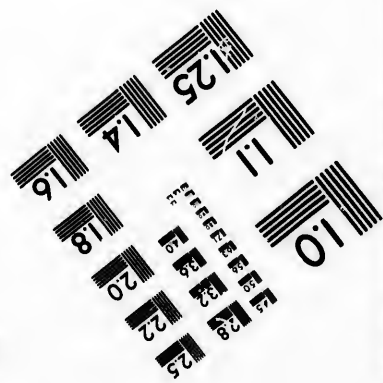
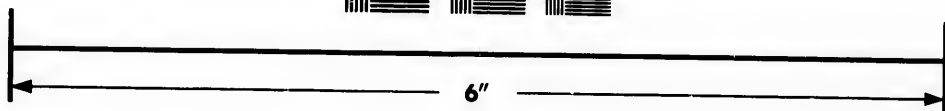
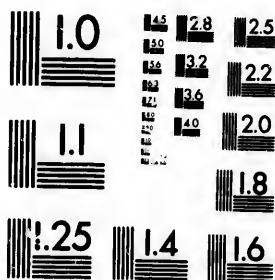


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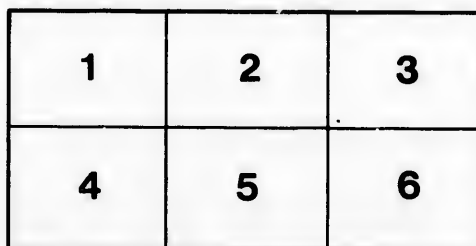
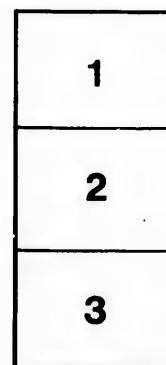
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CENTRAL EXPERIMENTAL FARM.

—:O:—

DEPARTMENT OF AGRICULTURE,
OTTAWA, - - - CANADA.

—:O:—

BULLETIN No. 9.

—:O:—

Results of the growth of Two-rowed Barley from Seed
imported by the Government of Canada.

—:O:—

FEBRUARY, 1891.

CENTRAL EXPERIMENTAL FARM.

—:O:—

DEPARTMENT OF AGRICULTURE,
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BULLETIN NO. 9.

Results of the growth of Two-rowed Barley from Seed
imported by the Government of Canada.

—:O:—

By WM. SAUNDERS, DIRECTOR EXPERIMENTAL FARMS.

—:O:—

A deep interest is felt in this subject at the present time by many Canadian farmers, but more particularly by those residing in those counties in Ontario where barley has been for many years one of the leading crops, and a general desire has been expressed to know the results of the many tests which have been made during the past season, especially with the variety which was imported by the Government for seed. The present bulletin contains these results as far as it has been possible to get them, nearly one-half of the farmers who joined in the test having reported.

When the Government, in February, 1890, decided, on the recommendation of the Minister of Agriculture, to place in the Estimates the sum of \$25,000 for the purchase of two-rowed barley in England to be disposed of for seed in Canada, the announcement was received with general approbation. The prospect of a tariff high enough to exclude the greater part of the crop of Canadian barley from the United States had led Canadians generally to the conclusion that the wisest course was to look for markets elsewhere, and the only other country which could take our barley was Great Britain. An impression prevails in many minds that in order to sell two-rowed barley at all in the mother country for brewing purposes it must be produced to weigh 56 lbs. to the bushel, since this is the English standard weight for a bushel of that grain. This is an error. Any kind of barley of almost any quality, however poor, will sell in the

British market, but the more inferior the grade the lower the price it will bring, and inferior barley from Canada would have to compete with the large quantities of barley of low grades which find their way to England from Russia and other European points, where farm labour is much lower than it is in this country. Since it costs as much to carry a bushel of inferior barley to England as it does to carry one of superior quality, and the question is not one of sale but of relative profit, the farmer here can only expect as his return the English figure, less the cost of transportation and commission, and when the price realized in Britain is low the highest figure which could be paid here would be too low to be remunerative to the grower.

