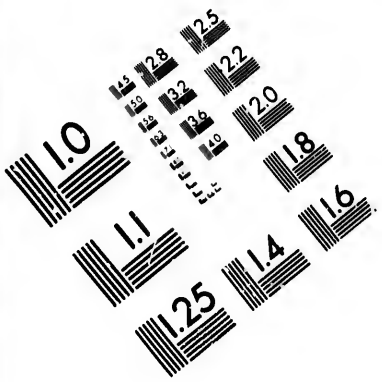


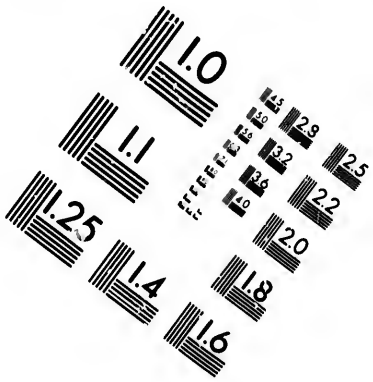


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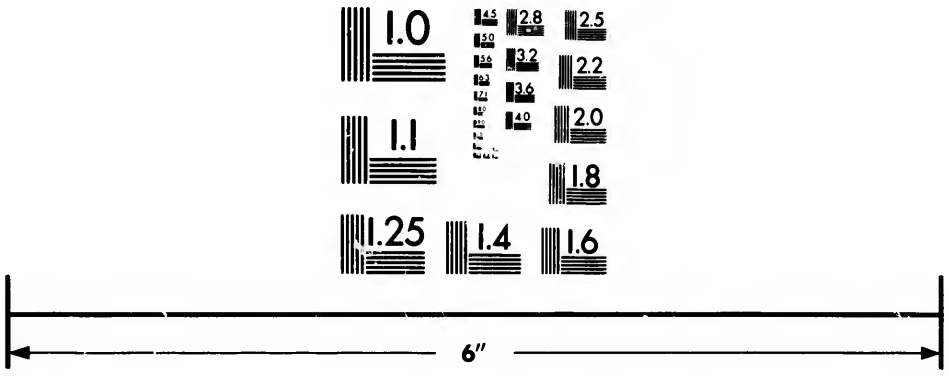


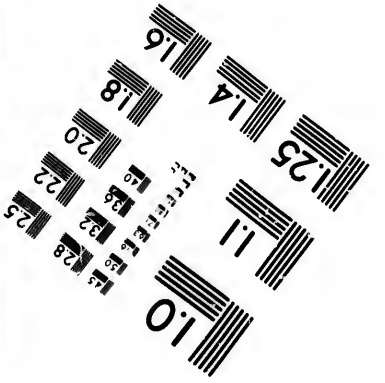


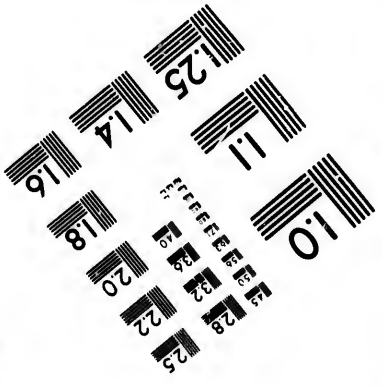


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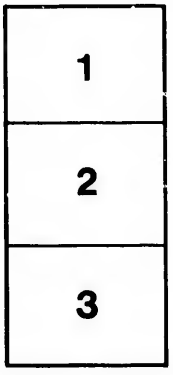


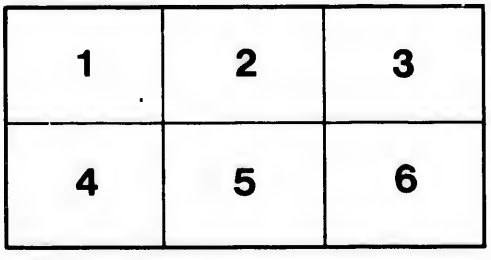

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PUBLISHED

DEPARTMENT OF AGRICULTURE

CENTRAL EXPERIMENTAL FARM

OTTAWA, CANADA



# RESULTS OBTAINED IN 1897

FROM

# TRIAL PLOTS

OF

# GRAIN, FODDER CORN,

# AND ROOTS

## BULLETIN No. 29

JANUARY, 1898

PUBLISHED BY DIRECTION OF THE HON. SYDNEY A. FISHER, MINISTER OF AGRICULTURE.

To the Honourable
The Minister of Agriculture.

SIR,—I have the honour to submit for your approval, bulletin 29 of the Experimental Farm series, 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 the season of 1897, with oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots and potatoes, in uniform plots. The average results are also given of three years' tests of the uniform plots of oats, barley, spring wheat and potatoes. This work has been undertaken with the object of gaining information as to the relative productiveness and earliness of the many varieties under test. The results show wide variations in the weight of the crops grown and point to the importance of greater care being exercised by farmers in choosing varieties of seed for sowing.

I trust that the information given, covering the experience gained under many 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, 10th January, 1898.

VIEW OF SOME OF THE UNIFORM TEST PLOTS OF GRAIN, 1887, AT THE CENTRAL EXPERIMENTAL FARM

GRAI

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# RESULTS OBTAINED IN 1897

FROM TRIAL PLOTS OF

# GRAIN, FODDER CORN, AND ROOTS

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

*Director Experimental Farms.*

In March, 1896, and in January, 1897, bulletins were published giving accounts of the crops obtained in 1895 and 1896, from a large number of test plots of many varieties of oats, barley, spring wheat, pease, Indian corn, turnips, mangels, carrots and potatoes grown at each of the experimental farms. During the season of 1897, similar lines of work have been conducted, and the crops which have been harvested are reported in the present bulletin. It is hoped that by the prompt issue of the results of these important tests in a form convenient for reference, the farmers of Canada may be able to gain information which will be useful to them in the selection of varieties for sowing during the coming season.

In these experiments the important crops named have been grown on blocks of lands selected so as to be as nearly uniform as possible in character, each having an area sufficient to include all the varieties of one sort of grain, and these have been arranged in plots of one-tenth or one-twentieth acre each, side by side, and usually all sown on the same day or within two days. The seed sown has been uniform in character, and the quantity of seed used per acre and the manner of sowing or planting has been the same.

These experiments have been undertaken for the purpose of gaining information as to the relative productiveness, when grown under similar conditions, of the many varieties in cultivation of these valuable farm crops, also to ascertain their periods of ripening in the different climates of this country.

Particulars are here submitted of the crops produced at each of the experimental farms from all the varieties sown, also the average yield obtained at all these farms. The time required for the maturing of the different sorts is also given, and they are arranged in every case in the order of their productiveness at the Central Experimental Farm at Ottawa.

At the Central Farm, owing to unfavourable weather before and during the harvest time, most of the cereals suffered much from rust, which materially reduced the weight of the crops, and the returns are lower than usual. At the branch farm at Nappan, N.S., the weather in the spring was unusually wet, which delayed seeding and shortened the season for growth. Nevertheless most of the crops of cereals there were well up to the average. At the branch farm at Brandon the season was unusually dry; the rainfall was only about half of the usual quantity. Cereals also were more or less injured by spring frosts and strong winds. Oats suffered most from these unfavourable conditions, some of the varieties sown were entirely destroyed, and others much reduced in yield. On this account some of the best sorts which have heretofore been near the head of the list as most productive, have fallen much behind, and the results at Brandon this season cannot be taken as a fair index of the relative productiveness of the different varieties under trial. The returns from the plots of wheat, barley and pease were well up to, if not above, the average. The yield of fodder crops and roots has been light.

At the branch farm at Indian Head, N.W.T., cereals also suffered from drought and winds in the spring, and some varieties, especially oats, were much injured, but a copious rainfall about the middle of June produced a rapid growth and development and resulted in good crops of most of the cereals, many of them much above the average. The yield of roots and fodder crops was small. At the branch farm at Agassiz, B. C. the weather was favourable to growth throughout the season and crops of all sorts were good.

## OATS.

Sixty-three varieties of oats have been tested during the season of 1897. These include ten of the cross-bred sorts which have been produced at the experimental farms, namely: Medal, Miller, Master, Russell, Olive, Brandon, King, Pense, Oxford and Cromwell. The size of the plots on which they were grown was one-tenth of an acre each at Brandon, Man., and at Indian Head, N.W.T., and one twentieth of an acre each at Ottawa, Ont., Nappan, N.S. and Agassiz, B.C. The quantity of seed sown of each variety was in the proportion of two bushels per acre, and the dates of sowing were the following:—Ottawa, 5th and 6th May; Nappan, 12th to 20th May; Brandon, 1st May; Indian Head, 3rd May, and at Agassiz, 16th April. The average crop of all these varieties of oats at each of the experimental farms was as follows:—At Ottawa, 39 bush. 23 lbs. per acre; Nappan, 59 bush. 5 lbs.; Brandon, 46 bush. 32 lbs.; Indian Head, 71 bush.; and at Agassiz, 67 bush. 29 lbs. per acre. The average return given by the whole of the varieties at all the farms was 56 bush. 31 lbs. per acre. Particulars as to the character of the land in each case, also its preparation and treatment will be found in the Annual Report of the Experimental Farms for 1897.

## UNIFORM TEST PLOTS OF OATS.

| No. | Name of Variety. | Yield at the several Experimental Farms, Season of 1897. | | | | | | | | | | 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. | Days. | Days. | Days. | Days. | Days. | Days. |
| 1 | Golden Giant .. | 57 | 12 | 53 | 18 | .. | .. | 80 | 10 | 89 | 14 70 5 | 103 | 117 | .... | 119 | 116 | 114 |
| 2 | Mennonite .. | 56 | 11 | 67 | 2 | .. | .. | 80 | .. | 57 | 32 65 11 | 91 | 101 | .... | 119 | 107 | 105 |
| 3 | Imp'd. American | 53 | 28 | 72 | 12 | .. | .. | 86 | 26 | 77 | 22 72 22 | 93 | 109 | .... | 119 | 121 | 110 |
| 4 | Early Etampes .. | 53 | 23 | 67 | 2 | 56 | 6 | 71 | 16 | 66 | 16 62 33 | 91 | 115 | 115 | 112 | 119 | 111 |
| 5 | White Schonen .. | 53 | 8 | 50 | .. | 50 | 10 | 72 | 2 | 68 | 28 58 30 | 93 | 106 | 120 | 117 | 109 | 109 |
| 6 | Ev. Golden Prol. | 50 | 30 | 51 | 26 | 76 | 26 | 80 | 10 | 65 | 10 65 .. | 93 | 107 | 109 | 112 | 119 | 108 |
| 7 | White Russian .. | 50 | 30 | 73 | 18 | 35 | 30 | 71 | 12 | 70 | .. 60 11 | 92 | 106 | 116 | 109 | 109 | 106 |
| 8 | Columbus..... | 49 | 29 | 67 | 2 | 52 | 12 | 85 | 30 | 73 | 18 65 11 | 92 | 107 | 116 | 109 | 109 | 107 |
| 9 | Wallis ... .... | 49 | 9 | 87 | 22 | 39 | 4 | 73 | 28 | 69 | 4 63 27 | 93 | 98 | 116 | 117 | 121 | 109 |
| 10 | Jeanette ..... | 49 | 4 | 50 | .. | 71 | 16 | 56 | 16 | 61 | 16 57 24 | 93 | 115 | 112 | 112 | 119 | 110 |
| 11 | Amer. Triumph.. | 49 | 3 | 44 | 4 | .. | .. | 59 | 24 | 69 | 24 55 22 | 92 | 107 | .... | 109 | 119 | 107 |
| 12 | Wide Awake.... | 48 | 23 | 61 | 26 | 18 | 18 | 74 | 14 | 73 | 18 55 13 | 94 | 106 | 116 | 109 | 122 | 109 |
| 13 | Banner ..... | 47 | 7 | 60 | .. | 53 | 8 | 52 | 2 | 64 | 4 55 11 | 96 | 107 | 110 | 117 | 117 | 109 |
| 14 | Golden Beauty .. | 47 | 7 | 61 | 26 | 57 | 12 | 61 | 16 | 66 | 26 58 31 | 92 | 107 | 111 | 109 | 119 | 108 |
| 15 | Lincoln..... | 46 | 6 | 64 | 24 | 37 | 12 | 73 | 28 | 87 | 22 61 32 | 91 | 98 | 116 | 109 | 110 | 105 |
| 16 | Bonanza ..... | 45 | 30 | 52 | 32 | .. | .. | 67 | 12 | 71 | 26 59 16 | 90 | 107 | .... | 106 | 117 | 105 |
| 17 | Abundance ..... | 45 | 15 | 53 | 18 | 38 | 28 | 62 | 22 | 52 | 22 50 21 | 93 | 99 | 116 | 117 | 121 | 109 |
| 18 | American Beauty | 45 | 10 | 64 | 24 | .. | .. | 75 | 30 | 74 | 24 65 5 | 92 | 105 | .... | 109 | 119 | 106 |
| 19 | Buckbee's Illinois | 44 | 24 | 44 | 4 | .. | .. | 79 | 4 | 76 | 16 61 3 | 96 | 110 | .... | 117 | 120 | 111 |
| 20 | Modal..... ... | 44 | 14 | 52 | 32 | 31 | 16 | 73 | 28 | 62 | 2 52 32 | 94 | 107 | 117 | 119 | 117 | 111 |
| 21 | Siberian O. A.C.. | 41 | 14 | 82 | 12 | 57 | 2 | 86 | 16 | 60 | 10 66 4 | 96 | 109 | 116 | 109 | 122 | 110 |
| 22 | Miller ..... | 43 | 33 | 45 | 30 | 48 | 8 | 73 | 8 | 68 | 18 55 33 | 96 | 107 | 110 | 119 | 117 | 110 |
| 23 | Scottish Chief.... | 43 | 28 | 47 | 22 | .. | .. | 67 | 12 | 73 | 18 58 3 | 90 | 107 | .... | 109 | 122 | 107 |
| 24 | Holstein Prolific. | 43 | 28 | 55 | 30 | 55 | .. | 80 | .. | 62 | 22 59 16 | 94 | 107 | 111 | 112 | 121 | 109 |
| 25 | Victoria Prize... | 43 | 18 | 44 | 4 | 52 | 2 | 50 | 10 | 52 | 32 48 18 | 90 | 110 | 109 | 117 | 107 | 107 |
| 26 | Improved Ligowo | 42 | 17 | 57 | 22 | 47 | 12 | 73 | 32 | 63 | 18 56 34 | 91 | 107 | 116 | 109 | 117 | 108 |
| 27 | Master..... .... | 42 | 12 | 59 | 14 | 41 | 14 | 68 | 18 | 52 | 12 53 14 | 93 | 98 | 116 | 117 | 116 | 103 |
| 28 | Hazlett's Seizure. | 42 | 12 | 78 | 22 | 32 | 22 | 82 | 12 | 68 | 28 60 33 | 96 | 93 | 115 | 109 | 117 | 106 |
| 29 | Welcome. ..... | 41 | 16 | 61 | 26 | 35 | .. | 71 | 12 | 66 | 12 55 6 | 90 | 106 | 104 | 106 | 119 | 105 |
| 30 | White Wonder .. | 40 | 25 | 76 | 16 | .. | .. | 66 | 6 | 58 | 18 60 16 | 90 | 93 | .... | 106 | 121 | 103 |
| 31 | Early Gothland .. | 40 | 10 | 64 | 4 | .. | .. | 82 | 12 | 62 | 12 62 9 | 92 | 99 | .... | 109 | 119 | 105 |
| 32 | Siberian ..... | 40 | 5 | 52 | 32 | .. | .. | 65 | 20 | 67 | 22 56 20 | 103 | 109 | .... | 119 | 123 | 114 |
| 33 | Bavarian..... . | 39 | 9 | 72 | 12 | .. | .. | 72 | 2 | 75 | 30 64 30 | 96 | 99 | .... | 109 | 121 | 106 |
| 34 | Russell ..... .. | 39 | 4 | 48 | 28 | 62 | 22 | 69 | 4 | 59 | 14 55 28 | 94 | 99 | 109 | 112 | 121 | 107 |
| 35 | Olive.. ... ..... | 38 | 23 | 60 | .. | .. | .. | 85 | .. | 65 | 10 62 8 | 94 | 107 | .... | 119 | 121 | 110 |
| 36 | Brandon ..... . | 38 | 13 | 48 | 28 | .. | .. | 52 | 12 | 68 | 8 51 32 | 96 | 103 | .... | 117 | 117 | 108 |
| 37 | Prize Cluster.... | 37 | 7 | 61 | 26 | 56 | 6 | 69 | 14 | 58 | 28 56 23 | 90 | 106 | 101 | 106 | 115 | 104 |
| 38 | King ... .... . | 37 | 2 | 40 | .. | 12 | 12 | 66 | 26 | 71 | 6 51 16 | 96 | 107 | 110 | 106 | 122 | 108 |
| 39 | Pense..... | 37 | 2 | 55 | 10 | 61 | 24 | 68 | 28 | 42 | 22 53 26 | 95 | 107 | 116 | 112 | 121 | 110 |
| 40 | Early Maine..... | 36 | 31 | 50 | .. | 52 | 2 | 78 | 8 | 92 | 32 62 1 | 95 | 102 | 115 | 119 | 117 | 110 |
| 41 | Rosedale ..... | 36 | 6 | 64 | 4 | 67 | 12 | 83 | 28 | 70 | 20 64 14 | 95 | 107 | 111 | 119 | 122 | 111 |
| 42 | Oxford ..... | 36 | 6 | 40 | .. | 48 | 28 | 77 | 22 | 60 | 20 52 22 | 96 | 110 | 110 | 117 | 119 | 110 |
| 43 | Early Blossom .. | 36 | 1 | 59 | 14 | 51 | 26 | 79 | 4 | 77 | 22 59 27 | 95 | 110 | 111 | 119 | 121 | 111 |
| 44 | Abyssinia..... | 35 | 30 | 62 | 32 | 33 | 28 | 87 | 2 | 58 | 28 55 24 | 95 | 102 | 122 | 119 | 118 | 111 |
| 45 | Cromwell.. ... | 35 | 25 | 50 | .. | .. | .. | 73 | 30 | 71 | 26 57 29 | 96 | 107 | .... | 112 | 117 | 108 |
| 46 | Rennie's Prize... | 34 | 24 | 51 | 26 | 29 | 34 | 66 | 6 | 64 | 24 49 16 | 92 | 98 | 109 | 106 | 118 | 105 |
| 47 | Imported Irish .. | 34 | 4 | 49 | 14 | 28 | 8 | 67 | 2 | 64 | 4 48 20 | 89 | 98 | 114 | 106 | 116 | 105 |
| 48 | Oderbruch..... | 33 | 4 | 62 | 32 | 37 | 2 | 67 | 12 | 82 | 32 56 23 | 95 | 107 | 110 | 109 | 124 | 109 |
| 49 | Cream Egyptian. | 33 | 3 | 62 | 32 | 26 | 26 | 65 | 20 | 70 | 20 51 27 | 95 | 98 | 110 | 109 | 122 | 107 |
| 50 | Winter Grey .... | 31 | 26 | 58 | 38 | 35 | .. | 68 | 18 | 60 | .. 50 30 | 90 | 104 | 115 | 106 | 107 | 105 |
| 51 | Early Archangel. | 31 | 26 | 40 | .. | 16 | 16 | 75 | 30 | 66 | 16 52 4 | 92 | 104 | 109 | 109 | 117 | 106 |
| 52 | Golden Tartarian | 31 | 8 | 72 | 12 | 83 | 18 | 63 | 18 | 69 | 14 64 .. | 103 | 117 | 114 | 117 | 117 | 114 |
| 53 | Cal. Prolific Blk. | 30 | 20 | 67 | 22 | 68 | 8 | 68 | 28 | 61 | 8 59 10 | 99 | 102 | 114 | 112 | 117 | 109 |
| 54 | Black Beauty.... | 30 | 1 | 57 | 22 | .. | .. | 72 | 32 | 92 | 32 63 13 | 92 | 105 | ..... | 117 | 117 | 108 |
| 55 | Newmarket ..... | 28 | 32 | 61 | 26 | 38 | 28 | 58 | 28 | 62 | 32 50 9 | 90 | 105 | 102 | 117 | 122 | 107 |
| 56 | Flying Scotchm'n | 28 | 23 | 82 | 12 | 47 | 12 | 79 | 24 | 74 | 4 62 15 | 93 | 93 | 110 | 112 | 117 | 105 |
| 57 | Coulommiers .... | 28 | 13 | 56 | 16 | 52 | 2 | 57 | 22 | 72 | 32 53 17 | 104 | 115 | 126 | 117 | 123 | 117 |

