 $\frac{1}{2}$	
19	Lincoln.....	58	28 50	20 81	26 73	28 46	26 62	12	97	104	128	131	120 116 $\frac{1}{2}$	
20	Giant Cluster.....	58	8 63	18 80	.. 70	.. 36	6 61	22	105	115	134	137	120 122 $\frac{1}{2}$	
21	Flying Scotchman.....	58	8 36	16 81	6 86	16 36	16 59	26	93	99	124	130	115 112 $\frac{1}{2}$	
22	Coulommiers Black.....	56	16 44	4 77	12 57	12 40	.. 55	2	115	116	136	141	125 126 $\frac{1}{2}$	
23	Early Archangel.....	56	6 44	4 88	8 88	8 48	28 65	4	88	98	126	130	118 112 $\frac{1}{2}$	
24	Prolific Black Tartarian.....	56	6 48	8 74	4 72	22 40	10 58	10	104	108	146	133	118 121 $\frac{1}{2}$	
25	Early Blossom.....	55	30 62	12 79	14 75	.. 45	20 63	22	103	107	134	137	121 120 $\frac{1}{2}$	
26	Rosedale.....	55	30 48	28 87	2 81	16 37	32 62	8	98	104	122	137	118 115 $\frac{1}{2}$	
27	Imported Irish.....	55	30 57	22 66	26 63	8 35	20 55	21	93	98	121	129	115 111 $\frac{1}{2}$	
28	Poland.....	55	10 51	6 67	2 69	4 41	6 56	26	93	99	122	137	115 113 $\frac{1}{2}$	
29	Holstein Prolific.....	54	4 54	24 95	20 89	24 33	18 65	18	101	106	128	137	120 118 $\frac{1}{2}$	
30	Early Gothland.....	52	2 66	16 84	24 53	18 59	14 63	6	97	106	131	130	118 116 $\frac{1}{2}$	
31	Scottish Chief.....	51	6 40	20 65	.. 77	22 34	24 53	28	91	97	122	133	118 112 $\frac{1}{2}$	
32	Victoria Prize.....	51	6 52	32 68	8 78	28 24	24 55	6	92	98	122	129	115 111 $\frac{1}{2}$	
33	Bonanza.....	51	6 44	24 44	24 85	10 44	24 54	4	94	103	122	133	120 114 $\frac{1}{2}$	
34	Welcome.....	49	14 47	22 41	26 81	16 30	20 50	6	98	97	120	134	120 113 $\frac{1}{2}$	
35	Early Etampes.....	48	28 54	4 57	32 50	10 36	7 49	16	102	104	146	134	120 121 $\frac{1}{2}$	
36	Prize Cluster.....	48	28 43	18 60	30 73	28 36	14 52	24	93	97	122	128	115 111	
37	White Wonder.....	46	6 51	16 52	2 71	16 39	24 52	6	91	97	122	130	115 111	
38	Siberian.....	45	10 38	28 87	12 86	26 30	.. 57	22	94	103	128	128	115 113 $\frac{1}{2}$	
39	Winter Grey.....	42	22 32	12 77	2 81	6 31	6 52	30	94	103	128	128	115 113 $\frac{1}{2}$	
40	Hazlett's Seizure.....	42	12 49	14 74	4 79	14 52	32 59	22	100	97	122	133	118 114	
41	Rennie's Prize White.....	40	.. 37	22 61	16 67	22 34	24 48	10	96	98	123	136	118 114 $\frac{1}{2}$	
42	White Monarch.....	34	24 31	26 68	8 69	24 35	30 48	2	108	107	131	137	120 120 $\frac{1}{2}$	
43	Scotch Hopetown.....	28	8 51	6 61	26 45	20 17	2 40	26	112	113	139	137	118 123 $\frac{1}{2}$	
44	Doncaster Prize.....	16	16 38	8 56	16 69	4 32	2 42	16	109	106	128	137	121 120 $\frac{1}{2}$	