The lower grades of barley, chiefly six-rowed, are used largely for feeding purposes and for distilling; the higher grades of two-rowed barley being in demand for malting and brewing, and for this purpose barley of high quality commands high prices. As a rule, the heavier and plumper the barley the better figure it will bring, the malting barleys varying in weight from 52 to 56 and in some cases to 57 lbs per bushel. There are, however, other points besides weight which influence buyers in the choice of barley for malting, such as mellowness and thinness of skin; but the full value of barley from any new source can be determined best by the character of the beer which results from the brewing. Chemical analyses have shown that barley of high quality is uniformly low in the proportion it contains of albuminoids or nitrogenous products; and as it has been shown that the six-rowed barleys grown in Ontario have a low proportion of nitrogen, and hence are higher in quality than the same class of barleys grown in the United States or Russia, and as it is altogether probable that this condition of the grain is brought about by climatic influences, there are good grounds for hope that two-rowed barleys grown under the same favourable conditions will possess that low proportion of nitrogen which will eventually prove an important factor in determining their value. From an average of 400 analyses published in Europe, extending over six years' crops, the fine two-rowed Austrian barleys average 9.61 per cent., those of England 9.69, Denmark 10.91, France 10.55, North Germany 11.21 and Russia 12.76. In the course of a special investigation into the composition of American barley made by the Chemist of the Department of Agriculture in Washington in 1876, the average proportion of nitrogenous products obtained from 12 analyses of Canadian

barley from Ontario was 9·83, while the average of those grown in different parts of the United States, leaving out California, was 11·50, California standing at 10·50.

A number of samples, both of two-rowed and six-rowed barley, grown in different parts of Canada, are now being analysed by the Chemist of the Experimental Farm, Mr. F. T. Shutt, with the object of gaining further information on this subject.

Canadian six-rowed barley is preferred by brewers in the United States, because having a lower proportion of albuminoids it is better than that grown in their own country; and there is reason to hope that the same relatively high character may be established for Canadian two-rowed barley. If this be done there is no reason why the brewers of Canada and the United States should not also prefer the two-rowed barley, which finds such favour in Great Britain.

As soon as the Canadian Government had decided to place the sum referred to in the Estimates negotiations were begun for the purchase of the barley, and to save time the arrangements were made by cable, pending the receipt of samples which were forwarded by mail. After careful enquiry, 10,000 bushels of barley was purchased from James Carter & Co., of London, England, of the variety known as Prize Prolific, this being selected mainly for the reason that the experiments already made with this barley in Canada had given good results. It was brought out in 5,000 bags of 112 lbs. each, and on arrival carefully inspected, and as it was not found as clean as was expected the bags were all opened and the barley passed twice through the cleaning apparatus of the Montreal Warehouse Company, by which means the sample was made uniform and good, and although not absolutely clean, was, from a commercial standpoint, very clean. Not knowing how large the demand might be it was first offered to Canadian farmers, one bag only to each individual, at \$4 per bag, freight being prepaid to the nearest railway station to the purchaser. As soon as the bulk of the orders were in, this limit of purchase was withdrawn, but the season then was too far advanced in the principal barley districts for the farmers to avail themselves of the offer of a further supply. Indeed in many instances, although every effort was made to secure prompt despatch, the barley purchased did not reach those who ordered it until a week or two after most of their grain was sown, and such late sowing lessens the yield, sometimes very materially.

About 3,200 bags were sold to 2,600 purchasers. Of these, 1,052 have sent in reports of the crop produced and samples of the grain as follows:—

Table showing results of tests of Two-rowed Barley (Prize Prolific), imported by the Government of Canada for Seed.

	Number of Reports with Samples.	Yield per Acre.	Total Yield from 112 Pounds.	Weight per Bushel as Received.	Weight per Bushel after Cleaning.
		Bushels.	Bushels.	Lbs.	Lbs.
Ontario.....	872	25½	28½	50½	51½
Quebec.....	48	20½	22½	48½	50½
Nova Scotia.....	13	26½	26½	47½	48
New Brunswick.....	23	22½	24½	47½	49½
Prince Edward Island.....	11	26½	27½	48	49
Manitoba.....	62	39	43½	48	50½
North-West Territories.....	22	27½	32½	46½	50½
British Columbia.....	1	45½	45½	50½	53

Since the greater part of the barley exported to the United States is sent from the Province of Ontario, some of the information gained from farmers in that Province will be given prominence in this Bulletin. Out of the 872 reports received from Ontario, 337 report a yield of the crop after roots, and the average of these is 27½ bushels per acre and the samples sent weighed as they were received 50½ lbs. per bushel. Many of the farmers who sent samples stated in their letters that they were sent just as they came from the thresher, and since such grain is not in a marketable condition it was thought only fair to the barley to make the samples merchantable by further cleaning. This was done by passing them all through a small fanning mill, which separated from 12 to 18 per cent. of the lighter grain and left the samples weighing on an average 51½ lbs. per bushel.