UNIFORM TEST PLOTS OF OATS—*Continued.*

| Number. | Name of Variety. | Yield of the Several Experimental Farms, Season of 1897. | | | | | | | | | | 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. |
| 58 | White Monarch | 27 | 32 | 64 | 24 | .... | .... | 70 | 10 | 67 | 2 | 57 | 17 | 102 | 98 | .... | 119 | 121 | 110 |
| 59 | Mortgage Lifter | 27 | 17 | 69 | 14 | 44 | 26 | 63 | 8 | 66 | 8 | 54 | 8 | 89 | 105 | 101 | 106 | 110 | 102 |
| 60 | Prolific Black Tartarian | 23 | 11 | 55 | 10 | .... | .... | 60 | 20 | 70 | .... | 52 | 10 | 99 | 110 | .... | 117 | 121 | 112 |
| 61 | Doncaster Prize | 23 | 8 | 65 | 30 | 20 | 10 | 65 | 20 | 70 | 10 | 49 | 2 | 102 | 98 | 111 | 119 | 108 | 108 |
| 62 | Poland | 21 | 11 | 51 | 26 | 28 | 8 | 73 | 8 | 62 | 17 | 47 | 14 | 93 | 93 | 111 | 106 | 108 | 102 |
| 63 | Scotch Hopetoun | 18 | 3 | 53 | 18 | 54 | 24 | 57 | 22 | 64 | 24 | 49 | 25 | 102 | 107 | 116 | 117 | 121 | 113 |

Eighteen varieties are not reported on from Brandon as these were destroyed by frost and wind.

The twelve varieties of oats which have produced the largest crops during 1897 at the several experimental farms are the following :—

CENTRAL EXPERIMENTAL FARM, OTTAWA.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Golden Giant | 57 | 12 | 7. White Russian | 50 | 30 |
| 2. Mennonite | 56 | 11 | 8. Columbus | 49 | 29 |
| 3. Improved American | 53 | 28 | 9. Wallis | 49 | 9 |
| 4. Early Etampes | 53 | 23 | 10. Joanette | 49 | 4 |
| 5. White Schonen | 53 | 8 | 11. American Triumph | 49 | 3 |
| 6. Early Golden Prolific | 50 | 30 | 12. Wide Awake | 48 | 23 |

An average yield for the twelve sorts of 51 bushels 29 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Wallis | 87 | 22 | 7. Bavarian | 72 | 12 |
| 2. Siberian O.A.C. | 82 | 12 | 8. Golden Tartarian | 72 | 12 |
| 3. Flying Scotchman | 82 | 12 | 9. Improved American | 72 | 12 |
| 4. Hazlett's Seizure | 78 | 22 | 10. Mortgage Lifter | 69 | 14 |
| 5. White Wonder | 76 | 16 | 11. California Prolific Black | 67 | 22 |
| 6. White Russian | 73 | 18 | 12. Columbus | 67 | 2 |

An average yield of 75 bushels 6 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA. BRANDON, MAN.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Golden Tartarian | 83 | 18 | 7. Russell | 62 | 22 |
| 2. Early Golden Prolific | 76 | 26 | 8. Golden Beauty | 57 | 12 |
| 3. Joanette | 71 | 16 | 9. Siberian O. A. C | 57 | 2 |
| 4. California Prolific Black | 68 | 8 | 10. Prize Cluster | 56 | 6 |
| 5. Rosedale | 67 | 12 | 11. Early Etampes | 56 | 6 |
| 6. Pense | 64 | 24 | 12. Holstein Prolific | 55 | 6 |

An average yield of 64 bushels 24 lbs. per acre.

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

| | | Per Acre. Bush. | Lbs. | | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|---|---|
| 1. | Abyssinia | 87 | 2 | 7. | Hazlett's Seizure | 82 | 12 |
| 2. | Improved American | 86 | 26 | 8. | Early Gothland | 82 | 12 |
| 3. | Siberian O.A.C. | 86 | 16 | 9. | Early Golden Prolific | 80 | 10 |
| 4. | Columbus | 85 | 30 | 10. | Golden Giant | 80 | 10 |
| 5. | Olive | 85 | .. | 11. | Mennonite | 80 | .. |
| 6. | Rosedale | 83 | 28 | 12. | Holstein Prolific | 80 | .. |

An average yield of 83 bushels 12 lbs. per acre.

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

| | | Per Acre. Bush. | Lbs. | | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|---|---|
| 1. | Early Maine | 92 | 32 | 7. | Improved American | 77 | 22 |
| 2. | Black Beauty | 92 | 32 | 8. | Buckbee's Illinois | 76 | 16 |
| 3. | Golden Giant | 89 | 14 | 9. | Bavarian | 75 | 30 |
| 4. | Lincoln | 87 | 22 | 10. | American Beauty | 74 | 24 |
| 5. | Oderbruch | 82 | 32 | 11. | Flying Scotchman | 74 | 4 |
| 6. | Early Blossom | 77 | 22 | 12. | Columbus | 73 | 18 |

An average yield of 81 bushels 11 lbs. per acre.

The twelve varieties which have produced the largest crops during 1897, taking the average results obtained at all the experimental farms are:—

| | | Per Acre. Bush. | Lbs. | | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|---|---|
| 1. | Improved American | 72 | 22 | 7. | Early Golden Prolific | 65 | .. |
| 2. | Golden Giant | 70 | 5 | 8. | Bavarian | 64 | 30 |
| 3. | Siberian, O. A. C. | 66 | 4 | 9. | Rosedale | 64 | 14 |
| 4. | Columbus | 65 | 11 | 10. | Golden Tartarian | 64 | .. |
| 5. | Mennonite | 65 | 11 | 11. | Wallis | 63 | 27 |
| 6. | American Beauty | 65 | 5 | 12. | Black Beauty | 63 | 13 |

An average yield of 65 bushels 29 lbs. per acre.

The Banner does not appear in this select list this year, owing to its being injured at Brandon and to its being sown in a very exposed and windswept situation at Indian Head. At this latter farm the crop on the "uniform test plots" was only 52 bushels 2 lbs. per acre, whereas the same seed of Banner oats used on the "early medium and late sown plots" gave a return of 101 bushels 16 lbs. per acre.

## BARLEY.

The trial plots of barley have included thirty-five varieties in all, fifteen different sorts of two-rowed and twenty of six-rowed. Among the two-rowed sorts are included eight hybrid varieties which have been produced at the experimental farms, namely: Sidney, Victor, Beaver, Pacer, Nepean, Bolton, Monck and Rigid. Among the six-rowed sorts there are nine of these hybrids, namely: Pioneer, Trooper, Royal, Stella, Vanguard, Nugent, Summit, Phœnix and Surprise. The plots were of the same size as those sown with oats. The quantity of seed used in each case was at the rate of two bushels per acre, and the dates of sowing were the following: Ottawa, 30th April to 3rd May; Nappan, 25th and 26th May; Brandon, 13th May; Indian Head, 5th May; and at Agassiz, 17th April.

## UNIFORM TEST PLOTS OF TWO-ROWED BARLEY.

| Number. | Name of Variety. | Yield of the Several Experimental Farms, Season of 1897. | | | | | | | | | | | | 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 | Newton | 41 | 7 | 40 | 40 | 22 | 4 | 51 | 2 | 31 | 12 | 36 | 37 | 13 | 91 | 104 | 102 | 107 | 120 | 105 |
| 2 | Canadian Thorpe | 38 | 26 | 40 | 40 | 23 | 16 | 53 | 6 | 35 | 7 | 4 | 38 | 28 | 92 | 103 | 104 | 108 | 119 | 105 |
| 3 | Sidney | 35 | 41 | 38 | 46 | 46 | 32 | 44 | 38 | 27 | 24 | 38 | 30 | | 92 | 104 | 96 | 111 | 116 | 104 |
| 4 | Danish Chevalier | 34 | 38 | 39 | 28 | 39 | 20 | 52 | 4 | 31 | 12 | 37 | 30 | | 91 | 104 | 103 | 111 | 117 | 105 |
| 5 | Victor | 34 | 28 | 35 | 40 | 42 | 4 | 45 | 30 | 30 | 20 | 37 | 34 | | 92 | 104 | 99 | 107 | 121 | 105 |
| 6 | Beaver | 34 | 8 | 34 | 28 | 34 | 8 | 52 | 24 | 28 | 36 | 36 | 40 | | 90 | 104 | 96 | 111 | 118 | 104 |
| 7 | Pacer | 32 | 41 | 37 | 4 | 46 | 12 | 43 | 26 | 29 | 8 | 37 | 37 | | 92 | 104 | 99 | 107 | 114 | 103 |
| 8 | Nepean | 31 | 27 | 40 | 40 | 46 | 2 | 47 | 34 | 32 | 44 | 39 | 39 | | 92 | 104 | 99 | 107 | 119 | 104 |
| 9 | Bolton | 31 | 23 | 37 | 24 | 37 | 4 | 47 | 14 | 28 | 6 | 36 | 14 | | 92 | 104 | 96 | 107 | 119 | 104 |
| 10 | French Chevalier | 24 | 28 | 35 | 40 | 43 | 26 | 53 | 16 | 37 | 4 | 38 | 42 | | 93 | 104 | 102 | 111 | 119 | 106 |
| 11 | Prize Prolific | 22 | 24 | 34 | 8 | 34 | 38 | 50 | | 32 | 24 | 34 | 38 | | 94 | 104 | 103 | 115 | 118 | 107 |
| 12 | Thanet | 21 | 17 | 29 | 8 | 42 | 4 | 45 | 10 | 31 | 12 | 33 | 29 | | 90 | 104 | 103 | 115 | 119 | 106 |
| 13 | Kinver Chevalier | 19 | 28 | 32 | 44 | 21 | 12 | 51 | 2 | 10 | 40 | 33 | 6 | | 91 | 104 | 104 | 115 | 119 | 107 |
| 14 | Monck | 18 | 26 | 23 | 36 | 21 | 22 | 37 | 24 | 28 | 16 | 25 | 44 | | 98 | 104 | 102 | 111 | 117 | 106 |
| 15 | Rigid | 14 | 8 | 21 | 32 | 32 | 24 | 50 | 10 | 27 | 4 | 29 | 6 | | 97 | 104 | 96 | 107 | 115 | 104 |

The six varieties of two-rowed barley which have given the largest crops at the several experimental farms during 1897 are the following :—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Newton | 41 | 7 | 4. Danish Chevalier | 34 | 38 |
| 2. Canadian Thorpe | 38 | 26 | 5. Victor | 34 | 28 |
| 3. Sidney | 35 | 41 | 6. Beaver | 34 | 8 |

An average yield of 36 bushels 25 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Canadian Thorpe | 40 | 40 | 4. Danish Chevalier | 39 | 28 |
| 2. Newton | 40 | 40 | 5. Sidney | 38 | 16 |
| 3. Nepean | 40 | 40 | 6. Bolton | 37 | 24 |

An average yield of 39 bushels 31 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Sidney | 46 | 32 | 4. French Chevalier | 43 | 26 |
| 2. Pacer | 46 | 12 | 5. Victor | 42 | 4 |
| 3. Nepean | 46 | 2 | 6. Thanet | 42 | 4 |

An average yield of 44 bushels 21 lbs. per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. French Chevalier | 53 | 16 | 4. Danish Chevalier | 52 | 4 |
| 2. Canadian Thorpe | 53 | 6 | 5. Kinver Chevalier | 51 | 32 |
| 3. Beaver | 52 | 24 | 6. Newton | 51 | 32 |

An average yield of 52 bushels 9 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Kinver Chevalier | 40 | 40 | 4. Nepean | 32 | 44 |
| 2. Canadian Thorpe | 37 | 4 | 5. Prize Prolific | 32 | 24 |
| 3. French Chevalier | 37 | 4 | 6. Newton | 31 | 12 |

An average yield of 35 bushels 13 lbs. per acre.

The six varieties of two-rowed barley which have given the largest crops during 1897, taking the average of the results obtained on all the experimental farms are :—

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Nepean | 39 | 39 | 4. Canadian Thorpe | 38 | 28 |
| 2. French Chevalier | 38 | 42 | 5. Pacer | 37 | 37 |
| 3. Sidney | 38 | 30 | 6. Victor | 37 | 34 |

An average yield of 38 bushels 27 lbs. per acre.

The average crop of all the varieties of two-rowed barley tested at each of the experimental farms was as follows: At Ottawa, 29 bush. 2 lbs. per acre; Nappan, 34 bush. 41 lbs.; Brandon, 34 bush. 44 lbs.; Indian Head, 48 bush. 16 lbs., and at Agassiz, 31 bush. 27 lbs. The average return given by the whole of the varieties at all the farms was 35 bush. 36 lbs. per acre.

UNIFORM TEST PLOTS OF SIX-ROWED BARLEY.

| Number. | Name of Variety. | Yield at the several Experimental Farms, Season of 1897. | | | | | | | | | | 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 | Odessa | 54 | 3 | 46 | 12 | 40 | 30 | 68 | 6 | 33 | 36 | 48 | 27 | 87 | 86 | 96 | 99 | 112 | 96 |
| 2 | Pioneer | 50 | 40 | 44 | 8 | 29 | 8 | 49 | 38 | 36 | 12 | 42 | 2 | 86 | 86 | 103 | 104 | 107 | 97 |
| 3 | Mensury | 49 | 18 | 52 | 4 | 34 | 18 | 66 | 42 | 38 | 16 | 48 | 10 | 90 | 90 | 96 | 99 | 110 | 97 |
| 4 | Trooper | 48 | 41 | 40 | .. | 51 | 12 | 57 | 44 | 32 | 30 | 46 | 6 | 86 | 94 | 96 | 99 | 111 | 97 |
| 5 | Royal | 48 | 6 | 48 | 16 | 25 | 20 | 63 | 36 | 36 | 22 | 44 | 20 | 85 | 85 | 95 | 99 | 107 | 94 |
| 6 | Oderbruch | 48 | 6 | 50 | 20 | 34 | 28 | 71 | 2 | 40 | 20 | 48 | 44 | 86 | 90 | 95 | 99 | 102 | 94 |
| 7 | Rennie's Impr'v'd | 46 | 26 | 40 | 40 | 42 | 34 | 68 | 6 | 37 | 24 | 47 | 7 | 85 | 86 | 95 | 100 | 102 | 94 |
| 8 | Stella | 45 | 25 | 38 | 36 | 33 | 26 | 58 | 16 | 34 | 8 | 42 | 3 | 84 | 94 | 102 | 99 | 112 | 98 |
| 9 | Success | 44 | 15 | 34 | 28 | 44 | 38 | 51 | 32 | 32 | 10 | 41 | 25 | 82 | 80 | 89 | 93 | 102 | 89 |
| 10 | Vanguard | 44 | 13 | 46 | 32 | 29 | 18 | 66 | 32 | 37 | 24 | 44 | 43 | 84 | 85 | 95 | 99 | 107 | 94 |
| 11 | Petschora | 43 | 36 | 45 | 20 | 35 | 40 | 70 | .. | 38 | 36 | 46 | 36 | 84 | 84 | 104 | 99 | 102 | 95 |
| 12 | Nugent | 43 | 6 | 39 | 28 | 41 | 2 | 56 | 12 | 35 | 20 | 43 | 4 | 90 | 94 | 96 | 99 | 112 | 98 |
| 13 | Blue Barley | 42 | 34 | 42 | 24 | 27 | 34 | 65 | 40 | 42 | 24 | 44 | 12 | 84 | 88 | 93 | 100 | 112 | 95 |
| 14 | Summit, | 41 | 37 | 38 | 36 | 50 | 10 | 55 | 30 | 33 | 24 | 43 | 46 | 86 | 94 | 98 | 99 | 112 | 98 |
| 15 | Phœnix | 41 | 11 | 40 | 20 | 39 | 18 | 51 | 12 | 33 | 16 | 41 | 5 | 85 | 85 | 96 | 100 | 102 | 94 |
| 16 | Excelsior | 40 | 40 | 37 | 20 | 49 | 8 | 57 | 34 | 30 | .. | 43 | 1 | 85 | 90 | 90 | 100 | 110 | 95 |
| 17 | Champion | 40 | 10 | 37 | 44 | 47 | 34 | 54 | 18 | 33 | 16 | 42 | 34 | 86 | 85 | 90 | 100 | 102 | 93 |
| 18 | Common | 40 | .. | 42 | 24 | 43 | 26 | 71 | 12 | 38 | 16 | 47 | 6 | 85 | 90 | 90 | 99 | 111 | 95 |
| 19 | Surprise | 38 | 12 | 40 | .. | 38 | 46 | 55 | 30 | 33 | 44 | 41 | 16 | 87 | 94 | 99 | 99 | 112 | 98 |
| 20 | Baxter | 35 | 7 | 37 | 20 | 32 | 34 | 66 | 32 | 32 | 30 | 40 | 44 | 87 | 86 | 97 | 99 | 105 | 95 |

The six varieties of six-rowed barley which have given the largest crops at the several experimental farms during 1897 are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Odessa | 54 | 3 | 4. Trooper | 48 | 41 |
| 2. Pioneer | 50 | 40 | 5. Royal | 48 | 6 |
| 3. Mensury | 49 | 18 | 6. Oderbruch | 48 | 6 |

An average crop of 49 bushels 43 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Mensury | 52 | 4 | 4. Vanguard | 46 | 32 |
| 2. Oderbruch | 50 | 20 | 5. Odessa | 46 | 12 |
| 3. Royal | 48 | 16 | 6. Petschora | 45 | 20 |

An average crop of 48 bushels 9 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Trooper | 51 | 12 | 4. Champion | 47 | 34 |
| 2. Summit | 50 | 10 | 5. Success | 44 | 38 |
| 3. Excelsior | 49 | 8 | 6. Common | 43 | 26 |

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

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Common | 71 | 12 | 4. Odessa | 68 | 6 |
| 2. Oderbruch | 71 | 2 | 5. Rennie's Improved | 68 | 6 |
| 3. Petschora | 70 | .. | 6. Mensury | 66 | 42 |

An average crop of 69 bushels 11 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Blue Barley | 42 | 24 | 4. Mensury | 38 | 16 |
| 2. Oderbruch | 40 | 20 | 5. Common | 38 | 16 |
| 3. Petschora | 38 | 36 | 6. Vanguard | 37 | 24 |

An average crop of 39 bushels 15 lbs. per acre.