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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. Bush. Lbs.		Per Acre. 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. Bush. Lbs.		Per Acre. 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. Bush. Lbs.		Per Acre. 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.....	88 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. Bush. Lbs.		Per Acre. 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. Bush. Lbs.		Per Acre. 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. Bush. Lbs.		Per Acre. 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.	
		Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Bush.	Lbs.	Days.	Days.
1	Sidney	43	16 27	40	60	9	42	44	27	14	40	15	91
2	Duck-bill	37	24 30	20	30	20	57	4	45	40	4	104	104
3	Bolton	35	30 34	8	.....	46	10 30	25	36	30	94	97	.....
4	Beaver	35	27	24	50	10	52	2	36	2	40	8	97
5	French Chevalier ..	34	18 47	44	62	14	54	38	38	16	47	26	97
6	Newton	29	18 35	20	56	2	48	5	34	8	40	30	99
7	Prize Prolific	28	6 38	16	42	12	59	33	16	40	11	97	105
8	Danish Chevalier ..	27	34 42	24	41	22	54	18	39	28	41	6	98
9	Kinver Chevalier ..	26	42 37	4	45	30	56	22	28	16	38	42	94
10	California Prolific ..	26	2 29	8	57	14	48	24	30	37	1	98	105
11	Canadian Thorpe ..	25	40 46	32	58	16	50	6	41	32	44	25	98
12	Thanet	21	42 35	20	43	46	54	40	32	24	37	34	97
13	Rigid	20	8 22	44	.....	48	16 26	12	39	11	.....	99	106

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.	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	97	97	97	97	97	97	97
2	Petschora	51	42 37	44	56	42	31	29	33	16	42	15	78	92	94	112	96	96	94	96	94	96	94	96	94
3	Royal	51	12 45	20	65	30	41	42	29	38	46	38	79	92	97	118	97	96	97	96	97	96	97	96	97
4	Success	51	12 45	40	30	10	45	40	26	37	39	47	76	92	87	108	96	96	91	96	91	96	91	96	91
5	Odessa	47	24 52	4 60	10 54	28	38	36	50	30	83	92	92	92	92	116	107	99	99	99	99	99	99	99	99
6	Oderbruch	47	14 38	16	48	46	40	36	27	42	11	87	93	97	116	97	98	98	98	98	98	98	98	98	98
7	Trooper	46	42 43	16	65	10	45	40	33	46	47	2	82	99	97	122	106	101	101	101	101	101	101	101	101
8	Stella	46	2 34	28	53	36	41	32	32	4 11	30	78	103	105	125	106	103	103	103	103	103	103	103	103	103
9	Vanguard	44	28 40	20	64	8 37	24 31	12	43	28	79	93	95	116	99	96	99	96	99	96	99	96	99	96	99
10	Common	43	46 12	4 63	6 41	20	28	6 43	36	80	92	96	116	106	98	106	98	106	98	106	98	106	98	106	98
11	Nugent	42	44 31	32	68	26	42	34	24	8 42	85	99	99	119	106	101	101	101	101	101	101	101	101	101	101
12	Summit	39	28 34	8 58	46	40	30	29	33	40	29	84	103	95	122	106	102	102	102	102	102	102	102	102	102
13	Surprise	36	12 41	32	65	10	38	26	24	14 41	9	86	103	98	122	106	103	103	103	103	103	103	103	103	103
14	Rennie's Improved	32	14 32	44	51	32	62	14	28	16 41	24	83	94	95	128	97	99	99	99	99	99	99	99	99	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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Bush. Lbs.		Per acre. 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. Success.....	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. Success.....	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	20 48	20 45	40 16	40 34	44	96	110	133	138	109 117½
2	Goose.....	28	20 27	40 42	10 33	20 15	20 29	20	103	108	133	135	112 118½
3	Old Red River....	26	30 30	20 47	10 42	40 17	20 32	48	103	115	133	138	109 119½
4	Pringle's Champlain.....	26	20 18	20 46	30 44	30 14	40 30	4	98	113	133	136	109 117½
5	Huron.....	25	40 31	.....	51	20 17	10 31	17	98	112	.....	138	105 113½
6	Wellman's Fife.....	25	20 25	20 34	.....	42	40 16	40 28	48	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	.....	31	2	103	115	139 138 123½
9	Red Fern.....	24	20 31	.....	41	10 42	20 16	40 31	6	100	110	133	138 119 120
10	Monarch.....	24	.....	36	30 36	.....	15	20 27	57	103	.....	139	138 122 116½
11	Alpha.....	24	.....	40	20 45	30 19	30 30	40	98	109	134	135	106 116½
12	Admiral.....	24	.....	30	40 42	50 35	10 20	.....	30	32	97	114	134 138 111 118½
13	Advance.....	24	.....	26	20 46	20 43	50 21	.....	32	18	98	113	134 138 111 118½
14	Emporium.....	24	.....	39	30 48	40 13	50 31	30	100	.....	133	138	122 123
15	Percy.....	23	40 28	20 41	.....	39	40 14	20 29	24	97	110	125	135 109 115½
16	Red Fife.....	23	40 24	.....	49	.....	45	.....	17	25	31	49	101 114 133 136 112 119½
17	Colorado.....	23	20 18	.....	34	10 29	10	.....	26	10	98	114	128 133 118½
18	Bienheim.....	23	10 27	.....	37	20 44	.....	17	10	29	44	98	114 133 138 112 119
19	Stanley.....	22	43 32	20 43	30 42	.....	13	20 30	47	96	113	133	135 119 119½
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 117½
22	Captor.....	22	10 27	.....	32	30 28	.....	17	50	25	30	95	114 139 136 111 119
23	Ladoga.....	21	40 24	.....	42	10 41	35 15	10 28	55	108	108	128	138 104 117½
24	White Cornell.....	21	34 29	20 44	50 35	20 14	.....	29	1	103	114	133	140 122 122½
25	Campbell's White Chaff.....	20	20 31	40 38	50 40	20 19	10 30	4	99	109	134	136	109 117½
26	Rio Grande.....	20	20 22	40 11	30 41	40 33	10 31	40	125	115	133	135	128 123½
27	Beaudry.....	19	40 19	.....	25	36 52	.....	22	40	27	47	97	112 130 136 111 117½
28	Black Sea.....	19	.....	25	38	30 41	10	.....	30	55	93	108	130 136 116½
29	Herisson Bearded.....	18	20 31	20 41	30 44	40 21	.....	31	22	98	115	139	138 109 119½
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	24	95	108	137	136 122 119½
32	Gelun.....	13	40 22	40 42	40 36	.....	14	10 25	50	100	108	126	132 111 115½