The results of those grown after other crops, given in 535 reports are as follows: Yield, 24½ bushels per acre; weight as received, 50½ lbs.; after cleaning, 51½ lbs. The average of the barley crop of Ontario for 1890, as given by the Bureau of Statistics, is 22.2 bushels per acre and this is based on the returns from 1,015 correspondents. On comparing the yield of two-rowed barley with this estimate, the barley grown after roots shows an average gain of 5½ bushels per acre and that grown after other crops of over 2 bushels; or, taking the average of the whole, the yield is 25½ bushels, or a gain of 3.3 bushels. Such a gain per acre on the barley acreage of

Ontario for 1890 would add \$1,157,187 to the income of the farming community of the Province and still better results might be looked for with early sowing.

The following table, compiled from the "Statistics of Crops in Ontario," shows the average for eight years, from 1882 to 1889, inclusive, of the acreage in barley in the different counties, the yield per acre and the total yield, arranged in the order of precedence.

	Acreage in Barley.	Yield per Acre.	Total Yield.
		Bushels.	Bushels.
York.....	58,018	29.6	1,714,907
Durham.....	47,780	27.3	1,305,325
Northumberland.....	46,597	22.7	1,058,473
Prince Edward.....	41,283	20.7	853,770
Lennox and Addington.....	40,500	22.3	902,331
Hastings.....	40,493	23.1	936,549
Ontario.....	39,537	29.1	1,145,353
Wellington.....	35,998	28.3	1,019,802
Peel.....	35,592	28.1	996,458
Simcoe.....	31,410	26.1	816,671
Victoria.....	31,280	25.4	795,573
Huron.....	27,336	27.7	757,750
Grey.....	23,346	24.5	571,538
Bruce.....	19,419	25.9	502,371
Brant.....	18,652	27.6	514,581
Frontenac.....	18,634	23.1	428,147
Perth.....	17,628	29.7	522,891
Oxford.....	17,079	30.1	513,778
Waterloo.....	16,573	30.8	510,269
Middelexsex.....	15,096	26.7	402,656
Lambton.....	14,584	26.5	387,176
Haldimand.....	14,401	23.1	331,995
Peterborough.....	13,957	24.4	340,237
Halton.....	13,341	28.4	379,040
Wentworth.....	13,036	28.3	369,285
Dufferin.....	11,965	25.5	304,926
Leeds and Grenville.....	11,039	25.2	278,649
Carleton.....	7,875	29.4	231,160
Dundas.....	6,767	30.1	203,486
Kent.....	6,484	27.5	178,364
Norfolk.....	6,181	26.0	160,553
Elgin.....	4,397	27.5	120,960
Lincoln.....	4,346	25.4	110,460
Welland.....	3,824	23.9	91,581
Lanark.....	2,847	26.6	75,780
Prescott.....	2,774	27.3	75,722
Essex.....	2,754	27.3	75,062
Stormont.....	2,289	28.0	64,154
Glengarry.....	2,213	23.1	51,182
Russell.....	1,455	24.7	35,992
Renfrew.....	1,443	24.8	35,776
Parry Sound.....	649	22.9	14,860
Algoma.....	564	26.7	15,076
Muskoka.....	531	21.7	11,536
Haliburton.....	278	24.2	6,725
Totals for the Province.....	772,245	26.2	20,218,930

Last year (1890) the acreage fell off to 701,326 acres and the yield was 4 bushels less than the average of the previous eight years, which brought the total yield down to 15,600,169.

Extracts from the reports of farmers residing in the several counties will now be given, beginning with the most important barley county—York. Unless otherwise stated, the results given in each case are from the sowing of 1 bag of 112 lbs.

YORK.

Emerson Cooper, of Carrville, writes: "Sown 23rd April on light clay loam, after potatoes; harvested about ten days later than other barley; yield, 25 bushels per acre; total yield, 35 bushels. Seeded too thick to get best results. Are so pleased with the barley that we think of sowing none but this variety next season."

L. Cameron, of Elder's Mills, says: "Sown 2nd May on clay loam, after potatoes; could not tell exactly the area sown; total yield from 112 lbs., 2,580 lbs, (53 $\frac{3}{4}$ bushels). The land was in good order."

Wm. McDonald, of Hagerman, says: "Sown 21st April on good clay soil, after corn and turnips; harvested 4th August; yield per acre, 40 bushels; total yield, 80 bushels from 185 lbs. of seed. I am sure 1 $\frac{1}{2}$ bushels of seed per acre would have produced a better result, the land being rich and well drained."