The six varieties of six-rowed barley which have given the largest crops during 1897, taking the average of the results obtained on all the experimental farms, are:—

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Oderbruch | 48 | 44 | 4. Rennie's Improved | 47 | 7 |
| 2. Odessa | 48 | 27 | 5. Common | 47 | 6 |
| 3. Mensury | 48 | 10 | 6. Petschora | 46 | 36 |

An average crop of 47 bushels 38 lbs. per acre.

The average crop of all the varieties of six-rowed barley tested at each of the experimental farms was as follows: At Ottawa, 44 bush. 17 lbs. per acre; Nappan, 42 bush. 10 lbs.; Brandon, 38 bush. 29 lbs.; Indian Head, 61 bush. 16 lbs., and at Agassiz, 35 bush. 26 lbs. The average return given by the whole of the varieties at all the farms was 44 bush. 22 lbs. per acre.

## SPRING WHEAT.

The uniform test plots of spring wheat for 1897 have included thirty-eight varieties. Among these there were seventeen cross-bred sorts which have been produced at the experimental farms. These are Huron, Advance, Blenheim, Preston, Dufferin, Countess, Dawn, Rideau, Crown, Progress, Stanley, Admiral, Alpha, Vernon, Captor, Percy and Beauty. The size of the plots in each case was the same as those of the oats, and the quantity of seed sown was in the proportion of one and one-half bushels per acre. The dates of sowing were the following:—At Ottawa, 29th and 30th April; Nappan, 10th and 11th May; Brandon, 26th April; Indian Head, 24th April, and at Agassiz, 14th April.

UNIFORM TEST PLOTS OF SPRING WHEAT.

| Number. | Name of Variety. | Yield of the several Experimental Farms, Season of 1897. | | | | | | | | | | | | 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 | Wellman's Fife | 24 | 55 | 30 | 20 | 32 | 30 | 37 | 50 | 31 | 20 | 31 | 23 | 102 | 108 | 119 | 126 | 125 | 116 |
| 2 | White Fife | 23 | 5 | 18 | 20 | 40 | 30 | 35 | 30 | 29 | 20 | 29 | 21 | 100 | 113 | 115 | 126 | 126 | 116 |
| 3 | Colorado | 22 | 15 | 23 | 20 | 28 | 30 | 25 | .. | 23 | 20 | 24 | 29 | 94 | 107 | 110 | 126 | 126 | 113 |
| 4 | Monarch | 22 | 7 | 23 | 20 | 34 | .. | 35 | 20 | 30 | 40 | 29 | 5 | 102 | 111 | 116 | 125 | 125 | 116 |
| 5 | Rio Grande | 22 | .. | 27 | 40 | 27 | 50 | 31 | 40 | 26 | .. | 27 | 2 | 101 | 113 | 111 | 126 | 125 | 115 |
| 6 | White Connell | 21 | 30 | 28 | 20 | 32 | 40 | 35 | 20 | 31 | 40 | 29 | 54 | 102 | 111 | 119 | 126 | 126 | 117 |
| 7 | Old Red River | 21 | 27 | 21 | .. | 26 | .. | 36 | 50 | 29 | 20 | 26 | 55 | 102 | 111 | 114 | 126 | 126 | 116 |
| 8 | Huron | 21 | .. | 23 | 20 | 22 | 20 | 37 | .. | 27 | 20 | 26 | 12 | 96 | 111 | 112 | 119 | 126 | 113 |
| 9 | Advance | 20 | 40 | 26 | 40 | 30 | 10 | 33 | 50 | 27 | 20 | 27 | 44 | 96 | 106 | 112 | 125 | 125 | 113 |
| 10 | White Russian | 20 | 35 | 26 | 40 | 36 | 20 | 31 | 50 | 30 | .. | 29 | 5 | 101 | 113 | 115 | 126 | 123 | 116 |
| 11 | Hungarian | 20 | 20 | 20 | 40 | 30 | 10 | 42 | .. | 28 | .. | 28 | 14 | 98 | 113 | 110 | 119 | 126 | 113 |
| 12 | Blenheim | 20 | 17 | 21 | .. | 31 | 30 | 30 | 30 | 27 | 20 | 26 | 7 | 98 | 113 | 112 | 126 | 126 | 115 |
| 13 | Preston | 20 | 10 | 26 | 20 | 27 | 10 | 36 | .. | 31 | .. | 28 | 8 | 98 | 106 | 116 | 125 | 121 | 113 |
| 14 | Dufferin | 19 | 55 | 22 | 40 | 24 | 40 | 29 | 10 | 23 | 20 | 23 | 57 | 95 | 109 | 113 | 125 | 121 | 113 |
| 15 | Countess | 19 | 55 | 17 | .. | 24 | 20 | 40 | 20 | 27 | 20 | 25 | 47 | 95 | 113 | 112 | 119 | 121 | 112 |
| 16 | Dawn | 19 | 55 | 22 | .. | 26 | .. | 35 | .. | 25 | .. | 25 | 35 | 95 | 109 | 109 | 119 | 113 | 109 |
| 17 | Rideau | 19 | 55 | 18 | 40 | 26 | .. | 36 | 10 | 29 | .. | 25 | 57 | 95 | 109 | 115 | 119 | 117 | 111 |
| 18 | Crown | 19 | 45 | 22 | .. | 33 | .. | 35 | 40 | 26 | .. | 27 | 17 | 96 | 111 | 110 | 119 | 126 | 112 |
| 19 | Goose | 19 | 15 | 26 | 40 | 26 | 30 | 27 | 10 | 28 | 20 | 25 | 35 | 99 | 107 | 116 | 125 | 126 | 115 |
| 20 | Red Fife | 19 | 15 | 21 | .. | 35 | 20 | 37 | 50 | 29 | 40 | 28 | 37 | 102 | 113 | 115 | 125 | 121 | 115 |
| 21 | Pringle's Champlain | 19 | .. | 19 | .. | 31 | .. | 37 | 10 | 27 | 40 | 26 | 46 | 97 | 111 | 115 | 119 | 126 | 114 |
| 22 | Progress | 18 | 55 | 18 | 40 | 23 | .. | 37 | 50 | 28 | .. | 25 | 17 | 99 | 113 | 116 | 119 | 126 | 115 |
| 23 | Stanley | 18 | 10 | 25 | 40 | 22 | 30 | 31 | .. | 25 | 40 | 24 | 36 | 98 | 106 | 112 | 122 | 121 | 112 |
| 24 | Admiral | 17 | 30 | 25 | .. | 30 | 30 | 40 | 10 | 28 | 20 | 28 | 18 | 100 | 110 | 115 | 119 | 121 | 113 |
| 25 | Alpha | 17 | 10 | 23 | 20 | 29 | 40 | 37 | 20 | 30 | .. | 27 | 30 | 99 | 106 | 112 | 119 | 121 | 111 |
| 26 | Vernon | 16 | 50 | 23 | 20 | 31 | 10 | 39 | .. | 28 | 20 | 27 | 44 | 101 | 109 | 109 | 125 | 126 | 114 |
| 27 | Captor | 16 | 50 | 22 | .. | 22 | 40 | 36 | .. | 30 | 40 | 25 | 38 | 98 | 113 | 116 | 119 | 117 | 113 |
| 28 | Percy | 16 | 39 | 17 | 40 | 30 | 40 | 38 | 40 | 27 | .. | 26 | 8 | 98 | 111 | 112 | 119 | 115 | 111 |
| 29 | Campbell's White Chaff | 16 | .. | 20 | 20 | 28 | 30 | 32 | 30 | 26 | 40 | 24 | 48 | 100 | 107 | 113 | 126 | 121 | 113 |
| 30 | Black Sea | 15 | 55 | 21 | 40 | 23 | 30 | 30 | 40 | 27 | .. | 23 | 45 | 96 | 109 | 110 | 119 | 112 | 109 |
| 31 | Golden Drop | 15 | .. | 22 | .. | 34 | 10 | 31 | 10 | 27 | .. | 25 | 52 | 96 | 106 | 112 | 126 | 117 | 111 |
| 32 | Ladoga | 14 | 55 | 18 | .. | 24 | 20 | 28 | 40 | 25 | 20 | 22 | 15 | 96 | 105 | 110 | 128 | 114 | 111 |
| 33 | Beauty | 14 | 35 | 23 | 20 | 22 | 30 | 33 | 20 | 24 | 20 | 23 | 37 | 101 | 113 | 114 | 119 | 112 | 112 |
| 34 | Beaudry | 14 | .. | 20 | 20 | 29 | 40 | 36 | 10 | 27 | .. | 25 | 26 | 96 | 111 | 110 | 128 | 121 | 113 |
| 35 | Herisson Bearded | 13 | 50 | 22 | .. | 25 | 30 | 39 | .. | 28 | 40 | 25 | 48 | 98 | 109 | 111 | 126 | 125 | 114 |
| 36 | Red Fern | 12 | 59 | 26 | 40 | 29 | 10 | 38 | 30 | 25 | 40 | 26 | 36 | 101 | 107 | 115 | 125 | 125 | 115 |
| 37 | Dion's | 12 | 50 | 26 | .. | 26 | 20 | 27 | 20 | 26 | 40 | 23 | 50 | 101 | 111 | 115 | 125 | 126 | 116 |
| 38 | Emporium | 10 | 21 | 22 | 40 | 31 | .. | 36 | 40 | 24 | 20 | 25 | .. | 101 | 111 | 116 | 126 | 126 | 116 |

The twelve varieties of spring wheat which have given the largest crops at the several experimental farms during 1897 are the following :—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Wellman's Fife | 24 | 55 | 7. Old Red River | 21 | 27 |
| 2. White Fife | 23 | 5 | 8. Huron | 21 | — |
| 3. Colorado | 22 | 15 | 9. Advance | 20 | 40 |
| 4. Monarch | 22 | 7 | 10. White Russian | 20 | 35 |
| 5. Rio Grande | 22 | — | 11. Hungarian | 20 | 20 |
| 6. White Connell | 21 | 30 | 12. Blenheim | 20 | 17 |

An average crop of 21 bushels 41 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Wellman's Fife | 30 | 20 | 7. White Russian | 26 | 40 |
| 2. White Connell | 28 | 20 | 8. Preston | 26 | 20 |
| 3. Rio Grande | 27 | 40 | 9. Dion's | 26 | — |
| 4. Advance | 26 | 40 | 10. Stanley | 25 | 40 |
| 5. Goose | 26 | 40 | 11. Admiral | 25 | — |
| 6. Red Fern | 26 | 40 | 12. Vernon | 23 | 20 |

An average crop of 26 bushels 37 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. White Fife | 40 | 30 | 7. White Connell | 32 | 40 |
| 2. White Russian | 36 | 20 | 8. Wellman's Fife | 32 | 30 |
| 3. Red Fife | 35 | 20 | 9. Blenheim | 31 | 30 |
| 4. Golden Drop | 34 | 10 | 10. Vernon | 31 | 10 |
| 5. Monarch | 34 | — | 11. Pringle's Champlain | 31 | — |
| 6. Crown | 33 | — | 12. Emporium | 31 | — |

An average crop of 33 bushels 36 lbs. per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Hungarian | 42 | — | 7. Red Fern | 38 | 30 |
| 2. Countess | 40 | 20 | 8. Wellman's Fife | 37 | 50 |
| 3. Admiral | 40 | 10 | 9. Progress | 37 | 50 |
| 4. Vernon | 39 | — | 10. Red Fife | 37 | 50 |
| 5. Herisson Bearded | 39 | — | 11. Alpha | 37 | 20 |
| 6. Percy | 38 | 40 | 12. Pringle's Champlain | 37 | 10 |

An average crop of 38 bushels 48 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. White Connell | 31 | 40 | 7. White Russian | 30 | — |
| 2. Wellman's Fife | 31 | 20 | 8. Red Fife | 29 | 40 |
| 3. Preston | 31 | — | 9. White Fife | 29 | 20 |
| 4. Captor | 30 | 40 | 10. Old Red River | 29 | 20 |
| 5. Monarch | 30 | 40 | 11. Rideau | 29 | — |
| 6. Alpha | 30 | — | 12. Herisson Bearded | 28 | 40 |

An average crop of 30 bushels 7 lbs. per acre.

The twelve varieties of spring wheat which have given 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. Wellman's Fife | 31 | 23 | 7. Red Fife | 28 | 37 |
| 2. White Connell | 29 | 54 | 8. Admiral | 28 | 18 |
| 3. White Fife | 29 | 21 | 9. Hungarian | 28 | 14 |
| 4. Monarch | 29 | 5 | 10. Preston | 28 | 8 |
| 5. White Russian | 29 | 5 | 11. Advance | 27 | 44 |
| 6 Herisson Bearded | 28 | 40 | 12. Vernon | 27 | 44 |

An average crop of 28 bushels 51 lbs. per acre.

The average crop of all the varieties of spring wheat tested at each of the experimental farms was as follows :—At Ottawa, 18 bush. 22 lbs. per acre ; Nappan, 22 bush. 45 lbs. ; Brandon, 28 bush. 44 lbs. ; Indian Head, 34 bush. 47 lbs., and at Agassiz, 27 bush. 35 lbs. The average return given by the whole of the varieties of spring wheat at all the farms was 26 bushels 27 lbs. per acre.

## PEASE.

The trial plots of pease during the past season have included forty varieties. Among these there are twenty of the cross-bred sorts which have been originated at the experimental farms. These are Arthur, King, Macoun, Perth, Victoria, Vincent, Carleton, Alma, Agnes, Kent, Duke, Nelson, Paragon, Bedford, Bruce, Bright, Archer, Mackay, Trilby, Prince. These were all sown in plots of one-tenth acre each at Brandon and Indian Head, and one-twentieth acre each at Ottawa, Nappan and Agassiz, and the quantity of seed used per acre has varied from two to three bushels, depending on the size of the pea. The dates of sowing were the following :—At Ottawa, 3rd and 4th May ; Nappan, 16th May ; Brandon, 17th April, Indian Head, 6th May, and at Agassiz, 1st May.