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

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 Fife. 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.	Days.	Days.	Days.	Days.	Days.		
1	Black-eyed Marrowfat.....	40	10	53	20	52	..	22	40	4	32	100	113	116	116	111
2	Mummy	39	30	40	..	53	10	22	50	3	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	102
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	28	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. Bush. Lbs.			Per acre. 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. Bush. Lbs.			Per acre. 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. Bush. Lbs.			Per acre. 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. Bush. Lbs.			Per acre. 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 winterfeeding, 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.	
		Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
1	Rural Thoroughbred White Flint.....	37	470	19	500	13	500	6	600	12	860
2	Giant Prolific Ensilage Sweet.....	28	1,970	11	1,650	13	1,500	6	600	5	1,440
3	Sanford Flint.....	23	1,300	12	640	13	1,500	5	800	6	1,340
4	Canada White Flint.....	23	756	11	1,100	14	600	6	600	7	760
5	Champion White Pearl Dent.....	23	200	12	200	11	500	6	600	7	80
6	Red Cob Ensilage.....	22	1,320	14	600	15	250	6	1,800	6	1,640
7	New White Cap Yellow Dent.....	22	990	12	750	12	640	5	800	10	680
8	Country Gentleman.....	18	400	15	250	9	1,800	5	200	12	200
9	North Dakota.....	18	520	9	1,250	11	1,650	5	800	5	1,980
10	Compton's Early.....	17	1,200	12	1,300	15	1,800	6	1,200	6	320
11	Angel of Midnight.....	17	100	17	100	14	600	8	800	9	920
12	Mammoth 8-rowed Flint.....	15	1,900	11	1,100	12	200	9	500	6	1,200
13	Longfellow.....	15	1,680	12	750	14	50	8	200	7	300
14	Canadian Dent.....	14	1,150	8	1,050	11	1,100	4	400	5	560
15	Extra Early Huron Dent.....	14	1,150	12	640	11	...	6	...	7	520
16	Pearce's Prolific.....	14	50	9	1,250	9	1,800	3	1,200	7	740
17	Mitchell's Early.....	13	1,280	8	500	13	1,500	6	600	4	800