Wm. Farr, Woodbridge, writes: "Sown 3rd May on clay loam, after fall wheat; harvested 5th August; yield, 28 bushels per acre; total yield, 35 bushels. It yielded better than our Canadian barley, but barley was below an average yield this year. I intend sowing about 10 acres another year."

Wm. Grant, Markham, reports: "Sown 24th April on clay loam, after potatoes; harvested 9th August, yield, 28 bushels from 1 $\frac{1}{4}$ acres. The two-rowed barley yielded more straw than the the six-rowed and 2 bushels per acre more grain; was sixteen days longer in ripening."

Thos. Geer, Aurora, says: "Sown 18th April on light soil, after potatoes; harvested 8th August; total yield, 40 bushels, very near double the yield of my six-rowed on same kind of soil." Sample sent weighed 54 lbs. per bushel.

John W. Mably, Aurora, reports: "Sown 16th April on very light but rich soil; harvested 15th August; total yield, 39 bushels. The

Prize Prolific yielded 15 bushels more than the six-rowed, sown side by side. Some who got the two-rowed barley here got more than double that of the six-rowed." Weight of sample 52½ lbs. per bushel.

Joshua Willoughby, of Sutton West, got 33½ bushels from one bag sown; Wm. Irwin, of Nobleton, 43 bushels; James Mallory, of Teston, 36 bushels; Richard Batters, of Bond Head, 55 bushels; James Mustard, of Markham, 35 bushels; James Dobson, Schomberg, 33 bushels—he says: "It far exceeds my six-rowed barley." Alfred E. Keffer, of Concord, 30 bushels; Robert Fraser, of Bradford, 37½ bushels, who says: "I intend sowing at least ten acres next spring." N. A. Malloy, of Laskay, 30 bushels—he says: "I sowed too thick; at 1½ bushels per acre the yield would have been better." T. F. Wallace, of Woodbridge, 36 bushels; Eli Wray, of Schomburgh, 40 bushels; Geo. Watson, of King, 30 bushels; Benjamin Bache, of Ravenshoe, 33 bushels; Thos. Cairns, of Laskay, 32 bushels; Isaac W. Fletcher, Humber, 38 bushels, and Wm. Morton, Holland Landing, 30 bushels per acre, who says: "I consider the two-rowed barley will prove a great advantage to our county."

DURHAM.

J. D. Treleven, of Hampton, had a yield of 35 bushels from one bag, and says: "I sowed this barley too thick; it stools out more than the six-rowed. I think 1½ bushels sufficient to the acre. It averaged with me more than twice as much as the six-rowed."

John Mitchell, of Millbrook, had 37 bushels, of which he sent a nice bright sample, which weighed 53½ lbs. per bushel. He says: "It has a poor-looking head, and it all knuckled down, but it did middling well."

Geo. Gray, of Clarke, had 32 bushels, weighing 51½ lbs. He says: "I think the straw is going to be too soft, if this year was a proper one to go by. We had a great deal of rain here."

James Adams, of Newcastle, had 105 bushels off 3 acres, or 35 bushels to the acre. He says: "The crop would have been much better with a favourable season. We shall sow the whole product next year. The best yield of six-rowed barley in this locality was 20 bushels per acre."

John McNeill, of Cavansville, had a yield of 50 bushels on nearly 2 acres from 112 lbs., and states, that it "is a week later in ripening, but much better than six-rowed grown alongside."

Richard Barrett, of Newcastle, had a yield of $43\frac{1}{2}$ bushels per acre; weight per bushel 52 lbs.

Richard Varcoe, of Newcastle, had 27 bushels per acre, weighing $53\frac{1}{2}$ lbs. per bushel. He says: "I intend to sow the total yield next year."

Richard Good, of Bowmanville, had a yield per acre of 25 bushels. He says: "This has been a very poor year for barley in this section; six-rowed averaged about 15 bushels."

Robert Cascaden, Wesleyville, had 25 bushels per acre, or a total of 35 bushels weighing $52\frac{1}{2}$ lbs. per bushel. He says: "My land is low, and season being wet and cold my barley had no chance; there was one high knoll on the patch and it was grand, good enough looking for 45 bushels per acre."

Thos Medd, Millbrook, had 40 bushels per acre, weighing 53 lbs. per bushel.

Joseph Bland, Mount Pleasant, had 28 bushels per acre, says: "It was a very bad barley season in this part."

NORTHUMBERLAND.