## UNIFORM TEST PLOTS OF PEASE.

| Number. | Name of Variety. | Yield at the several Experimental Farms, Season of 1897. | | | | | | | | | | | | 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 the Farms. | | Ottawa, Ont. | Nappan, N.S. | Brandon, Man. | Indian Head, N.W.T. | Agassiz, B.C. | Average of all the Farms. |
| | | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Days. | Days. | Days. | Days. | Days. | Days. |
| 1 | Canadian Beauty | 31 | 50 | 16 | .. | 30 | 20 | 29 | .. | 27 | 20 | 26 | 54 | 112 | 116 | 131 | 111 | 114 | 117 |
| 2 | Oddfellow | 30 | 30 | 28 | 40 | 29 | 20 | 27 | .. | 23 | .. | 27 | 42 | 95 | 116 | 131 | 105 | 116 | 113 |
| 3 | Arthur | 30 | 20 | 13 | 20 | 29 | 30 | 34 | 10 | 28 | 20 | 27 | 8 | 95 | 104 | 125 | 109 | 115 | 110 |
| 4 | Creeper | 29 | 40 | 22 | 40 | 36 | 40 | 30 | 50 | 25 | 20 | 29 | 2 | 109 | 116 | 131 | 111 | 104 | 114 |
| 5 | King | 29 | 35 | 31 | 40 | 42 | 40 | 28 | 40 | 31 | 20 | 32 | 47 | 109 | 116 | 131 | 111 | 107 | 115 |
| 6 | Macoun | 27 | 40 | 16 | 40 | 25 | .. | 32 | 20 | 24 | .. | 25 | 8 | 119 | 123 | 140 | 112 | 114 | 122 |
| 7 | Prussian Blue | 27 | 20 | 30 | .. | 35 | .. | 24 | 30 | 24 | 40 | 28 | 18 | 100 | 120 | 131 | 110 | 114 | 115 |
| 8 | Prince Albert | 27 | 5 | 22 | 20 | 32 | .. | 34 | 40 | 26 | .. | 28 | 25 | 117 | 123 | 141 | 110 | 114 | 121 |
| 9 | Crown | 26 | 50 | 35 | .. | 33 | 40 | 32 | 50 | 13 | 20 | 28 | 20 | 103 | 104 | 125 | 110 | 108 | 110 |
| 10 | Harrison's Glory | 26 | 40 | 19 | 20 | 32 | . | 22 | .. | 21 | 40 | 24 | 20 | 98 | 111 | 130 | 105 | 105 | 110 |
| 11 | Early Britain | 26 | 30 | 50 | .. | 26 | 40 | 28 | . | 24 | 20 | 31 | 6 | 95 | 109 | 125 | 105 | 105 | 108 |
| 12 | Perth | 26 | 20 | 31 | 40 | 24 | 40 | 29 | 30 | 23 | .. | 27 | 2 | 108 | 109 | 131 | 109 | 107 | 113 |
| 13 | Victoria | 26 | .. | 22 | .. | 35 | 20 | 33 | .. | 24 | .. | 28 | 4 | 118 | 123 | 135 | 110 | 103 | 118 |
| 14 | Vincent | 25 | 50 | 26 | 40 | 26 | .. | 31 | 40 | 28 | 40 | 27 | 46 | 107 | 116 | 130 | 110 | 107 | 114 |
| 15 | Carleton | 25 | 40 | 20 | 40 | 36 | 40 | 30 | 40 | 23 | .. | 27 | 20 | 107 | 109 | 140 | 110 | 115 | 116 |
| 16 | New Potter | 25 | 20 | 22 | .. | 34 | 40 | 33 | 20 | 19 | 40 | 27 | .. | 115 | 116 | 131 | 112 | 105 | 116 |
| 17 | Alma | 25 | .. | 22 | .. | 40 | 40 | 30 | 30 | 20 | 20 | 27 | 42 | 109 | 104 | 131 | 109 | 116 | 114 |
| 18 | Agnes | 24 | 45 | 11 | 20 | 32 | .. | 24 | 50 | 14 | 40 | 21 | 31 | 98 | 111 | 130 | 109 | 105 | 111 |
| 19 | Elephant Blue | 24 | 40 | 24 | 40 | 34 | .. | 25 | 50 | 23 | 20 | 26 | 30 | 97 | 111 | 125 | 105 | 116 | 111 |
| 20 | Kent | 24 | 30 | 15 | .. | 34 | .. | 26 | 30 | 24 | 40 | 24 | 56 | 114 | 120 | 131 | 110 | 114 | 118 |
| 21 | Duke | 24 | 30 | 26 | 40 | 27 | .. | 28 | 20 | 23 | 40 | 26 | 2 | 111 | 123 | 140 | 109 | 115 | 120 |
| 22 | Black Eyed Marrowfat | 24 | 20 | 16 | 40 | 29 | 20 | 28 | 50 | 16 | 40 | 23 | 10 | 108 | 111 | 131 | 111 | 114 | 115 |
| 23 | Mummy | 23 | 50 | 16 | 40 | 37 | 40 | 28 | 50 | 22 | .. | 25 | 48 | 95 | 104 | 130 | 110 | 106 | 109 |
| 24 | Nelson | 23 | 45 | 23 | 20 | 26 | 40 | 29 | 40 | 29 | 20 | 26 | 33 | 95 | 111 | 128 | 105 | 116 | 111 |
| 25 | Paragon | 22 | 50 | 16 | 40 | 26 | 40 | 29 | 30 | 22 | 40 | 23 | 40 | 117 | 120 | 142 | 110 | 107 | 119 |
| 26 | Bedford | 22 | 50 | 17 | 20 | 40 | .. | 27 | 20 | 25 | 20 | 26 | 34 | 118 | 127 | 142 | 112 | 115 | 123 |
| 27 | Chancellor | 22 | .. | 30 | .. | 34 | .. | 28 | 40 | 23 | 20 | 27 | 36 | 93 | 109 | 115 | 103 | 116 | 107 |
| 28 | Bruce | 21 | 30 | 22 | 20 | 21 | 20 | 27 | 10 | 22 | 40 | 23 | .. | 108 | 120 | 142 | 110 | 114 | 119 |
| 29 | Multiplier | 21 | .. | 18 | 40 | 26 | 20 | 30 | .. | 16 | 20 | 22 | 28 | 106 | 120 | 138 | 111 | 114 | 118 |
| 30 | Golden Vine | 20 | 50 | 16 | .. | 34 | .. | 34 | 10 | 20 | 20 | 25 | 4 | 106 | 116 | 125 | 110 | 105 | 112 |
| 31 | Large White Marrowfat | 20 | 30 | 20 | 40 | 22 | 40 | 31 | 50 | 24 | 40 | 24 | 4 | 100 | 120 | 135 | 112 | 116 | 117 |
| 32 | Bright | 20 | 20 | 26 | 40 | 37 | 20 | 40 | . | 30 | 20 | 30 | 56 | 117 | 127 | 142 | 112 | 116 | 123 |
| 33 | Centennial | 20 | 20 | 31 | 40 | 35 | 40 | 35 | 40 | 17 | 40 | 28 | 12 | 109 | 123 | 131 | 111 | 114 | 118 |
| 34 | Archer | 20 | .. | 24 | .. | 36 | .. | 34 | 10 | 29 | 40 | 28 | 46 | 106 | 127 | 131 | 109 | 105 | 116 |
| 35 | Mackay | 17 | 40 | 18 | 20 | 35 | .. | 23 | 20 | 17 | 40 | 22 | 24 | 102 | 120 | 131 | 110 | 114 | 115 |
| 36 | Trilby | 15 | 40 | 22 | 20 | 38 | 20 | 31 | 50 | 20 | .. | 25 | 38 | 118 | 123 | 131 | 110 | 116 | 120 |
| 37 | Prince | 15 | .. | 19 | 20 | 33 | 20 | 27 | 30 | 20 | .. | 22 | 50 | 106 | 120 | 131 | 111 | 114 | 116 |
| 38 | Dan'l O'Rourke | 14 | .. | 11 | 20 | 25 | 20 | 34 | 10 | 16 | 20 | 20 | 14 | 93 | 104 | 123 | 107 | 103 | 106 |
| 39 | White Wonder | 9 | 5 | 23 | 20 | 34 | 40 | 30 | 10 | 23 | 40 | 24 | 11 | 93 | 109 | 123 | 106 | 105 | 107 |
| 40 | Pride | 7 | 40 | 21 | 40 | 31 | 40 | 29 | 50 | 16 | 20 | 21 | 20 | 94 | 120 | 124 | 109 | 104 | 110 |

The twelve varieties of pease which have given the largest crops at the several experimental farms during 1897, are the following:—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Canadian Beauty | 31 | 50 | 7. Prussian Blue | 27 | 20 |
| 2. Oddfellow | 30 | 30 | 8. Prince Albert | 27 | 5 |
| 3. Arthur | 30 | 20 | 9. Crown | 26 | 50 |
| 4. Creeper | 29 | 40 | 10. Harrison's Glory | 26 | 40 |
| 5. King | 29 | 35 | 11. Early Britain | 26 | 30 |
| 6. Macoun | 27 | 40 | 12. Perth | 26 | 20 |

An average crop of 28 bushels 22 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Early Britain | 50 | .. | 7. Prussian Blue | 30 | .. |
| 2. Crown | 35 | .. | 8. Oddfellow | 28 | 40 |
| 3. Perth | 31 | 40 | 9. Bright | 26 | 40 |
| 4. Centennial | 31 | 40 | 10. Duke | 26 | 40 |
| 5. King | 31 | 40 | 11. Vincent | 26 | 40 |
| 6. Chancellor | 30 | .. | 12. Elephant Blue | 24 | 40 |

An average crop of 31 bushels 7 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. King | 42 | 40 | 7. Carleton | 36 | 40 |
| 2. Alma | 40 | 40 | 8. Creeper | 36 | 40 |
| 3. Bedford | 40 | .. | 9. Archer | 36 | .. |
| 4. Trilby | 38 | 20 | 10. Centennial | 35 | 40 |
| 5. Mummy | 37 | 40 | 11. Victoria | 35 | 20 |
| 6. Bright | 37 | 20 | 12. Mackay | 35 | .. |

An average crop of 37 bushels 40 lbs. per acre.

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Bright | 40 | .. | 7. New Potter | 33 | 20 |
| 2. Centennial | 35 | 40 | 8. Victoria | 33 | .. |
| 3. Prince Albert | 34 | 40 | 9. Crown | 32 | 50 |
| 4. Golden Vine | 34 | 10 | 10. Macoun | 32 | 20 |
| 5. Daniel O'Rourke | 34 | 10 | 11. Large White Marrowfat | 31 | 50 |
| 6. Arthur | 34 | 10 | 12. Trilby | 31 | 50 |

An average crop of 34 bushels per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. King | 31 | 20 | 7. Canadian Beauty | 27 | 20 |
| 2. Bright | 30 | 20 | 8. Prince Albert | 26 | .. |
| 3. Archer | 29 | 40 | 9. Creeper | 25 | 20 |
| 4. Nelson | 29 | 20 | 10. Bedford | 25 | 20 |
| 5. Vincent | 28 | 40 | 11. Prussian Blue | 24 | 40 |
| 6. Arthur | 28 | 20 | 12. Kent | 24 | 40 |

An average crop of 27 bushels 35 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. King | 32 | 47 | 7. Crown | 28 | 20 |
| 2. Early Britain | 31 | 6 | 8. Prussian Blue | 28 | 18 |
| 3. Bright | 30 | 56 | 9. Centennial | 28 | 12 |
| 4. Creeper | 29 | 2 | 10. Victoria | 28 | 4 |
| 5. Archer | 28 | 46 | 11. Vincent | 27 | 46 |
| 6. Prince Albert | 28 | 25 | 12. Alma | 27 | 42 |

An average crop of 29 bushels 7 lbs. per acre.

The average crop of all the varieties of pease tested at each of the experimental farms was as follows :—At Ottawa, 23 bush. 15 lbs. per acre ; Nappan, 22 bush. 38 lbs. ; Brandon, 31 bush. 53 lbs ; Indian Head, 30 bush. 4 lbs., and at Agassiz, 22 bush. 44 lbs. The average return given by the whole of the varieties at all the farms is 26 bushels 7 lbs. per acre.

## INDIAN CORN.

Twenty-four varieties of Indian corn have been under trial during 1897, all planted on uniform soil in rows three feet apart and the plants thinned out to six or eight inches apart in the row. The dates of planting were the following:—At Ottawa, 25th May; Nappan, 4th June; Brandon, 19th May; Indian Head, 19th May, and at Agassiz, from 18th May to 1st June. All were cut green and put into the silo for the winter feeding of stock. The dates of cutting were:—At Ottawa, 17th September; Nappan, 3rd October; Brandon, 28th August; Indian Head, 4th September, and at Agassiz, 28th September. 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 1897. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ottawa, Ont. | | Nappan, Ont. | | Brandon, Manitoba. | | 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 | Selected Leaming | 36 | 1,260 | 13 | 400 | 13 | 400 | 10 | 1,450 | 43 | 900 | 23 | 882 |
| 2 | Giant Prolific Ensilage | 36 | 1,062 | 4 | 250 | 13 | 400 | 16 | 450 | 32 | 350 | 20 | 902 |
| 3 | Cloud's Early Yellow | 32 | 416 | 9 | 1,470 | 16 | 1,000 | 14 | 50 | 24 | 400 | 19 | 667 |
| 4 | Red Cob Ensilage | 30 | 1,512 | 13 | 500 | 16 | 100 | 12 | 1,300 | 43 | 900 | 23 | 462 |
| 5 | Cuban Giant | 26 | 800 | 8 | 1,270 | 17 | 1,200 | 15 | 250 | 42 | 700 | 22 | 44 |
| 6 | Rural Thoroughbred White Flint | 26 | 767 | 6 | 870 | 16 | 100 | 8 | 1,600 | 29 | 300 | 17 | 727 |
| 7 | Champion White Pearl | 25 | 556 | 11 | .... | 19 | 1,600 | 11 | 1,650 | 27 | 780 | 19 | 117 |
| 8 | North Dakota White | 25 | 292 | 7 | 1,400 | 11 | .... | ..... | | 34 | 200 | 19 | 973 |
| 9 | Mamm. 8 rowed Flint | 24 | 708 | 13 | 400 | 16 | 1,000 | 12 | 1,200 | 35 | 950 | 20 | 582 |
| 10 | Ninety-day | 23 | 992 | 5 | 340 | 11 | 1,760 | 11 | 1,650 | 29 | 1,400 | 16 | 828 |
| 11 | Longfellow | 22 | 1,870 | 11 | 550 | 11 | 1,100 | 12 | 200 | 19 | 610 | 15 | 866 |
| 12 | Pride of the North | 22 | 1,804 | 6 | 870 | 11 | .... | 13 | 950 | 14 | 1,810 | 13 | 1,487 |
| 13 | North Dakota Yellow | 22 | 165 | 5 | 1,000 | 11 | .... | 12 | 750 | 16 | 780 | 13 | 939 |
| 14 | Early Butler | 21 | 1,296 | 6 | 1,970 | 18 | 1,400 | 13 | 1,170 | 37 | 800 | 19 | 1,327 |
| 15 | Sanford | 21 | 1,164 | 11 | 440 | 9 | 1,800 | 15 | 1,900 | 22 | .... | 16 | 261 |
| 16 | Extra Ey Huron Dent | 20 | 1,976 | 6 | 870 | 12 | 1,300 | 11 | 900 | .... | ..... | 12 | 1,761 |
| 17 | Compton's Early | 20 | 1,976 | 10 | 460 | 14 | 1,700 | 11 | 1,870 | 18 | 1,840 | 15 | 769 |
| 18 | Angel of Midnight | 20 | 1,580 | 10 | 240 | 19 | 1,600 | 10 | 900 | 33 | .... | 18 | 1,661 |
| 19 | White Cap Yellow Dent | 19 | 1,200 | 9 | 150 | 15 | 1,800 | 11 | 1,100 | 20 | 800 | 15 | 628 |
| 20 | Canada White Flint | 18 | 1,818 | 9 | 1,800 | 10 | 900 | 12 | 1,850 | 17 | 1,860 | 14 | 46 |
| 21 | King of the Earliest | 17 | 980 | 9 | 700 | 14 | 600 | 11 | ... | 31 | 700 | 16 | 1,396 |
| 22 | Pearce's Prolific | 17 | 848 | 6 | 870 | 9 | 700 | 12 | 200 | 28 | 100 | 14 | 1,344 |
| 23 | Mitchell's Extra Early | 16 | 736 | 4 | 800 | 13 | 400 | 12 | 1,300 | 14 | 50 | 12 | 257 |
| 24 | Mamm. Sweet Fodder | 13 | 1,720 | ..... | ... | ..... | | ..... | .... | 26 | 800 | 20 | 260 |

The test of varieties in this case was not quite complete. The Mammoth Sweet Fodder was omitted at Nappan, Brandon and Indian Head. The North Dakota White was also omitted at Indian Head and the Extra Early Huron Dent at Agassiz for the reason that the seed did not arrive in time for planting.

The six varieties of Indian corn which have given the heaviest crops at the several experimental farms during 1897, are the following:—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Selected Leaming | 36 | 1260 | 4. Red Cob Ensilage | 30 | 1512 |
| 2. Giant Prolific Ensilage | 36 | 1062 | 5. Cuban Giant | 26 | 800 |
| 3. Cloud's Early Yellow | 32 | 416 | 6. Thoroughbred White Flint | 26 | 767 |

An average crop of 31 tons 969 lbs. per acre.

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

| | Per acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Compton's Early | 11 | 1100 | 4. Early Butler | 10 | 1670 |
| 2. Sanford | 11 | 440 | 5. Angel of Midnight | 10 | 1450 |
| 3. Longfellow | 11 | .... | 6. Cloud's Early Yellow | 10 | 1340 |

An average crop of 11 tons per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

| | Per acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Champion White Pearl | 19 | 1600 | 4. Cuban Giant | 17 | 1200 |
| 2. Angel of Midnight | 19 | 1600 | 5. Mammoth 8-rowed Flint | 16 | 1000 |
| 3. Early Butler | 18 | 1400 | 6. Cloud's Early Yellow | 16 | 1000 |

An average crop of 18 tons 300 lbs. per acre.

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

| | Per acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant Prolific Ensilage | 16 | 450 | 4. Cloud's Early Yellow | 14 | 50 |
| 2. Sanford | 15 | 1900 | 5. Early Butler | 13 | 1170 |
| 3. Cuban Giant | 15 | 350 | 6. Pride of the North | 13 | 950 |

An average crop of 14 tons 1,478 lbs per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Red Cob Ensilage | 43 | 900 | 4. Early Butler | 37 | 800 |
| 2. Selected Leaming | 43 | 900 | 5. Mammoth 8-rowed Flint | 35 | 950 |
| 3. Cuban Giant | 42 | 700 | 6. North Dakota White | 34 | 200 |

An average crop of 39 tons 741 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Selected Leaming | 23 | 882 | 4. Giant Prolific Ensilage | 20 | 902 |
| 2. Red Cob Ensilage | 23 | 462 | 5. Mammoth 8-rowed Flint | 20 | 582 |
| 3. Cuban Giant | 22 | 44 | 6. Mammoth Sweet Fodder | 20 | 260 |

An average crop of 21 tons 1,189 lbs. per acre.

In considering the weights obtained from the varieties named in this last list, it must be borne in mind that most of the very large growing sorts are very late in ripening, and that the fodder they produce is immature and in-

ferior in quality. Hence the most productive of the earlier ripening sorts should be selected in preference, as producing the most nutritious food.

The average weight cut green of all the varieties of Indian corn tested at each of the experimental farms was as follows:—At Ottawa, 23 tons, 1,066 lbs.: Nappan, 8 tons, 1,394 lbs.; Brandon, 14 tons, 211 lbs.; Indian Head, 12 tons, 1,031 lbs., and at Agassiz, 27 tons, 1,784 lbs. The average return given by the whole of the varieties at all the farms was 17 tons 693 lbs.