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 1,423
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 1,120	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 1,900	30 800	17 1,376	11 440	16 1,600	11 1,640	12 1,344	8 1,428	17 1,802	15 1,517
8	Skirving's Swede	8 1,424	14 776	33 500	26 725	17 320	15 360	20 800	12 1,200	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	11 1,232	10 1,120	14 1,067	17 5
10	Giant King	8 38	12 288	30 325	23 740	21 1,560	13 400	17 1,040	12 1,200	7 80	6 1,728	14 1,151	13 394
11	Jumbo or Monarch	7 1,312	10 64	28 523	33 1,430	21 1,560	13 400	17 1,040	12 1,200	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 96
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.		Napier, N.S.		Brandon, Man.		Indian Head, N.W.T.		Agassiz, B.C.		Average of all Farms.	
		May 11.	May 25.	May 25.	June 8.	May 22.	June 8.	May 25.	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.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.
1	Manum. Long Red (Evans).	37 976	22 880	21 1,700	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.	33 528	19 1,336	24 165	15 875	21 1,052	15 1,080	12 720	11 1,910	26 800	26 621	23 1,049	17 1,031
3	Manum. Long Red (Sharp).	32 1,298	19 1,665	16 775	23 75	25 1,744	21 1,500	10 1,360	9 480	15 1,856	20 1,516	20 1,589	18 1,820
4	Giant Yellow Intermediate.	31 634	19 1,600	35 965	29 1,850	31 301	19 544	12 680	12 400	22 192	28 320	26 955	21 1,643
5	Champion Yellow Globe.	29 1,400	19 16	17 1,625	23 1,975	22 1,408	16 1,528	10 680	10 400	23 1,520	21 1,206	20 1,726	18 1,643
6	Manum. Long Red (Webb).	23 146	16 1,066	19 950	24 450	28 1,024	26 800	16 880	12 600	32 416	17 1,200	25 283	19 823
7	Canadian Giant.	28 1,288	23 1,250	...	...	29 400	26 1,856	...	...	27 1,440	25 1,216	22 1,043	25 804
8	Conqueror Yellow Globe.	28 1,090	17 848	21 1,415	17 1,150	30 436	21 1,560	12 1,200	12 600	21 768	15 1,680	22 1,786	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	19 529
10	Red Fleshed Globe.	24 1,806	22 880	10 1,375	15 400	25 160	22 1,672	9 1,680	9 600	31 832	16 4,792	20 788	17 669
11	Warden Orange Globe.	24 1,268	16 208	19 475	16 15	20 128	14 1,568	11 40	8 1,920	22 1,408	27 560	19 1,084	16 1,254
12	Golden Tankard.	22 682	17 1,640	32 790	30 800	24 1,632	23 992	16 400	15	26 1,856	21 240	24 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, Napier, N.S., 1st sowing.	21	1,855
do do 2nd sowing.	21	1,263
Brandon, Man., 1st sowing.	27	278
do do 2nd sowing.	21	1,570
Indian Head, N.W.T., 1st sowing.	12	367
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.		June 21.		April 27.		May 11.	
		Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	Tons. Lbs.	1st Sowing.	2nd Sowing.
1	Mammoth White Intermediate.	29 1,400	25 820	21 275	13 155	18 1,810	11 440	7 400	30 720	23 347	21 925	18 140	
2	Improved Half-Long White.	27 1,335	23 1,320	19 330	13 1,225	17 320	11 880	8 80	17 1,787	14 1,333	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	16 106	15 1,337	
4	Early Genl.	24 262	14 1,782	19 180	6 1,775	11 1,760	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	11 400	15 360	8 1,760	19 720	13 1,897	14 104	13 278	
6	Carter's Orange Giant.	23 282	20 565	20 565	8 150	11 1,760	15 360	8 800	19 720	13 1,897	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	24 1,400	9 525	15 350	13 840	7 1,000	25 160	14 236	19 80	14 790	
9	Yellow Intermediate.	21 570	18 1,050	18 1,050	9 1,970	10 680	6 1,200	8 1,280	15 680	11 880	14 1,652	9 676	
10	Long Scarlet Altringham.	25 1,020	9 1,140	14 1,925	5 450	9 40	9 480	8 800	18 961	15 1,213	14 986	10 71	
11	Long Orange or Survey.	11 1,100	7 332	11 325	5 430	9 480	11 440	8 800	17 1,787	12 1,813	11 1,208	9 400	
12	Scarlet Intermediate.			11 1,275	11 1,275	10 240	9 40	8 1,280			10 265	10 637	

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	do do Indian Head, N.W.T., 1st sowing	8	778
Experimental Farm, Nappan, N.S., 1st sowing	16	1,970	do do Agassiz, B.C., 1st sowing	19	786
do do 2nd sowing	10	982	do do 2nd sowing	15	907

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

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

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 $2\frac{1}{2}$ 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	Bush. Lbs
1	American Wonder....	385 ..	340 ..	.....	176 ..	88 ..	247	15
2	Rochester Rose.....	381 8	330 ..	232 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	L. N. 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 43	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	148 ..	156 76	219	23
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

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40. Ear
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UNIFORM TEST PLOTS OF POTATOES—*Concluded.*

Number.	Name of Variety.	Ottawa, Ont.	Napuan, 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 ..	283 20	264 ..	208 16	265 2
34	Seedling No. 214.....	259 36	.....	.....	172 ..	95 20	175 39
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 ..	289 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 ..	203 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 ..	205 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 Northern.....	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.

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 per Acre.	Smallest Crop per Acre.	Difference 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 In- crease 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.