Geo. Farr, of Harwood, sowed his bag on less than an acre; had a total yield of 35 bushels, or at the rate of 40 bushels per acre, weighing 53 lbs. per bushel. He says: "Sowed 3rd May on clay loam, after roots, harvested 15th August. Had I sown 2 acres with the same quantity of seed I would have realised about double the yield; am satisfied with the barley; think it will do well on my farm. I intend sowing quite a quantity next year."

Wm. Cochrane, of Colborne, had a yield from 1 bag of 34 bushels, weighing $52\frac{1}{2}$ lbs. per bushel says: "Sown about 12th May, on clay loam, after oats; harvested 4th August. I am well pleased with the grain; it was the best crop raised in this section. I am going to give it a fair trial another year."

F. Boneycastle, of Campeilford, had 25 bushels per acre, after fall wheat. He says: "Turned out better than the six-rowed, but has a very weak straw."

John L. Grogan, of Cobourg, had a total yield of 24 bushels on $1\frac{1}{2}$ acres. He says: "Spring very wet; about $\frac{1}{2}$ acre was drowned out; yielded better than the six-rowed barley; it will not lodge like the six-rowed; straw not so long, and brighter."

W. B. Huyek, of Castleton, had 18 bushels per acre. He says : "Although this is a small yield, it is considerably better than the six-rowed did, which was the poorest ever grown in this section on account of heavy rainfall. I think well of it."

G. L. Duncan, of Colborne, had 21 bushels per acre. He says : "about one-third of my crop was drowned out with heavy rains ; a poor crop, but better than the six-rowed barley this year."

W. T. Burnham, of Cobourg, had a total yield of 54 bushels from one bag or 39 bushels per acre, weighing $53\frac{1}{4}$ lbs. per bushel. He says : "The season was much against it, on account of so much rain."

Jacob R. Harris, Warkworth, had 30 bushels from one bag sown. He says : "One-third of this was sown at 2 bushels per acre, one-third at $1\frac{1}{2}$ bushels, and one-third at 1 bushel. That sown 1 bushel per acre was best ; the barley was injured by heavy rains."

Thos. Gibson, Newcastle, had 35 bushels from one bag sown. He says : "I think it can be grown successfully in this county."

Thos. Clarke, of Brighton, had 21 bushels per acre. He says : "Season was very unfavourable ; had six-rowed barley alongside of it, and the two-rowed was equally good, if not better. The wet drowned part of it out."

PRINCE EDWARD.

James R. Anderson, of Mountain View, had a total yield of 40 bushels, 32 bushels per acre, weighing $53\frac{2}{3}$ lbs. He says : "Sown 21st April on black clay ; preceding crop, barley ; harvested last week in July. I sowed my bag on $1\frac{1}{4}$ acres of ground ; had I sown it on $1\frac{3}{4}$ acres I would have had a much better crop. When it began to stool it was altogether too thick to do well. I showed it at the fairs near by and took the first prize on it ; am well pleased with the way the barley has turned out."

Geo. C. Hurlburt, of Cressy, had a total yield of 39 bushels, weighing 53 lbs. per bushel. He says : "About ten days later than six-rowed ; preceding crop, barley. I sowed on ordinary soil ; had no extra chance ; the yield was double that of the six-rowed."

Elkanah Babbitt, of Rossmore, had 50 bushels from one bag sown on $1\frac{1}{2}$ acres. He says : "I am well pleased with this year's trial ; the yield was more than double that of our common six-rowed, which had as near the same chance as possible."

Dr. Edward Kydd, of Picton, had a total yield of 25 bushels. He says: "It yielded better than my other barley on similar soil; will try it again next year."

Geo. F. Affir, of Picton, had a similar yield of 25 bushels. He says: "It yielded better than my other barley; am well satisfied, and will sow next year"

Alex. H. Anderson, of Rossmore, had 20 bushels per acre; total yield, 26 bushels. He says: "Preceding crop, six-rowed barley. I used no manure in the field, and sowed six-rowed barley in same field alongside of it, as I wished to see which would do the best. I found the two-rowed far exceeded the other in straw and yield."

G. J. Walmsley, Waupoos, had 22 bushels per acre. He says: "I think it does better than the six-rowed barley."

Oscar Bristol, Demorestville, reports a total yield of 60 bushels, or 30 bushels per acre. He says: "I am well pleased with the two-rowed barley."

W. S. DeMill, Picton, had 130 bushels from five bags sown, and says that his two-rowed yielded much more than the six-rowed. "Am satisfied we can make it a success".

John J. Young, Consecon, sowed his bag on $1\frac{1}{2}$ acres, and had a yield of 40 bushels. He says "The two-rowed barley yielded about one-quarter more than the six-rowed did."