## TURNIPS.

Eighteen varieties of turnips have been under test during 1897, sown on drills or on the flat in rows from 2 to 2½ feet apart. Two sowings were made at each farm, one sowing two weeks later than the other. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following:—At Ottawa, 13th and 14th October; Nappan, 14th and 18th October; Brandon, 1st October; Indian Head, 5th October, and at Agassiz, 18th October. The yield per acre in each case has been calculated from the weight of roots gathered from two rows each, 66 feet long.

| Number. | Name of Variety. | Ottawa, Ont. | | | | Nappan, N.S. | | | | Brandon, Man. | | | | Indian Head, N.W.T. | | | | Agassiz, B.C. | | | | Average of all Farms. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sown May 8. | | Sown May 21. | | Sown. June 4. | | Sown. June 18. | | Sown May 20. | | Sown June 3. | | Sown May 18. | | Sown May 28. | | Sown May 14. | | Sown May 28. | | 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 | Shamrock Purple Top. | 44 | 1,100 | 27 | 1,770 | 37 | 480 | 33 | 120 | 9 | 1,800 | 8 | 1,424 | 8 | 596 | 10 | 460 | 40 | 520 | 40 | 960 | 28 | 1,099 | 24 | 147 |
| 2 | Selected Purple Top... | 44 | 770 | 26 | 965 | 29 | 520 | 25 | 1,060 | 4 | 712 | 11 | 440 | 7 | 520 | 9 | 348 | 57 | 48 | 47 | 600 | 28 | 914 | 23 | 1,883 |
| 3 | Perfection Swede..... | 42 | 1,965 | 25 | 1,315 | 31 | 1,080 | 31 | 1,840 | 7 | 1,576 | 9 | 744 | 7 | 1,018 | 10 | 64 | 49 | 208 | 50 | 1,376 | 27 | 1,575 | 25 | 1,068 |
| 4 | Giant King ..... | 41 | 5 | 30 | 885 | 24 | 640 | 21 | 560 | 8 | 1,688 | 7 | 1,576 | 3 | 468 | 7 | 588 | 53 | 1,712 | 47 | 840 | 26 | 503 | 22 | 1,650 |
| 5 | Marquis of Lorne..... | 40 | 1,510 | 26 | 1,845 | 26 | 1,960 | 24 | 360 | 9 | 1,008 | 6 | 1,992 | 6 | 672 | 6 | 1,860 | 53 | 1,360 | 52 | 1,600 | 27 | 902 | 23 | 1,131 |
| 6 | Jumbo or Monarch.... | 40 | 905 | 28 | 925 | 24 | 360 | 19 | 760 | 8 | 1,424 | 8 | 632 | 6 | 400 | 8 | 896 | 54 | 1,120 | 51 | 1,400 | 26 | 1,642 | 23 | 523 |
| 7 | Prize Winner..... | 40 | 850 | 26 | 855 | 25 | 1,060 | 23 | 1,880 | 9 | 216 | 10 | 856 | 6 | 1,332 | 7 | 1,180 | 66 | 1,555 | 49 | 1,000 | 29 | 1,403 | 23 | 1,154 |
| 8 | Mammoth Clyde..... | 39 | 1,915 | 28 | 815 | 25 | 1,820 | 24 | 780 | 10 | 328 | 6 | 1,200 | 4 | 1,504 | 6 | 1,464 | 50 | 760 | 44 | 880 | 26 | 465 | 22 | 228 |
| 9 | Carter's Elephant..... | 38 | 1,220 | 34 | 1,300 | 27 | 1,380 | 19 | 1,520 | 8 | 1,952 | 7 | 520 | 5 | 1,352 | 7 | 1,312 | 53 | 1,712 | 47 | 840 | 26 | 1,923 | 23 | 698 |
| 10 | East Lothian ..... | 38 | 230 | 30 | 445 | 30 | 800 | 24 | 360 | 9 | 480 | 8 | 1,688 | 6 | 408 | 7 | 1,576 | 56 | 1,168 | 60 | 384 | 28 | 217 | 26 | 491 |
| 11 | Prize Purple Top..... | 36 | 1,975 | 24 | 510 | 26 | 1,960 | 22 | 840 | 9 | 1,536 | 8 | 1,160 | 4 | 1,372 | 10 | 1,648 | 58 | 1,040 | 53 | 160 | 27 | 777 | 24 | 1,664 |
| 12 | Hall's Westbury..... | 36 | 1,590 | 26 | 910 | 25 | 1,060 | 26 | 1,960 | 12 | 1,232 | 8 | 1,952 | 8 | 1,424 | 10 | 268 | 53 | 40 | 48 | 1,504 | 27 | 269 | 24 | 519 |
| 13 | Hartley's Bronze..... | 36 | 765 | 27 | 780 | 32 | 600 | 28 | 1,760 | 8 | 896 | 8 | 1,952 | 9 | 1,518 | 10 | 856 | 55 | 880 | 50 | 1,376 | 28 | 938 | 25 | 545 |
| 14 | Skirving's..... | 36 | 600 | 28 | 1,915 | 31 | 320 | 20 | 1,180 | 8 | 1,952 | 8 | 1,160 | 6 | 1,464 | 9 | 1,932 | 55 | | 49 | 1,264 | 27 | 1,268 | 23 | 1,090 |
| 15 | Sutton's Champion .... | 35 | 1,280 | 22 | 55 | 25 | 1,820 | 24 | 1,540 | 8 | 632 | 9 | 1,800 | 7 | 256 | 8 | 1,820 | 45 | 200 | 42 | 1,360 | 24 | 887 | 21 | 1,315 |
| 16 | Halewood's Bronze Top | 35 | 345 | 24 | 235 | 36 | 200 | 25 | 1,820 | 11 | 440 | 8 | 1,424 | 4 | 316 | 8 | 1,160 | 56 | 200 | 51 | 80 | 28 | 1,100 | 23 | 1,344 |
| 17 | Bangholm Selected .... | 34 | 1,300 | 27 | 890 | 28 | 1,760 | 24 | 780 | 9 | 216 | 8 | 1,424 | 4 | 1,768 | 6 | 1,464 | 47 | 600 | 46 | 840 | 24 | 1,929 | 22 | 1,480 |
| 18 | Champion Purple Top . | 32 | 1,395 | 27 | 1,110 | 28 | 240 | 24 | 1,540 | 7 | 1,048 | 6 | 1,728 | 7 | 256 | 8 | 1,820 | 47 | 600 | 45 | 200 | 24 | 1,108 | 22 | 1,278 |

The crops from the successive growings of turnips at the experimental farms have averaged as follows :—

| | Tons. | Lbs. |
|---|---|---|
| Central Experimental Farm, first sowing..... ..... | 38 | 1,318 |
| do do second sowing..... ... ... | 27 | 862 |
| Experimental Farm, Nappan, first sowing.... ... .... ... | 28 | 1,559 |
| do do second sowing..... | 24 | 1,592 |
| Experimental Farm, Brandon, Man., first sowing..... .. .. | 8 | 1,952 |
| Experimental Farm, Brandon, Man., second sowing..... ..... | 8 | 1,199 |
| Experimental Farm, Indian Head, N.W.T., first sowing..... | 6 | 817 |
| do do do second sowing .... | 8 | 1,362 |
| Experimental Farm, Agassiz, first sowing ..... ..... .. | 52 | 1,985 |
| do do second sowing ..... | 49 | 259 |

**Average crop from all the plots at all the farms, first sowing, 27 tons 326 lbs. ; second sowing, 23 tons 1,456 lbs.**

It will be seen by reference to the table that the first sowing of turnips at each of the experimental farms, has given the larger crop excepting at Indian Head. The average of all the sowings at all the farms show 3 tons 1,871 lbs. per acre more from the first sowing than from the second.

The six varieties of turnips which have given the heaviest crops at the several experimental farms during the season of 1897, are the following. Where not otherwise stated the quantities given are all from the early sown plots :

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Shamrock Purple Top. .. | 44 | 1,100 | 4. Giant King..... | 41 | 5 |
| 2. Selected Purple Top..... | 44 | 770 | 5. Marquis of Lorne,..... | 40 | 1,510 |
| 3. Perfection Swede..... | 42 | 1,965 | 6. Jumbo or Monarch ..... | 40 | 905 |

An average crop of 42 tons 709 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Shamrock Purple Top..... | 37 | 480 | 4. Perfection Swede, 2nd sowing | 31 | 1,840 |
| 2. Halewood's Bronze Top..... | 36 | 200 | 5. Skirvings..... | 31 | 320 |
| 3. Hartley's Bronze..... | 32 | 600 | 6. East Lothian..... ..... | 30 | 800 |

An average crop of 33 tons 373 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Hall's Westbury ..... ..... | 11 | 1,232 | 4. Shamrock Purple Top..... | 9 | 1,800 |
| 2. Halewood's Bronze Top.... | 11 | 440 | 5. Prize Purple Top ..... | 9 | 1,536 |
| 3. Mammoth Clyde..... | 10 | 328 | 6. Marquis of Lorne..... | 9 | 1,008 |

An average crop of 10 tons 724 lbs. per acre.

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Prize Purple Top, 2nd sowing. | 10 | 1,648 | 4. Hall's Westbury, 2nd sowing. | 10 | 268 |
| 2. Hartley's Bronze, 2nd sowing.... ..... | 10 | 856 | 5. Perfection Swede, 2nd sowing..... | 10 | 64 |
| 3. Shamrock Purple Top, 2nd sowing ..... ..... | 10 | 460 | 6. Skirvings, 2nd sowing..... | 9 | 1,932 |

An average crop of 10 tons 538 lbs per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Prize Winner..... | 66 | 1,555 | 4. Selected Purple Top..... | 57 | 48 |
| 2. East Lothian, 2nd sowing... | 60 | 384 | 5. Halewood's Bronze Top .... | 56 | 200 |
| 3. Prize Purple Top, 2nd sowing..... | 58 | 1,040 | 6. Hartley's Bronze..... ..... | 55 | 880 |

An average crop of 59 tons 18 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Prize Winner ..... | 29 | 1,403 | 4. Hartley's Bronze Top. ..... | 28 | 938 |
| 2. Shamrock Purple Top ..... | 28 | 1,999 | 5. Selected Purple Top..... | 28 | 914 |
| 3. Halewood's Bronze Top..... | 28 | 1,100 | 6. East Lothian ..... .... | 28 | 217 |

An average crop of 28 tons 1,428 lbs. per acre.

## MANGELS.

Eighteen varieties of mangels were under trial in 1897, all sown on drills or on the flat from 2 to 2½ feet apart. Two sowings were made at each farm, the second sowing, two weeks later than the first. The dates of sowing will be found in the accompanying table, the dates on which the roots were pulled were the following :—At Ottawa, 11th October ; Nappan, 14th and 15th October ; Brandon, 30th September ; Indian Head, 4th October; and at Agassiz, 15th October. 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 MANGELS.

| Number. | Name of Variety. | Ottawa, Ont. | | Nappan, N. S. | | Brandon, Man. | | Indian Head, N.W.T. | | Agassiz, B. C. | | Average of all Farms. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sown May 8 | Sown May 21. | Sown June 4. | Sown June 18. | Sown May 20. | Sown June 3. | Sown May 18. | Sown May 28. | Sown April 24. | Sown May 8. | 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 | Giant Yellow Intermediate (Steele) | 46 1,060 | 37 305 | 34 400 | 23 1,880 | 22 352 | 16 1,000 | 10 1,120 | 13 1,852 | 34 1,080 | 31 40 | 29 1,202 | 24 1,015 |
| 2 | Gate Post | 44 1,815 | 35 1,335 | 26 1,200 | 17 960 | 14 776 | 20 128 | 12 420 | 13 1,984 | 34 992 | 36 160 | 26 1,041 | 24 1,313 |
| 3 | Canadian Giant | 40 1,345 | 28 1,420 | 28 1,000 | 20 1,040 | 21 32 | 20 1,184 | 7 388 | 11 176 | 35 752 | 28 1,200 | 26 1,102 | 21 1,804 |
| 4 | Golden Tankard | 35 950 | 22 605 | 25 1,060 | 19 1,520 | 17 584 | 14 1,832 | 8 1,820 | 12 684 | 27 912 | 26 360 | 22 1,865 | 19 200 |
| 5 | Mammoth Long Red | 34 1,960 | 28 485 | 27 1,480 | 23 1,100 | 15 1,680 | 18 696 | 10 1,780 | 13 268 | 32 1,824 | 30 1,600 | 24 945 | 22 1,630 |
| 6 | Champion Yellow Globe | 34 1,630 | 22 605 | 26 1,200 | 23 1,100 | 26 8 | 15 96 | 10 1,912 | 12 1,476 | 27 1,000 | 25 656 | 25 350 | 19 1,587 |
| 7 | Selected Mamm. Long Red | 34 845 | 23 1,850 | .... ..... | ..... ..... | 23 464 | 26 1,328 | 10 1,120 | 12 1,470 | 39 1,024 | 32 240 | 26 1,863 | 23 1,722 |
| 8 | Yellow Intermediate | 33 715 | 21 1,560 | 29 1,280 | 21 1,320 | 6 672 | 17 56 | 10 1,912 | 15 1,944 | 31 1,184 | 27 1,000 | 22 755 | 20 1,576 |
| 9 | Red Fleshed Tankard | 32 1,010 | 28 815 | 25 300 | 14 880 | 11 176 | 6 144 | 6 1,728 | 8 92 | 39 320 | 35 400 | 22 1,907 | 18 866 |
| 10 | Red Fleshed Globe | 32 405 | 23 365 | 21 560 | 22 80 | 20 392 | 13 1,984 | 9 216 | 10 460 | 24 1,280 | 24 460 | 21 971 | 18 1,458 |
| 11 | Giant Yellow Globe | 31 1,855 | 26 1,790 | 29 1,280 | 23 340 | 19 808 | 15 1,944 | 11 1,628 | 13 1,324 | 27 1,264 | 25 600 | 24 167 | 21 |
| 12 | Prize Mamm. Long Red | 31 1,690 | 25 655 | 27 720 | 21 1,320 | 25 424 | 15 1,944 | 10 1,120 | 12 1,476 | 29 1,136 | 23 1,960 | 24 1,818 | 19 1,871 |
| 13 | Golden Fleshed Tankard | 30 1,050 | 21 240 | 26 1,200 | 18 1,240 | 13 400 | 11 1,760 | 9 1,404 | 13 1,852 | 39 1,140 | 35 400 | 23 1,839 | 20 298 |
| 14 | Warden Orange Globe | 29 1,730 | 27 835 | 24 1,540 | 23 340 | 14 1,832 | 12 816 | 8 896 | 11 1,628 | 19 1,424 | 18 80 | 19 1,084 | 18 1,140 |
| 15 | Giant Yellow Half Long | 29 740 | 19 1,765 | 33 840 | 25 300 | 15 1,994 | 18 112 | 10 1,912 | 14 1,568 | 31 1,360 | 28 672 | 24 569 | 21 483 |
| 16 | Ward's Large Oval Shaped | 28 155 | 19 280 | 30 | 19 1,520 | 18 1,488 | 19 1,336 | 9 480 | 13 268 | 28 496 | 22 1,760 | 22 1,724 | 18 1,833 |
| 17 | Giant Yellow Intermediate (Pearce) | 25 1,535 | 16 395 | ..... ..... | ..... ..... | .... .... | ..... ..... | 9 216 | 13 664 | 27 912 | 26 624 | 20 1,554 | 18 1,228 |
| 18 | Norbiton Giant | 19 1,325 | 10 130 | 34 400 | 23 360 | 20 1,976 | 23 1,256 | 11 1,760 | 12 420 | 35 1,456 | 34 1,960 | 24 983 | 20 1,625 |

Selected Mammoth Long Red and Giant Yellow Intermediate were omitted at Nappan, and Giant Yellow Intermediate at Brandon.
The crops from the successive sowings of Mangels at the experimental farms have averaged as follows:

| | Tons. | Lbs. |
|---|---|---|
| Central Experimental Farm, Ottawa, Ont., first sowing | 33 | 323 |
| do do do second sowing | 24 | 635 |
| Experimental Farm, Nappan, N. S., first sowing | 28 | 404 |
| do do second sowing | 21 | 706 |
| do Brandon, Man., first sowing | 18 | 3 |
| Experimental Farm, Brandon, Man., second sowing | 16 | 1,742 |
| do Indian Head, N. W. T., first sowing | 9 | 1,991 |
| do do do second sowing | 12 | 1,589 |
| do Agassiz, B. C., first sowing | 31 | 975 |
| do do second sowing | 28 | 895 |

Average crop from all the plots at all the farms: First sowing, 24 tons 208 lbs.; second sowing, 20 tons 1,756 lbs.

In the case of the mangels also, the early sown plots have given the larger crops. Taking the earlier sowings at all the experimental farms, they have given an average of 3 tons, 1,452 lbs. per acre more than that obtained from the later sowings.

The six varieties of mangels which have given the heaviest crops at the several experimental farms during 1897 are the following. Where not otherwise stated the quantities given are all from the early sown plots:

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant Yellow Intermediate. | 46 | 1,060 | 4. Golden Tankard... ..... | 35 | 950 |
| 2. Gate Post..... ... | 44 | 1,815 | 5. Mamm. Long Red .... .... | 34 | 1,960 |
| 3. Canadian Giant..... | 40 | 1,345 | 6. Champion Yellow Globe..... | 34 | 1,630 |

An average crop of 39 tons 1,127 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant Yellow Intermediate. | 34 | 400 | 4. Ward's Large Oval-shaped... | 30 | |
| 2. Norbiton Giant..... ..... | 34 | 400 | 5. Yellow Intermediate.. ... . | 29 | 1,280 |
| 3. Giant Yellow Half Long.... | 33 | 840 | 6. Giant Yellow Globe..... | 29 | 1,280 |

An average crop of 31 tons 1,700 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Champion Yellow Globe.... | 26 | 8 | 4. Canadian Giant..... | 21 | 32 |
| 2. Prize Mamm. Long Red ... | 25 | 424 | 5. Norbiton Giant. ..... . | 20 | 1,976 |
| 3. Giant Yellow Intermediate. | 22 | 352 | 6. Red Fleshed Globe..... | 20 | 352 |

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

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Yellow Intermediate, 2nd sowing . . ... ..... | 15 | 1,944 | 4. Giant Yellow Globe, 2nd sowing.... ..... .. | 13 | 1,324 |
| 2. Gate Post, 2nd sowing ... | 13 | 1,984 | 5. Prize Mamm. Long Red, 2nd | | |
| 3. Golden Fleshed Tankard, 2nd sowing ..... ... . | 13 | 1,852 | sowing.. . ..... 6. Mamm. Long Red, 2nd sowing | 13 13 | 268 268 |

An average crop of 13 tons 1,540 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Selected Mamm. Long Red.. | 39 | 1,024 | 4. Gate Post, 2nd sowing..... | 36 | 160 |
| 2. Red Fleshed Tankard..... | 39 | 320 | 5. Norbiton Giant..... | 35 | 1,456 |
| 3. Golden Fleshed Tankard.... | 39 | 140 | 6. Canadian Giant..... .... | 35 | 752 |

An average crop of 37 tons 975 lbs. per acre.