W. C. Killup, Consecon, had 25 bushels, and says: "This two-rowed barley turned out better than the six-rowed sown in the same field."

James Arthur, of the same place, had 27 bushels per acre, or a total yield of 40 bushels.

Enock A. Mills, Demorestville, had 26 bushels per acre, or a total yield of 40 bushels. He says: "It was late sown, but did very well after all; it gives very good satisfaction."

LENNOX AND ADDINGTON.

J. J. Watson, Adolphustown, had 33 bushels from one bag sown. He says: "Sown 21st April; harvested 31st July; the six-rowed barley was the poorest of any crop this year in this section."

Thomas Gurran, Sandhurst, had 45 bushels from one bag sown, or 30 bushels to the acre. He says: "I sowed it about one-fourth too thick; would have had 60 bushels if sown on more ground."

Lewis Hastman,, Odessa, reports a yield of 18 bushels from 1 bushel, and says : "Six-rowed barley turned out about 10 bushels from 1 in same field."

David T. Finley, Stella, had a total yield of $42\frac{1}{2}$ bushels from two bags sown, and says : "I am well pleased with the two-rowed barley for this unfavourable season. I did not receive it early enough ; my six-rowed was up before the other arrived." He also states that his two-rowed barley, although so late sown, yielded better than the six-rowed.

John Galbraith, Camden East sowed one bag on 1 acre, and had a yield of 20 bushels. He says : "I find 2 bushels to the acre too much ; $1\frac{1}{4}$ bushels would be quite enough, as it is a great barley to stool, some roots having as many as ten shoots. The six-rowed barley in this section was not half a crop."

Jas. Cousins, Enterprise, had 30 bushels to the acre, 75 to 80 bushels from two bags, and says ; "Sowed six-rowed same day in same field, all conditions alike ; the two-rowed gave 8 to 10 bushels per acre the better yield."

J. D. Wager, Enterprise, had $34\frac{1}{2}$ bushels per acre, or a total yield of 40 measured bushels from one bag. He says : "Had six-rowed barley in same field, same treatment ; yield only $16\frac{1}{2}$ bushels from one, and lighter barley."

N. B. Hough, Sillsville, had 37 bushels from one bag sown. He says : "Part of it was hurt with wet weather ; otherwise, I think there would have been 45 to 50 bushels."

Peter D. Davis, Dorland, had a total yield of 35 bushels, or 25 bushels per acre.

Micheel McKeever, Sandhurst, reports a total yield of 30 bushels, and John Marshall, Stella, 24 bushels per acre. He sent a sample which weighed 53 lbs. per bushel, and says : "The barley was half drowned out ; think it will do well here."

HASTINGS.

S. E. Lane, Wallbridge, sowed one bag on 1 acre, and had 23 bushels, and says : "It yielded about 7 bushels to the acre more than the six-rowed barley, and stands the wet weather better."

Alex. Morton, Thomasburg, had a yield of 30 bushels, or 24 bushels per acre, and says : "It would have yielded better had it not blown down ; is a week or a week and a-half later than six-rowed."

Henry Fern, Foxboro', had 28 bushels, and says: "I believe we can raise the barley if you can get us a market for it."

John Toppings, Marysville, sowed his bag on 1 acre, and got 30 bushels. He says: "I sowed it too thick."

Alex. Miller, Frankford, had a yield of 30 bushels, or about 20 bushels an acre, and says: "Sown 28th April; harvested 15th August. The seed weighed 55 lbs. per bushel, the yield only 51. Six-rowed growing in the same field beside it weighed 48 lbs. and about the same yield per acre."

Jos. Haggerty, West Huntingdon, sowed one bag on nearly $1\frac{1}{2}$ acres and had 32 bushels. He says, "Sown 8th May; harvested 12th August. Straw quite soft; lodged badly; sowed 1 bushel in field with six-rowed, which stood much better; all our barley almost a failure this season; think it should be sown very early, and am of opinion it will do well. I intend sowing next spring."

Robert Bush, Frankford, had 31 bushels, or $23\frac{1}{4}$ bushels per acre, and says: "I liked it very well; had a bigger yield than any one in our neighbourhood."

John H. McColl, of the same place, sowed his bag about $1\frac{1}{2}$ bushels per acre, and had 28 bushels. He says: "I didn't give this barley any extra chance; I sowed it on one side of a field with my six-rowed barley; I don't think the two-rowed barley yielded quite as much per acre as my own barley."

W. N. Ponton, Belleville, who had 26 bushels from one bag, says: "A larger yield than the ordinary Canadian barley, which this year did not hold out its usual weight and was very poor." The sample sent by Mr. Ponton weighed 53 lbs. per bushel.

Wm. Arbuckle, Thomasburg, had 35 bushels from one bag of seed, and says: "Took first prize at Township show. D. McFarlane, Melrose, 35 bushels; John Levertton, Shannonville, 32 bushels, and Charles Long, Blessington, 27 bushels, who says: "I am well satisfied with it, comparing it with the growth of six-rowed barley."

P. R. Daly, of Belleville, had 24 bushels from one bag sown, and says: "The seed arrived late, and I was obliged to sow it upon unsuitable ground; still, it beat my six-rowed in quantity and quality. I intend to sow all that it produced, and will try and give it a fair trial the coming season."

ONTARIO.

James Tran, Green River, had 40 bushels per acre, or 44 bushels in all. He says " : Sown 6th May. I think the barley did very well for the chance it got; land was not fall-ploughed, only gang-ploughed in the spring; barley crop poor here, only averaging about 20 bushels per acre. For the last 25 years have not raised less than 25 to 50 bushels; this year I had only 24 bushels per acre."

Mr. Coates, Shirley, had 32 bushels from one bag of seed, and says : " We liked it very well; will sow about 10 acres next year."

Thomas Stonehouse, Cannington, had 2,000 lbs. (41 bush. 32 lbs.) from one bag sown, and says : " A splendid crop; great yield; far ahead of the six-rowed; will sow 27 acres of this barley next spring; has a strong, rank straw; will only sow 1 bushel to the acre next season, as it stools out very much."

Geo. Ruttle, Breechin, cleaned up 30 bushels per acre, says : " This barley had not a good chance, but did better than the six-rowed beside it; was strong in the straw, and did not rust; the six-rowed rusted badly."

William Pearson, Manchester, had 40 bushels from one bag of seed, and says; " I am satisfied that I can raise more per acre of the two-rowed than I can of the six-rowed. I intend sowing about 60 acres next spring."

Robert Brabagon, Wick, had 35 bushels, and says. " I had about three times as much two-rowed barley on the same farm as I had of the six-rowed."

John Forsyth, of Glasgow, had 28 bushels, and says. " The yield would have been much larger had it not been for the heavy rains. Our Canadian barley in the same field produced scarcely 20 bushels to the acre. The two-rowed produced more straw than the six-rowed."

A. P. McDonald, of Millington, had 30 bushels 40 lbs. per acre, and says. " This year was very unfavourable for barley in this part of Ontario; six-rowed, which usually does well, was a failure. The two-rowed barley did much better with me on the same soil. I believe it will be a success if the farmers will prepare the ground properly for it."

Thos. Waddell, Beaverton, had a yield of 40 bushels from one bag on $1\frac{1}{3}$ acres. Robert Bruce, Brechin, 40 bushels per acre; Wm. Oak,

Beaverton, 40 bushels per acre; Wm. Jeffrey, Brooklin, had 60 bushels from $1\frac{1}{2}$ acres; Wm. Brent, Raglan, 40 bushels per acre. He says: "I think if I had received the barley ten days sooner it would have done better, although I think it did first-rate." Wm. Brain, Beaverton, had 30 bushels 27 lbs. per acre; B. T. Brown, Gamebridge, 41 bushels per acre; R. S. Vickrey, Prince Albert, 40 bushels off $1\frac{1}{2}$ acres; James Pound, Dumbarton, 35 bushels per acre, he says, "The season was damp; there was a heavy crop of straw, and it went down a good deal, which lessened the yield." W. Eyres, Cannington, had 35 bushels from one bag, or 30 bushels per acre; John Martin, Raglan, 32 bushels per acre; James Trull, Whitby, 30 bushels per acre; C. Harleston Irving, Newmarket, 30 bushels. He says, "I intend to sow 10 or 12 acres next spring." John H. Whitfield, Port Perry, reports 35 bushels per acre; and Wm. Blackwell, Cannington, 32 bushels per acre, total yield from one bag, 40 bushels, who says: "Sowed six rowed barley in same field; yield per acre 20 bushels."

WELLINGTON.

Geo. Wright, Elora, had 40 bushels per acre or 45 bushels in all from one bag. He says, "I intend to sow Carter's Prize Prolific next season." Charles Gillies, Mount Forest, had 30 bushels from one bag sown, and says: "It has yielded about 5 bushels more to the acre than six-rowed barley."