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:

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant Yellow Intermediate. | 29 | 1,202 | 4. Gate Post..... | 26 | 1,044 |
| 2. Selected Mamm. Long Red. | 26 | 1,863 | 5. Champion Yellow Globe..... | 25 | 350 |
| 3. Canadian Giant..... | 26 | 1,103 | 6. Prize Mamm. Long Red..... | 24 | 1,818 |

An average crop of 26 tons 1,229 lbs. per acre.

## CARROTS.

Fifteen varieties of carrots were under test during 1897. all sown in drills or on the flat from 1½ to 2 feet apart. Two sowings were made in each case, 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 the following:—At Ottawa, 11th October; Nappan, 14th and 15th October; Brandon, 30th September; Indian Head, 6th October; and at Agassiz, 15th October. The yield per acre in each case has been calculated from the weight of roots gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF CARROTS.

| Number. | Name of Variety. | Ottawa, Ont. | Nappan, N.S. | Brandon, Man. | Indian Head, N.W.T. | Agassiz, B.C. | Average of all the Farms. |
|---|---|---|---|---|---|---|---|

| Number. | Name of Variety. | Ottawa, Ont. | | | | Nappan, N.S. | | | | Brandon, Man. | | | | Indian Head, N.W.T. | | | | Agassiz, B.C. | | | | Average of all the Farms. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sown May 8. | | Sown May 21. | | Sown June 4. | | Sown June 18. | | Sown May 20. | | Sown June 3. | | Sown May 14. | | Sown May 27. | | Sown April 23. | | Sown May 7. | | 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 | Mam. White Intermediate | 24 | 180 | 19 | 445 | 16 | 1,440 | 14 | 100 | 3 | 600 | 3 | 1,480 | 3 | 1,128 | 3 | 1,128 | 26 | 800 | 16 | 1,440 | 14 | 1,630 | 11 | 919 |
| 2 | Green Top White Orthe... | 23 | 1,850 | 20 | 95 | 18 | 1,240 | 12 | 320 | 4 | 360 | 3 | 600 | 3 | 600 | 2 | 1,016 | 33 | 880 | 26 | 800 | 16 | 1,386 | 12 | 1,766 |
| 3 | Giant White Vosges..... | 23 | 200 | 19 | 940 | 21 | 560 | 16 | 680 | 3 | 600 | 5 | 1,440 | 2 | 1,544 | 3 | 1,392 | 37 | 1,680 | 46 | 200 | 17 | 1,317 | 18 | 530 |
| 4 | Iverson's Champion ..... | 21 | 1,230 | 16 | 1,000 | 21 | 1,320 | 13 | 580 | 3 | 600 | 5 | 1,000 | 3 | 996 | 4 | 448 | 27 | 120 | 36 | 1,060 | 15 | 853 | 15 | 418 |
| 5 | Improved Short White . . | 21 | 570 | 21 | 240 | 17 | 960 | 16 | 680 | 1 | 1,080 | 3 | 160 | 3 | 1,524 | 3 | 468 | 33 | 1,467 | 30 | 1,892 | 15 | 1,120 | 15 | 176 |
| 6 | Half Long White. ..... | 20 | 1,305 | 17 | 980 | 16 | 680 | 12 | 1,840 | 2 | 840 | 4 | 1,240 | 3 | 204 | 3 | 864 | 31 | 87 | 22 | 1,760 | 14 | 1,423 | 12 | 537 |
| 7 | Half Long Chantenay .... | 19 | 1,270 | 14 | 1,810 | 17 | 960 | 12 | 320 | 2 | 400 | 2 | 400 | 3 | 72 | 3 | 1,524 | 26 | 1,960 | 24 | 688 | 13 | 1,732 | 11 | 948 |
| 8 | Guerande or Ox Heart.... | 19 | 5 | 12 | 475 | 16 | 1,440 | 11 | 40 | 1 | 640 | 2 | 400 | 3 | 600 | 3 | 204 | 27 | 1,560 | 20 | 480 | 13 | 1,249 | 9 | 1,520 |
| 9 | Early Gem..... ..... | 18 | 1,345 | 14 | 1,755 | 13 | 1,360 | 14 | 100 | 2 | 840 | 3 | 1,480 | 2 | 1,412 | 2 | 1,808 | 30 | 1,600 | 29 | 1,840 | 13 | 1,311 | 13 | 197 |
| 10 | White Belgian ..... ... | 18 | 740 | 15 | 1,680 | 13 | 1,360 | 10 | 1,280 | 2 | 1,720 | 3 | 160 | 3 | 852 | 3 | 1,392 | 30 | 1,600 | 23 | 53 | 13 | 1,654 | 11 | 513 |
| 11 | Yellow Intermediate ..... | 17 | 45 | 15 | 195 | 16 | 1,440 | 8 | 1,280 | 2 | 400 | 3 | 1,920 | 2 | 1,016 | 2 | 1,676 | 39 | 1,200 | 27 | 267 | 15 | 1,220 | 11 | 1,068 |
| 12 | Carter's Orange Giant ... | 13 | 400 | 10 | 1,505 | 9 | 1,000 | 7 | 1,760 | 1 | 640 | 2 | 1,280 | 2 | 1,016 | 3 | 72 | 31 | 1,360 | 23 | 1,040 | 11 | 1,283 | 9 | 1,131 |
| 13 | Long Orange or Surrey ... | 11 | 1,595 | 10 | 625 | 9 | 240 | 7 | 1,760 | 1 | 1,520 | 3 | 160 | 2 | 752 | 2 | 620 | 18 | 760 | 21 | 240 | 8 | 1,373 | 8 | 1,881 |
| 14 | Scarlet Intermediate.... | 9 | 1,140 | 7 | 1,510 | 11 | 800 | 7 | 100 | 1 | 1,520 | 3 | 1,920 | 2 | 1,016 | 2 | 356 | 11 | 880 | 13 | 1,280 | 7 | 671 | 6 | 1,833 |
| 15 | Long Scarlet Altringham . | 8 | 1,490 | 8 | 1,380 | 9 | 1,000 | 8 | 520 | — | 1,760 | 3 | 160 | 1 | 1,960 | 1 | 1,076 | 19 | 1,600 | 17 | 1,787 | 8 | 362 | 7 | 1,785 |

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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Central Experimental Farm, Ottawa, Ont., first sowing..... | 18 | tons | 91 | lbs. | Experimental Farm, Indian Head, N.W.T., first sowing..... | 2 | tons 1,913 lbs. |
| do do do second sowing .... | 14 | do | 1,909 | do | do do do second sowing .... | 3 | do 136 do |
| Experimental Farm, Nappan, N.S., first sowing..... ..... | 15 | do | 653 | do | do Agassiz, B.C., first sowing... ..... | 28 | do 904 do |
| do do second sowing..... | 11 | do | 1,024 | do | do do second sowing..... | 25 | do 722 do |
| do Brandon, Man., first sowing ..... | 2 | do | 635 | do | Average crop from all the plots at all the farms, first sowing ... | 13 | do 839 do |
| do do second sowing..... : | 3 | do | 1,187 | do | do do do second sowing . | 11 | do 1,396 do |

The carrots have also given the larger crops from the early sown plots. Taking the average yield of the carrot plots on all the farms, the crops from the early sowings have exceeded those from the plots sown later by 1 ton 1,443 lbs. per acre.

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

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Mamm. White Intermediate. | 24 | 180 | 4. Iverson's Champion ..... | 21 | 1,230 |
| 2. Green Top White Orthe..... | 23 | 1,850 | 5. Improved Short White..... | 21 | 570 |
| 3. Giant White Vosges..... | 23 | 200 | 6. Half-long White ..... | 20 | 1,305 |

An average crop of 22 tons, 889 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Iverson's Champion..... | 21 | 1,320 | 4. Half-long Chantenay..... . | 17 | 960 |
| 2. Giant White Vosges..... | 21 | 560 | 5. Improved Short White..... | 17 | 960 |
| 3. Green Top White Orthe..... | 18 | 1,820 | 6. Yellow Intermediate..... | 16 | 1,440 |

An average crop of 18 tons 1,843 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant White Vosges, 2nd sowing..... | 5 | 1440 | 4. White Green Top Orthe..... | 4 | 360 |
| 2. Iverson's Champion, 2nd sowing ..... | 5 | 1,000 | 5. Yellow Intermediate, 2nd sowing..... | 3 | 1,920 |
| 3. Half-long White, 2nd sowing | 4 | 1,240 | 6. Scarlet Intermediate, 2nd sowing ..... | 3 | 1,920 |

An average crop of 4 tons 1,313 lbs. per acre.

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Iverson's Champion, 2nd sowing..... | 4 | 448 | 4. Giant White Vosges, 2nd sowing ..... | 3 | 1,392 |
| 2. Improved Short White..... | 3 | 1,524 | 5. White Belgian, 2nd sowing.. | 3 | 1,392 |
| 3. Half-long Chantenay, 2nd sowing ..... | 3 | 1,524 | 6. Mamm. White Intermediate. | 3 | 1,128 |

An average crop of 3 tons 1,568 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant White Vosges, 2nd sowing ..... | 46 | 200 | 4. Improved Short White ..... | 33 | 1,407 |
| 2. Yellow Intermediate..... | 39 | 1,200 | 5. Green Top White Orthe..... | 33 | 880 |
| 3. Iverson's Champion, 2nd sowing..... | 36 | 1,060 | 6. Carter's Orange Giant. . .. | 31 | 1,360 |

An average crop of 36 tons 1,688 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Giant White Vosges..... ... | 18 | 490 | 4. Improved Short White ..... | 15 | 1,120 |
| 2. Green Top White Orthe..... | 16 | 1,386 | 5. Iverson's Champion..... | 15 | 853 |
| 3. Yellow Intermediate .... ... | 15 | 1,220 | 6. Mamm. White Intermediate. | 14 | 1,630 |

An average crop of 16 tons 115 lbs. per acre.

## SUGAR BEETS.

Five varieties of sugar beets have been tested during 1897, sown in drills or on the flat from 2 to 2½ feet apart. Two sowings were made in each case, 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 the following :—At Ottawa, 11th October; Nappan, 14th and 15th October; Brandon, 30th September; Indian Head, 4th October; and at Agassiz, 15th October. The yield per acre in each instance has been calculated from the weight of roots gathered from two rows, each 66 feet long.

## UNIFORM TEST PLOTS OF SUGAR BEETS.

| Number. | Name of Variety. | Ottawa, Ont. | | Nappan, N.S. | | Brandon, Man. | | Indian Head, N.W.T | | Agassiz, B.C. | | Average of all Farms. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sown May 8. | Sown May 21. | Sown June 4. | Sown June 18. | Sown May 20. | Sown June 3. | Sown May 18. | Sown May 28. | Sown April 26. | Sown May 10. | 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 | Improved Imperial.... | 23 90 | 15 30 | 20 1,040 | 15 400 | 15 1,680 | 13 1,192 | 9 1,140 | 8 1,292 | 13 1,720 | 13 1,280 | 16 1,134 | 13 439 |
| 2 | Danish Improved..... | 19 5 | 13 1,060 | 22 1,600 | 15 1,920 | 13 928 | 20 392 | 10 1,252 | 11 308 | 14 952 | 13 1,104 | 16 147 | 14 1,757 |
| 3 | Red Top Sugar..... .. | 18 1,620 | 16 1,110 | 22 1,600 | 16 1,440 | 20 1,184 | 16 1,792 | 9 1,932 | 12 1,740 | 12 1,000 | 15 800 | 16 1,867 | 15 1,374 |
| 4 | Wanzleben..... | 18 1,015 | 14 1,205 | 22 840 | 14 1,640 | 11 176 | 13 1,720 | 8 632 | 11 704 | 14 1,040 | 13 1,456 | 14 1,941 | 13 1,345 |
| 5 | Vilmorin's Improved.. | 15 1,680 | 15 745 | 15 1,160 | 14 120 | 20 656 | 10 1,120 | 7 1,180 | 7 1,120 | 13 400 | 12 1,520 | 14 1,015 | 12 125 |

The crop from the successive sowings of sugar beets at the experimental farms have averaged as follows :—

| | | Tons. | Lbs. |
|---|---|---|---|
| Central Experimental Farm, Ottawa, Ont., | 1st sowing | 19 | 82 |
| " " " | 2nd " | 15 | 30 |
| Experimental Farm, Nappan, N.S. | 1st " | 20 | 1,648 |
| " " | 2nd " | 15 | 704 |
| " Brandon, Man. | 1st " | 16 | 525 |
| " " | 2nd " | 15 | 43 |
| " Indian Head, N.W.T. | 1st " | 9 | 427 |
| " " | 2nd " | 10 | 633 |
| " Agassiz, B.C. | 1st " | 13 | 1,422 |
| " " | 2nd " | 13 | 1,632 |

Average crop from all the plots on all the farms, first sowing, 15 tons 1,621 lbs.; second sowing, 13 tons 1,808 lbs.

The four varieties of sugar beets which have produced the heaviest crops at the several experimental farms during 1897, are the following—where not otherwise stated the crops grown are from the first sowing :—

CENTRAL EXPERIMENTAL FARM, OTTAWA, ONT.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Improved Imperial..... | 23 | 90 | 5. Danish Improved.... ..... | 19 | 5 |
| 2. Danish Red Top... ..... | 20 | 1,745 | 4. Red Top Sugar..... | 18 | 1,620 |

An average crop of 20 tons 865 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Danish Improved..... | 22 | 1,600 | 3. Wanzleben..... | 22 | 840 |
| 2. Red Top Sugar..... | 22 | 1,600 | 4. Improved Imperial.. ..... | 20 | 1,040 |

An average crop of 22 tons 270 lbs. per acre.

EXPERIMENTAL FARM FOR MANITOBA, BRANDON, MAN.

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Red Top Sugar..... | 20 | 1,184 | 3. Danish Improved, 2nd sowing | 20 | 392 |
| 2. Vilmorin's Improved.. ... | 20 | 656 | 4. Improved Imperial..... | 15 | 1,680 |

An average crop of 19 tons 478 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Red Top Sugar, 2nd sowing. | 12 | 1,740 | 3. Danish Improved, 2nd sowing | 11 | 308 |
| 2. Wanzleben " | 11 | 704 | 4. Improved Imperial .... .... | 9 | 1,140 |

An average crop of 11 tons 473 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Red Top Sugar, 2nd sowing. | 15 | 800 | 3. Danish Improved..... | 14 | 952 |
| 2. Wanzleben " | 14 | 1,040 | 4. Improved Imperial..... | 13 | 1,720 |

An average crop of 14 tons 1,128 lbs. per acre.

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

| | Per Acre. Tons. | Lbs. | | Per Acre. Tons. | Lbs. |
|---|---|---|---|---|---|
| 1. Red Top Sugar .... ..... | 16 | 1,857 | 3. Danish Improved..... .... | 16 | 147 |
| 2. Improved Imperial..... | 16 | 1,134 | 4. Wanzleben..... .. ..... | 14 | 1,941 |

An average of 16 tons 270 lbs. per acre.

## POTATOES.

Ninety-eight varieties of potatoes have been under trial in uniform test plots during 1897. The potatoes for planting were cut into pieces with two or three eyes in each, and these were planted in rows 26 to 30 inches apart, the sets being placed a foot apart in the rows. The dates of planting

and digging were the following:—At Ottawa, planted 21st and 22nd May, dug from 4th to 7th October; Nappan, planted 25th May, dug 1st to 11th October; Brandon, planted 21st May, dug 29th September; Indian Head, planted 17th May, dug 4th October; and at Agassiz, planted 4th to 28th May, and dug 18th to 25th September. The yield per acre has been calculated in each case from the weight of tubers gathered from two rows, each 66 feet long.

UNIFORM TEST PLOTS OF POTATOES.

| Number. | Name of Variety. | Yields at the Several Experimental Farms, Season of 1897. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ottawa, Ont. | | Nappan, N.S. | | Brandon, Man. | | Indian Head, N.W.T. | | Agassiz, B.C. | | Average of all the Farms. | |
| | | Bush. | Lbs | Bush. | Lbs | Bush. | Lbs | Bush. | Lbs | Bush. | Lbs | Bush. | Lbs |
| 1 | Holborn Abundance | 402 | 36 | 412 | 30 | 73 | 20 | 255 | 12 | 418 | .. | 312 | 20 |
| 2 | Seedling No. 230 | 400 | 24 | 390 | .. | 183 | 20 | 314 | 16 | 355 | 40 | 328 | 44 |
| 3 | Seedling No. 7 | 381 | 42 | 400 | .. | 220 | .. | 292 | 36 | 535 | 20 | 365 | 55 |
| 4 | Irish Daisy | 372 | 54 | 277 | 30 | . | .... | 262 | .. | 591 | 36 | 376 | .. |
| 5 | Chicago Market | 356 | 24 | 245 | .. | 238 | 20 | ..... | | 360 | 10 | 299 | 58 |
| 6 | Dreer's Standard | 346 | 38 | 290 | .. | 242 | .. | 266 | 12 | 419 | 48 | 312 | 56 |
| 7 | Earliest of All | 346 | 30 | 240 | .. | 179 | 40 | .... | ..... | 319 | 44 | 271 | 28 |
| 8 | Northern Spy | 346 | 30 | 300 | .. | 187 | .. | 530 | 24 | 408 | 18 | 354 | 26 |
| 9 | Rose No. 9 | 338 | 48 | ..... | | 121 | .. | 127 | 36 | 513 | 20 | 275 | 11 |
| 10 | Reeve's Rose | 336 | 36 | 315 | .. | 341 | .. | 231 | .. | 481 | 4 | 340 | 56 |
| 11 | Vanier | 333 | 18 | 255 | .. | 176 | .. | 173 | 48 | 506 | .. | 288 | 49 |
| 12 | Daisy | 332 | 37 | 275 | .. | 51 | 20 | 217 | 48 | 293 | 20 | 234 | 1 |
| 13 | Irish Cobbler | 321 | 12 | 317 | 30 | 231 | .. | 156 | 12 | 305 | 4 | 266 | 12 |
| 14 | Flemish Beauty Seedling | 315 | 42 | 177 | 30 | 304 | 20 | 310 | .. | 352 | 30 | 292 | .. |
| 15 | London | 315 | 42 | 265 | .. | 124 | 40 | ..... | | 344 | 20 | 262 | 25 |
| 16 | Everett | 311 | 18 | 320 | .. | 260 | 20 | 129 | 48 | 358 | 36 | 276 | .. |
| 17 | Early Sunrise | 309 | 47 | 280 | .. | 146 | 40 | 288 | 12 | 528 | .. | 310 | 32 |
| 18 | Reading Giant | 302 | 30 | 287 | 30 | 315 | 20 | 160 | 36 | 481 | 4 | 309 | 24 |
| 19 | Sharpe's Seedling | 300 | 18 | 295 | .. | 198 | .. | 156 | 12 | 334 | 24 | 256 | 47 |
| 20 | Troy Seedling | 297 | 44 | 362 | 30 | 190 | 40 | 100 | .. | 457 | 36 | 281 | 42 |
| 21 | Delaware | 296 | 38 | 245 | .. | 201 | 40 | 151 | 48 | 303 | 36 | 239 | 44 |
| 22 | Charles Downing | 292 | 36 | 290 | .. | 198 | .. | 286 | .. | 469 | 20 | 307 | 11 |
| 23 | Late Puritan | 287 | 22 | 295 | .. | 253 | .. | 169 | 24 | 536 | 48 | 308 | 19 |
| 24 | Wonder of the World | 287 | 6 | 295 | .. | 190 | 40 | 215 | 36 | 234 | 40 | 244 | 36 |
| 25 | New Variety No. 1 | 284 | 21 | 275 | .. | 363 | .. | 301 | 24 | 409 | 36 | 326 | 40 |
| 26 | State of Maine | 283 | 15 | 347 | 30 | 209 | .. | 290 | 24 | 440 | .. | 314 | 2 |
| 27 | Early Six Weeks | 280 | 22 | 285 | .. | 183 | 20 | ..... | | 205 | 20 | 238 | 30 |
| 28 | Crown Jewel | 280 | 8 | 272 | 30 | 179 | 40 | 145 | 12 | 352 | 30 | 246 | .. |
| 29 | Seattle | 278 | 34 | 377 | 30 | 201 | 40 | 129 | 48 | 315 | 20 | 260 | 34 |
| 30 | Clarke's No. 1 | 278 | 18 | 412 | 30 | 289 | 40 | 330 | .. | 528 | .. | 367 | 42 |
| 31 | Early Ohio | 277 | 53 | 325 | .. | 73 | 20 | 134 | 12 | 228 | 48 | 207 | 51 |
| 32 | Vick's Extra Early | 269 | 30 | 287 | 30 | 71 | .. | 389 | 24 | 414 | .. | 286 | 17 |
| 33 | White Beauty | 268 | 24 | 215 | .. | 179 | 40 | 325 | 36 | 238 | 48 | 245 | 30 |
| 34 | Lightning Express | 268 | 24 | 320 | .. | 44 | .. | ..... | | 286 | .. | 229 | 36 |
| 35 | McKenzie | 267 | 18 | 345 | .. | 216 | 20 | 222 | 12 | 363 | 44 | 282 | 55 |
| 36 | Great Divide | 266 | 12 | 320 | .. | 256 | 40 | ..... | | 407 | 14 | 312 | 31 |
| 37 | Green Mountain | 266 | 12 | 315 | .. | 194 | 20 | ..... | | 300 | 40 | 269 | 3 |
| 38 | American Wonder | 266 | 12 | 275 | .. | 212 | 40 | 290 | 24 | 598 | 24 | 328 | 32 |
| 39 | Early Rose | 265 | 31 | 380 | .. | 198 | .. | 198 | .. | 290 | 24 | 266 | 23 |
| 40 | Carman No. 1 | 265 | 22 | 335 | .. | 201 | 40 | 129 | 48 | 299 | 12 | 246 | 12 |
| 41 | Dakota Red | 264 | .. | 360 | .. | 183 | 20 | 305 | 48 | 445 | 52 | 311 | 48 |
| 42 | Hale's Champion | 264 | .. | 292 | 20 | 249 | 20 | 207 | .. | 284 | 32 | 259 | 28 |
| 43 | Money Maker | 264 | .. | 305 | .. | 209 | .. | ..... | | 330 | .. | 277 | .. |
| 44 | Early Gem | 261 | 48 | 310 | .. | 194 | 20 | 248 | 12 | 271 | 20 | 257 | 8 |
| 45 | American Giant | 261 | 31 | ..... | | 143 | .. | ..... | | 374 | .. | 259 | 30 |
| 46 | Lizzie's Pride | 260 | 42 | 325 | .. | 256 | 40 | 283 | 48 | 249 | 20 | 275 | 6 |
| 47 | Freeman | 260 | 42 | 377 | 30 | 110 | .. | ..... | ... | 271 | 20 | 254 | 53 |

UNIFORM TEST PLOTS OF POTATOES—*Continued.*

| Number. | Name of Variety. | Yields at the several Experimental Farms, Season of 1897. | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ottawa, Ont. | | Nappan, N.S. | | Brandon, Man. | | Indian Head, N.W.T. | | Agassiz, B.C. | | Average of all the Farms. | |
| | | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. | Bush. | Lbs. |
| 48 | Burpee's Extra Early | 259 | 36 | 370 | .. | 198 | .. | 129 | 48 | 228 | 48 | 237 | 14 |
| 49 | Algoma No. 1 | 258 | 22 | 275 | .. | 139 | 20 | 224 | 24 | 418 | .. | 263 | 1 |
| 50 | Ideal | 255 | 12 | 350 | .. | 179 | 40 | ..... | | 334 | 24 | 279 | 49 |
| 51 | Early White Prize | 254 | 39 | 252 | 30 | 124 | 40 | 363 | .. | 316 | 48 | 262 | 19 |
| 52 | Russell's Seedling | 253 | .. | 307 | 30 | 205 | 20 | 180 | .. | .... | .. | 236 | 27 |
| 53 | Thorburn | 251 | 54 | 265 | — | 139 | 20 | ... | ..... | 296 | 22 | 238 | 9 |
| 54 | Early Harvest | 250 | 48 | 307 | 30 | 172 | 20 | 158 | 24 | 253 | 28 | 228 | 30 |
| 55 | Lee's Favourite | 248 | 36 | 412 | 30 | 88 | — | 530 | 24 | 403 | 20 | 336 | 34 |
| 56 | Polaris | 248 | 36 | 182 | 30 | 154 | — | 268 | 24 | 297 | 44 | 230 | 15 |
| 57 | Columbus | 244 | 12 | 292 | 30 | 165 | — | 224 | 24 | 418 | — | 268 | 49 |
| 58 | King of the Roses | 244 | 12 | 240 | — | 245 | 40 | 79 | — | 256 | 40 | 213 | 6 |
| 59 | Record | 243 | 6 | 325 | — | 88 | — | 211 | 12 | 370 | — | 239 | 28 |
| 60 | Rochester Rose | 242 | — | 312 | 30 | 154 | — | ..... | | 422 | 40 | 257 | 47 |
| 61 | Early Norther | 240 | 54 | 217 | 30 | 176 | — | 277 | 12 | 408 | 18 | 263 | 59 |
| 62 | Prize Taker | 238 | 42 | 195 | — | 71 | — | 246 | 24 | 528 | — | 255 | 49 |
| 63 | Quaker City | 237 | 36 | 327 | 30 | 201 | 40 | 272 | 48 | 360 | 10 | 279 | 57 |
| 64 | Bill Nye | 237 | 36 | 295 | — | 132 | — | 77 | — | 419 | 28 | 232 | 13 |
| 65 | Pride of the Table | 237 | 3 | 275 | — | 168 | 40 | ..... | | 451 | 44 | 283 | 7 |
| 66 | Beauty of Hebron | 235 | 40 | 222 | 30 | 95 | 20 | 127 | 36 | 303 | 36 | 196 | 56 |
| 67 | Burnaby Seedling | 234 | 1 | 322 | 30 | 161 | 20 | 105 | 36 | 302 | 8 | 225 | 7 |
| 68 | Brown's Rot Proof | 233 | 45 | 295 | — | 249 | 20 | ..... | | 454 | 40 | 308 | 11 |
| 69 | Satisfaction | 233 | 12 | 225 | — | 176 | — | 211 | 12 | 457 | 36 | 260 | 36 |
| 70 | Monroe County | 232 | 6 | 285 | — | 194 | 20 | ... | .... | 462 | — | 293 | 21 |
| 71 | Fillbasket | 231 | — | 300 | — | 124 | 40 | 198 | — | 244 | 36 | 219 | 39 |
| 72 | Pride of the Market | 224 | 24 | 262 | 30 | 253 | — | 220 | — | 354 | 12 | 262 | 49 |
| 73 | Early Puritan | 223 | 18 | 460 | — | 172 | 20 | 246 | 24 | 528 | — | 326 | — |
| 74 | Victor Rose | 218 | 54 | 250 | — | 165 | — | 257 | 24 | 308 | — | 239 | 52 |
| 75 | New Queen | 218 | 46 | 265 | — | 110 | — | ..... | | 411 | — | 251 | 11 |
| 76 | Queen of the Valley | 218 | 37 | 317 | 30 | 183 | 20 | ..... | | 281 | 36 | 250 | 16 |
| 77 | Honeoye Rose | 217 | 48 | 250 | — | 22 | — | ..... | | 322 | 40 | 203 | 7 |
| 78 | Harbinger | 216 | 50 | 267 | 30 | 113 | 40 | 169 | 24 | 176 | — | 188 | 41 |
| 79 | Rural No. 2 | 216 | 42 | 335 | — | 91 | 40 | .. .. | ... | 308 | — | 237 | 50 |
| 80 | Pearce's Extra Early | 216 | 1 | 170 | — | 146 | 40 | ..... | | 414 | — | 236 | 40 |
| 81 | Maggie Murphy | 216 | 25 | 315 | — | 106 | 20 | 226 | 36 | 205 | 20 | 213 | 56 |
| 82 | World's Fair | 214 | 55 | 270 | — | 176 | — | 387 | 12 | 454 | 40 | 300 | 33 |
| 83 | Hopeful | 213 | 49 | 295 | — | 223 | 40 | 125 | 24 | 256 | 40 | 222 | 55 |
| 84 | Empire State | 211 | 53 | 252 | 30 | 194 | 20 | 213 | 24 | 498 | 40 | 274 | 9 |
| 85 | Rural Blush | 211 | 12 | 272 | 30 | 146 | 40 | 231 | 24 | 322 | 40 | 236 | 53 |
| 86 | Good News | 209 | — | 345 | — | 168 | 40 | 123 | 12 | 352 | 30 | 239 | 40 |
| 87 | Ohio Junior | 209 | — | 175 | — | 71 | — | 321 | 12 | 403 | 20 | 235 | 54 |
| 88 | Clay Rose | 206 | 48 | 192 | 30 | 88 | — | .... | ..... | 633 | 36 | 280 | 13 |
| 89 | Carman No. 3 | 202 | 24 | 360 | — | 88 | — | 451 | — | 447 | 20 | 309 | 45 |
| 90 | Brownell's Winner | 202 | 24 | 312 | 30 | 168 | 40 | 330 | — | 563 | 12 | 315 | 21 |
| 91 | Peerless Junior | 187 | — | 352 | — | 161 | 20 | ..... | | 362 | 16 | 265 | 39 |
| 92 | Houlton Rose | 184 | 48 | 220 | — | 238 | 20 | 226 | — | 322 | 40 | 238 | 22 |
| 93 | Table King | 182 | 36 | 215 | — | 14 | 40 | 92 | 24 | 176 | — | 136 | 8 |
| 94 | I. X. L. | 179 | 18 | 400 | — | 102 | 40 | 316 | 48 | 264 | — | 252 | 33 |
| 95 | General Gordon | 176 | 16 | 345 | — | 264 | — | ..... | | 225 | 22 | 252 | 39 |
| 96 | Stourbridge Glory | 161 | 42 | 235 | — | 102 | 40 | 204 | 36 | ..... | | 175 | 59 |
| 97 | Orphans | 149 | 3 | 257 | 30 | 66 | — | 138 | 36 | 294 | 4 | 181 | 3 |
| 98 | Seedling 214 | 139 | 42 | 200 | — | 146 | 40 | 197 | — | 256 | 40 | 188 | — |

The following, which are omitted, failed to germinate or were injured during growth so that they could not be reported on:—At Nappan, Nos. 9, 45; Brandon, No. 4; Indian Head, Nos. 5, 7, 15, 27, 34, 36, 37, 43, 45, 47, 50, 53, 60, 65, 68, 70, 75, 76, 77, 79, 80, 88, 91, 95, and at Agassiz, Nos. 52, 96.

The twelve varieties of potatoes which have produced the heaviest crops at the several experimental farms during 1897 are the following:—

### Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Holborn Abundance | 402 | 36 | 7. Earliest of All | 346 | 30 |
| 2. Seedling No. 230 | 400 | 24 | 8. Northern Spy | 346 | 30 |
| 3. Seedling No. 7 | 381 | 42 | 9. Rose No. 9 | 338 | 18 |
| 4. Irish Daisy | 372 | 54 | 10. Reeves' Rose | 336 | 36 |
| 5. Chicago Market | 356 | 24 | 11. Vanier | 333 | 18 |
| 6. Dreer's Standard | 346 | 38 | 12. Daisy | 332 | 37 |

An average crop of 357 bushels 55 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Early Puritan | 460 | .. | 7. Seedling No. 230 | 390 | .. |
| 2. Clarke's No. 1 | 412 | 30 | 8. Early Rose | 380 | .. |
| 3. Lee's Favourite | 412 | 30 | 9. Freeman | 377 | 30 |
| 4. Holborn Abundance | 412 | 30 | 10. Seattle | 377 | 30 |
| 5. I. X. L. | 400 | .. | 11. Burpee's Extra Early | 370 | .. |
| 6. Seedling No. 7 | 400 | .. | 12. Troy Seedling | 362 | 30 |

An average crop of 396 bushels 15 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. New Variety No. 1 | 363 | .. | 7. Everett | 260 | 20 |
| 2. Reeves' Rose | 341 | .. | 8. Great Divide | 256 | 40 |
| 3. Reading Giant | 315 | 20 | 9. Lizzie's Pride | 256 | 40 |
| 4. Flemish Beauty Seedling | 304 | 20 | 10. Late Puritan | 253 | .. |
| 5. Clarke's No. 1 | 289 | 40 | 11. Pride of the Market | 253 | .. |
| 6. General Gordon | 264 | .. | 12. Hale's Champion | 249 | 20 |

An average crop of 283 bushels 52 lbs. per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Lee's Favourite | 530 | 24 | 7. Brownell's Winner | 330 | .. |
| 2. Northern Spy | 530 | 24 | 8. Clarke's No. 1 | 330 | .. |
| 3. Carman No. 3 | 451 | .. | 9. White Beauty | 325 | 36 |
| 4. Vick's Extra Early | 389 | 24 | 10. Ohio Junior | 321 | 12 |
| 5. World's Fair | 387 | 12 | 11. I. X. L. | 316 | 48 |
| 6. Early White Prize | 363 | .. | 12. Seedling No. 230 | 314 | 36 |

An average crop of 382 bushels 28 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Clay Rose | 633 | 36 | 7. Early Sunrise | 528 | .. |
| 2. American Wonder | 598 | 24 | 8. Early Puritan | 528 | .. |
| 3. Irish Daisy | 591 | 36 | 9. Clarke's No. 1 | 528 | .. |
| 4. Brownell's Winner | 563 | 12 | 10. Prize Taker | 528 | .. |
| 5. Late Puritan | 536 | 48 | 11. Rose No. 9 | 513 | 20 |
| 6. Seedling No. 7 | 535 | 20 | 12. Vanier | 506 | .. |

An average crop of 549 bushels 11 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Irish Daisy | 376 | .. | 7. Seedling No. 230 | 328 | 44 |
| 2. Clarke's No. 1 | 367 | 42 | 8. American Wonder | 328 | 32 |
| 3. Seedling No. 7 | 365 | 55 | 9. New Variety No. 1 | 326 | 40 |
| 4. Northern Spy | 354 | 26 | 10. Early Puritan | 326 | .. |
| 5. Reeves' Rose | 340 | 56 | 11. Brownell's Winner | 315 | 21 |
| 6. Lee's Favourite | 336 | 34 | 12. State of Maine | 314 | 7 |

An average crop of 340 bushels 5 lbs. per acre.

The average crop of all the varieties of potatoes tested at each of the experimental farms was as follows: At Ottawa, 259 bush. 17 lbs. per acre; Nappan, 295 bush. 8 lbs.; Brandon, 171 bush. 30 lbs.; Indian Head, 230 bush. 55 lbs., and at Agassiz, 366 bush. 55 lbs. The average return given by the whole of the varieties at all the farms was 265 bushels 58 lbs. per acre.

## AVERAGE CROPS FOR THE PAST THREE YEARS.

The results of experimental tests of varieties of grain to gain information as to their relative productiveness and usefulness, are much more reliable as a guide to the selection of the best sorts when the average experience of several years can be given. For the last three years a similar series of test plots to those reported in this bulletin has been conducted under conditions as nearly uniform as it has been possible to secure. The average of the crops obtained are herewith presented.

### THREE YEARS' EXPERIENCE WITH VARIETIES OF OATS.

The twelve varieties of oats which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

#### Central Experimental Farm, Ottawa.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Banner | 68 | 30 | 7. Golden Giant | 63 | 15 |
| 2. Golden Beauty | 65 | 15 | 8. American Beauty | 62 | 12 |
| 3. American Triumph | 65 | 13 | 9. White Schonen | 61 | 28 |
| 4. Columbus | 65 | 12 | 10. Improved Ligowo | 61 | 18 |
| 5. White Russian | 65 | .. | 11. Bavarian | 59 | 22 |
| 6. Abundance | 63 | 23 | 12. Wallis | 58 | 23 |

An average yield of 63 bushels 15 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Wallis | 74 | 31 | 7. Golden Beauty | 69 | 7 |
| 2. White Russian | 73 | 31 | 8. Early Blossom | 68 | 28 |
| 3. Banner | 71 | 13 | 9. American Beauty | 68 | 21 |
| 4. California Prolific Black | 70 | 7 | 10. Abyssinia | 67 | 15 |
| 5. Columbus | 70 | .. | 11. White Schonen | 67 | 9 |
| 6. Early Gothland | 69 | 13 | 12. Improved Ligowo | 65 | 17 |

An average yield of 69 bushels 24 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Banner | 86 | 16 | 7. Golden Beauty | 72 | 22 |
| 2. Early Golden Prolific | 86 | 6 | 8. Rosedale | 71 | 26 |
| 3. American Beauty | 85 | 20 | 9. Bavarian | 69 | 24 |
| 4. Holstein Prolific | 77 | 25 | 10. Improved Ligowo | 69 | 1 |
| 5. Golden Giant | 77 | 15 | 11. Joanette | 69 | 4 |
| 6. White Schonen | 73 | 1 | 12. Columbus | 68 | 11 |

An average yield of 75 bushels 20 lbs. per acre.

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Columbus | 92 | 19 | 7. Improved Ligowo | 84 | 29 |
| 2. Holstein Prolific | 91 | 3 | 8. Wide Awake | 84 | 21 |
| 3. American Beauty | 89 | 1 | 9. Early Archangel | 83 | 14 |
| 4. Abundance | 86 | 33 | 10. Early Golden Prolific | 83 | 8 |
| 5. White Schonen | 85 | 13 | 11. Abyssinia | 81 | 16 |
| 6. Golden Beauty | 85 | 3 | 12. American Triumph | 80 | 27 |

An average yield of 85 bushels 23 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Early Gothland | 61 | 4 | 7. Columbus | 56 | 9 |
| 2. Lincoln | 60 | 18 | 8. Oderbruch | 56 | 4 |
| 3. Bavarian | 58 | 28 | 9. American Beauty | 55 | 33 |
| 4. Early Golden Prolific | 58 | 16 | 10. Bonanza | 55 | 31 |
| 5. Golden Giant | 57 | 5 | 11. Hazlett's Seizure | 55 | 23 |
| 6. Early Blossom | 57 | 4 | 12. Banner | 55 | 22 |

An average yield of 57 bushels 14 lbs. per acre.

The twelve varieties which have produced the largest average crops for the past three years 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 | 72 | 10 | 7. Holstein Prolific | 67 | 18 |
| 2. Banner | 72 | 7 | 8. Improved Ligowo | 66 | 18 |
| 3. Columbus | 70 | 15 | 9. White Russian | 65 | 25 |
| 4. Golden Beauty | 69 | 1 | 10. Wallis | 65 | 18 |
| 5. White Schonen | 68 | 7 | 11. Bavarian | 64 | 33 |
| 6. Early Golden Prolific | 67 | 26 | 12. Early Gothland | 64 | 22 |

An average yield of 67 bushels 32 lbs. per acre.

The Abundance, which is also a very promising oat, averaged 64 bushels 17 lbs. per acre, within five lbs. per acre of the Early Gothland.

## THREE YEARS' EXPERIENCE WITH VARIETIES OF BARLEY.

### Two-Rowed Barley.

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

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Sidney | 41 | 39 | 4. Canadian Thorpe | 37 | 47 |
| 2. Newton | 40 | 25 | 5. Beaver | 37 | 37 |
| 3. Bolton | 39 | 18 | 6. Danish Chevalier | 37 | 27 |

An average yield of 39 bushels 8 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. French Chevalier | 38 | 16 | 4. Canadian Thorpe | 35 | .. |
| 2. Danish Chevalier | 36 | 12 | 5. Bolton | 33 | 9 |
| 3. Prize Prolific | 35 | 13 | 6. Newton | 32 | 37 |

An average yield of 35 bushels 6 lbs. per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. French Chevalier | 48 | 46 | 4. Thanet | 40 | 27 |
| 2. Sidney | 48 | 9 | 5. Canadian Thorpe | 38 | 6 |
| 3. Newton | 42 | 1 | 6. Beaver | 37 | 47 |

An average yield of 42 bushels 31 lbs. per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. French Chevalier | 60 | 23 | 4. Danish Chevalier | 55 | 47 |
| 2. Beaver | 57 | 3 | 5. Newton | 55 | 46 |
| 3. Canadian Thorpe | 56 | 4 | 6. Prize Prolific | 53 | 33 |

An average yield of 56 bushels 26 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Canadian Thorpe | 40 | 20 | 4. Kinver Chevalier | 35 | 44 |
| 2. French Chevalier | 39 | 41 | 5. Beaver | 33 | 46 |
| 3. Danish Chevalier | 36 | 45 | 6. Prize Prolific | 31 | 32 |

An average yield of 36 bushels 22 lbs. per acre.

The six varieties of two-rowed barley which have produced the largest average crops for the past three years on all the farms are :—

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1 French Chevalier | 44 | 25 | 4. Newton | 39 | 40 |
| 2. Canadian Thorpe | 41 | 25 | 5. Beaver | 39 | 34 |
| 3. Danish Chevalier | 40 | 42 | 6. Sidney | 39 | 14 |

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

### Six-Rowed Barley.

The six varieties of six-rowed barley which have averaged the heaviest crops at the several experimental farms during the past three years are:—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Odessa | 56 | 44 | 4. Trooper | 51 | 27 |
| 2. Mensury | 56 | 9 | 5. Oderbruch | 47 | 47 |
| 3. Royal | 53 | 39 | 6. Petschora | 47 | 6 |

An average yield of 52 bushels 12 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Mensury | 52 | 37 | 4. Oderbruch | 41 | 45 |
| 2. Surprise | 46 | 5 | 5. Success | 41 | 29 |
| 3. Trooper | 43 | 36 | 6. Vangaard | 41 | 18 |

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

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Mensury | 54 | 11 | 4. Nugent | 51 | 32 |
| 2. Common | 53 | 43 | 5. Surprise | 47 | 31 |
| 3. Trooper | 52 | 21 | 6. Summit | 46 | 15 |

An average yield of 51 bushels, 1 lb. per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N. W. T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Rennie's Improved | 61 | 45 | 4. Common | 60 | 23 |
| 2. Odessa | 61 | 35 | 5. Oderbruch | 58 | 36 |
| 3. Mensury | 60 | 40 | 6. Trooper | 57 | 1 |

An average yield of 60 bushels 6 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Oderbruch | 35 | 5 | 4. Mensury | 31 | 25 |
| 2. Odessa | 32 | 24 | 5. Royal | 30 | 27 |
| 3. Common | 31 | 42 | 6. Petschora | 30 | |

An average yield of 31 bushels 44 lbs. per acre.

The six varieties of six-rowed barley which have produced the largest average crops for the past three years on all the farms are :—

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Mensury | 51 | 5 | 4. Common | 45 | 42 |
| 2. Odessa | 47 | 10 | 5. Royal | 45 | 5 |
| 3. Trooper | 46 | 43 | 6. Oderbruch | 44 | 30 |

An average yield of 46 bushels 38 lbs. per acre.

## THREE YEARS' EXPERIENCE WITH VARIETIES OF SPRING WHEAT.

The twelve varieties of spring wheat which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Preston | 25 | 77 | 7. Wellman's Fife | 21 | 42 |
| 2. Monarch | 22 | 46 | 8. Pringle's Champlain | 21 | 27 |
| 3. Colorado | 22 | 32 | 9. Alpha | 21 | 20 |
| 4. White Russian | 22 | 31 | 10. Advance | 21 | 20 |
| 5. Goose | 22 | 25 | 11. Stanley | 21 | 18 |
| 6. Huron | 21 | 53 | 12. Rio Grande | 21 | 13 |

An average yield of 22 bushels 8 lbs per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Stanley | 35 | 40 | 7. White Connell | 33 | 53 |
| 2. Preston | 35 | 13 | 8. Huron | 33 | 7 |
| 3. Wellman's Fife | 35 | 13 | 9. Advance | 32 | 20 |
| 4. Red Fern | 34 | 47 | 10. Old Red River | 32 | 20 |
| 5. White Russian | 34 | 20 | 11. Rio Grande | 32 | |
| 6. Goose | 34 | | 12. Campbell's White Chaff | 30 | 27 |

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

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. White Fife | 38 | 47 | 7. Advance | 34 | 53 |
| 2. Preston (2 yrs. only) | 37 | 65 | 8. Crown | 34 | 30 |
| 3. Red Fife | 37 | | 9. Monarch | 34 | 20 |
| 4. Rio Grande | 35 | 57 | 10. White Connell | 34 | 10 |
| 5. Goose | 35 | 43 | 11. Old Red River | 33 | 47 |
| 6. Pringle's Champlain | 35 | 37 | 12. White Russian | 32 | 50 |

An average yield of 35 bushels 28 lbs. per acre.

### Experimental Farm for the N.W. Territories, Indian Head, N.W.T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Huron | 44 | 20 | 7. Alpha | 41 | 13 |
| 2. Beandry | 43 | 37 | 8. Preston | 41 | 10 |
| 3. Emporium | 43 | 7 | 9. Rideau | 40 | 53 |
| 4. Red Fern | 41 | 27 | 10. Wellman's Fife | 40 | 50 |
| 5. Red Fife | 41 | 23 | 11. Crown | 40 | 43 |
| 6. Pringle's Champlain | 41 | 23 | 12. Herisson Bearded | 40 | 40 |

An average yield of 41 bushels 44 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. White Fife | 26 | 38 | 7. Alpha | 24 | 10 |
| 2. Herisson Bearded | 26 | 20 | 8. Campbell's White Chaff | 24 | |
| 3. Preston | 25 | 47 | 9. Red Fife | 23 | 28 |
| 4. White Connell | 24 | 40 | 10. Admiral | 23 | 27 |
| 5. Old Red River | 24 | 40 | 11. Red Fern | 23 | 20 |
| 6. Wellman's Fife | 24 | 20 | 12. Monarch | 23 | 13 |

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

The twelve varieties of spring wheat which have produced the largest average crops at all the farms for the past three years are :

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Preston | 33 | 4 | 7. Red Fife | 30 | 9 |
| 2. Monarch | 31 | 2 | 8. White Connell | 30 | 5 |
| 3. Wellman's Fife | 30 | 36 | 9. Advance | 30 | |
| 4. White Fife | 30 | 25 | 10. Goose | 29 | 51 |
| 5. Rio Grande | 30 | 23 | 11. Red Fern | 29 | 49 |
| 6. Old Red River | 30 | 17 | 12. Alpha | 29 | 37 |

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

It will be seen that the new cross-bred varieties, Preston, Advance and Alpha, which were originated at the Experimental Farms stand well to the front in these tests. Huron also, another of the cross-bred sorts, gave an average for the three years of 29 bushels 8 lbs. per acre, only 29 lbs. less than Alpha.

### PEASE, INDIAN CORN, AND FIELD ROOTS.

The records of the varieties of pease are not yet sufficiently complete to permit of an average of the crop for three years being given, a large proportion of those under test, having only been grown for one or two years at most. With Indian Corn the varieties which stand at the head of the list for weight of crop are the large-growing dent sorts, which do not mature well in the short season at Ottawa, and hence do not make the best quality of ensilage.

The different varieties of field roots have not always been consecutively tested during the past three years and therefore records for the full time are not available. In turnips the Purple Top Swedes, in mangels the varieties of Mammoth Long Red, and in carrots the Short White varieties have given the best returns.

## THREE YEARS' EXPERIENCE WITH VARIETIES OF POTATOES.

The twelve varieties of potatoes which have averaged the heaviest crops at the several experimental farms during the past three years are the following :—

### Central Experimental Farm, Ottawa, Ont.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Late Puritan | 366 | 10 | 7. Dreer's Standard | 316 | 7 |
| 2. Irish Daisy | 359 | 4 | 8. Early Harvest | 314 | 8 |
| 3. Holborn Abundance | 357 | 8 | 9. Daisy | 305 | 34 |
| 4. American Wonder | 334 | 46 | 10. Chicago Market | 305 | 23 |
| 5. Everett | 328 | 52 | 11. I. X. L. | 301 | 35 |
| 6. Rochester Rose | 316 | 59 | 12. Empire State | 301 | 16 |

An average yield of 325 bushels 35 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Holborn Abundance | 433 | 3 | 7. Irish Daisy | 377 | 23 |
| 2. Early Puritan | 403 | 13 | 8. Dreer's Standard | 377 | 13 |
| 3. Rochester Rose | 397 | 30 | 9. Empire State | 376 | 23 |
| 4. Clarke's No. 1 | 394 | 2 | 10. Late Puritan | 376 | 7 |
| 5. Carman No. 1 | 393 | 53 | 11. Lee's Favourite | 368 | 30 |
| 6. I. X. L. | 391 | 50 | 12. Pride of the Market | 365 | 50 |

An average yield of 387 bushels 55 lbs per acre.

### Experimental Farm for Manitoba, Brandon, Man.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Pearce's Extra Early | 383 | 47 | 7. Carman No. 1 | 338 | 33 |
| 2. Everett | 363 | .. | 8. Great Divide | 337 | 20 |
| 3. Early Norther | 360 | 33 | 9. Polaris | 333 | 40 |
| 4. Pride of the Market | 351 | 47 | 10. Early Puritan | 332 | 27 |
| 5. Clarke's No. 1 | 344 | 40 | 11. Lizzie's Pride | 323 | 53 |
| 6. Late Puritan | 343 | 27 | 12. Early White Prize | 312 | 57 |

An average yield of 343 bushels 50 lbs per acre.

### Experimental Farm for the N. W. Territories, Indian Head, N. W. T.

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Lee's Favorite | 350 | 36 | 7. State of Maine | 291 | 52 |
| 2. Northern Spy | 339 | .. | 8. Brownell's Winner | 283 | 52 |
| 3. Lizzie's Pride | 325 | 48 | 9. Empire State | 283 | 36 |
| 4. Early White Prize | 307 | 28 | 10. Early Gem | 280 | 48 |
| 5. White Beauty | 298 | 24 | 11. Clarke's No. 1 | 280 | 44 |
| 6. American Wonder | 293 | 20 | 12. Late Puritan | 267 | 36 |

An average yield of 300 bushels 15 lbs. per acre.

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

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Clay Rose | 367 | 39 | 7. Troy Seeding | 277 | 35 |
| 2. Late Puritan | 319 | 15 | 8. Delaware | 267 | 55 |
| 3. Dakota Red | 308 | 5 | 9. Chicago Market | 263 | 31 |
| 4. Vanier | 304 | 35 | 10. American Wonder | 263 | 1 |
| 5. Irish Daisy | 299 | 23 | 11. Early Sunrise | 259 | 7 |
| 6. Prize Taker | 288 | 27 | 12. Moneymaker | 251 | 47 |

An average yield of 289 bushels 12 lbs per acre.

The twelve varieties of potatoes which have produced the largest average crops for the past three years on all the experimental farms are;

| | Per Acre. Bush. | Lbs. | | Per Acre. Bush. | Lbs. |
|---|---|---|---|---|---|
| 1. Late Puritan | 334 | 31 | 7. State of Maine | 301 | 45 |
| 2. Irish Daisy | 332 | 42 | 8. Carman, No. 1 | 300 | 46 |
| 3. Empire State | 310 | 40 | 9. Northern Spy | 297 | 21 |
| 4. Lee's Favorite | 310 | 35 | 10. Early Puritan | 296 | 48 |
| 5. Clarke's No. 1 | 309 | 48 | 11. Rochester Rose | 292 | 28 |
| 6. American Wonder | 302 | 11 | 12. Chicago Market | 292 | 20 |

An average yield of 306 bushels 55 lbs. per acre.

## CONCLUSIONS.

The results of these uniform tests of so many varieties of cereals and potatoes clearly show the wide differences which exist regarding their individual productiveness. Sown side by side, on the same day on similar soil with the same treatment and subject to precisely the same climatic conditions, the variations in the weight of crop are remarkable, and furnish the strongest proof of the importance of selecting those sorts for seed which have shown by their records that they are entitled to rank among the best.

The variations between the largest and smallest crops obtained from the sowing of different sorts under uniform conditions during the past three years, at the Central Experimental Farm, at Ottawa, are shown in the following table :—

| Crop Sown. | Season of 1895. | | | Season of 1896. | | | Season of 1897. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Largest Crop per Acre. | Smallest Crop per Acre. | Difference in Crop per Acre. | Largest Crop per Acre. | Smallest Crop per Acre. | Difference in Crop per Acre. | Largest Crop per Acre. | Smallest Crop per Acre. | Difference in Crop per Acre. |
| | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. | Bush. Lbs. |
| Oats | 74·4 | 16·6 | 57·22 | 85·10 | 45·10 | 40·0 | 57·12 | 18·3 | 39·9 |
| Barley, two-rowed | 43·16 | 20·8 | 23·8 | 51·2 | 34·38 | 16·12 | 41·7 | 14·8 | 26·47 |
| do six-rowed | 58·6 | 32·14 | 25·26 | 69·8 | 41·2 | 28·6 | 54·3 | 35·7 | 18·44 |
| Spring Wheat | 30·40 | 13·40 | 17·0 | 24·20 | 9·0 | 15·20 | 24·55 | 10·21 | 14·34 |
| Pease | 40·10 | 30·20 | 9·50 | 45·50 | 34·0 | 11·50 | 31·50 | 14·0 | 17·56 |
| Potatoes | 385·0 | 133·50 | 251·9 | 455·24 | 159·30 | 295 54 | 402·36 | 139·42 | 262·54 |

The averages obtained, as the results of the tests for three years, also furnish conclusive evidence that many of the more prolific varieties show that prolific tendency from year to year and under all the variations in climate found throughout the Dominion. Any of those varieties which are placed at the head of the list as excelling in productiveness for the past three years may be sown with the confident expectation of a good crop, provided the conditions are moderately favourable, and as the cultivation of these prolific sorts becomes more general, we may reasonably anticipate a considerable increase throughout this country in the average yield of grain in bushels per acre. In view of the large and increasing area under cereal crops in Canada, this subject is of great importance to the country. With the acreage now under cultivation every bushel of increase per acre in the cereal crops would add from two to three million dollars to the receipts of the farming community in Canada, a large proportion of which would be clear profit. Some of the desirable sorts referred to are already obtainable from seedsmen, others are being disseminated by growing them on the experimental farms and distributing the product in sample packages to farmers on application in all parts of the Dominion.