H. A. Hunter, Orangeville, had $32\frac{1}{2}$ bushels per acre, and says: "Bright, and 4 lbs. per bushel heavier than six-rowed barley grown in the same field."

Geo. Haycock, Aberfoyle, had 26 bushels per acre, and says: "It did well for the chance it had; could have sown it 15 days sooner if I had it. It yielded far better than the Canadian barley, and stands up well. I intend sowing it all next spring on a better piece of land."

John Shaw, West Luther, had a yield of 32 bushels, and says: "Shall not sow any six-rowed barley next season."

J. Riordan, Arthur, had 40 bushels, and says: "Sowed my bag on exactly 1 acre; if put on $1\frac{1}{4}$ acres the yield would have been better. I will manage the sowing better another season."

John Given, Ballinafad, had 34 bushels from one bag, about 25 bushels per acre, and says: "I think that with good cultivation it would do well here, and that seems to be the prevailing opinion."

Jas. W. Burns, Rockwood, had 30 bushels per acre, and says: "When it came out in head a destructive storm laid it flat; but for this I feel certain we would have had 40 bushels."

Jas. McNaughton, Gourock, had 80 bushels from two bags, or about 40 bushels to the acre, and says: "I am very much pleased with the two-rowed barley. I have had a number of farmers asking for seed."

Thos. E. Walsh, Guelph, had 38 bushels from a bag, or 30 bushels per acre, and says: "It was sown too thick, also too late, but the yield was better than the six-rowed barley under the same conditions."

L. D. Crewson, Grand Valley, had 30 bushels per acre, and says: "Will sow mostly of it next season." Geo. W. Thompson, Guelph, 30 bushels; Judson W. Crewson, Grand Valley, 35 bushels, or 30 bushels per acre; Robert Fyfe, Harriston, 30 bushels; E. Mooney, Orton, 32½ bushels; James Davey, Grand Valley, 30 bushels; A. F. McGill, Hillsburg, total yield, 38 bushels, 30 bushels per acre; John Allen, Riverstown, 34 bushels per acre; Robert A. Patullo, Vanatter, had 28 bushels; Richard Gaffery, Mount Forest, 30 bushels, who says: "I think it might do very well in this country;" and Chas. Drury, Arthur, got 38 bushels.

PEEL.

Geo. Douglass, Graham's Station, had a total yield of 40 bushels, says: "Sown 15th May on not very rich soil; harvested 12th August. I believe it is a very good barley for this climate, and if sown on good soil would be very profitable."

Geo. Sheard, Woodhill, had 32 bushels per acre, and says: "Sown 10th May, on clay loam; harvested 20th August. The yield is greater by 30 per cent. than six-rowed barley with me." G. S. Boyes, also of Woodhill, had 30 bushels, and says: "Season was unfavourable for barley; this was about two weeks longer maturing than common six-rowed."

John Craig, Sandhill, had 28 bushels per acre, and says: "I can recommend the barley; there was no manure put on this field for six years and it was a very wet season. It stood the storms well. I cut it with my binder, and had to mow the rest of my barley. I intend sowing all I have on hand."

Joseph Wiggins, Claude, had a total yield of 34½ bushels, or about 30 bushels to the acre, and says: "In a good season I would have had 50 bushels." F. Lundy, Brampton, total yield 35 bushels, 30 bushels

per acre who says: "If it had been a favourable season, would have had at least 10 bushels more." Henry Richardson, Burnhamthorpe, had about 36 bushels per acre, and says, "It did not get a fair chance this year. I intend to sow 10 acres next season, and would advise all farmers to give this barley a chance." James Lyons, Salmonville, 28 bushels, says, "It was a week later ripening; I think I sowed it one-half too thick." Wallis Dunn, Cooksville, says: "I got about 20 bushels, which I intend to sow next season. The yield was fully as good if not a little better than the six-rowed."

SIMCOE.

David Wamman, Orillia, had a total yield of 36 bushels, 30 bushels per acre, and says: "Sown 24th April on a strong loam; harvested 6th August. I am well satisfied with the yield this year; it was not a favourable season."

Wm. Neve, Dalston, had 46 bushels per acre, weighing $53\frac{1}{2}$ lbs. per bushel, and says: "I believe it is a good kind of barley."

Thos. B. Murray, Avening, had a yield of 52 bushels, 34 bushels per acre. He says: "The straw was very light, and it appeared to be a light yield, but when you examined the head it was plump, and from 30 to 40 grains in good heads."

Robert Lawrence, Honeywood, had 31 bushels, or 30 bushels per acre, and says: "I propose sowing all of mine next season, as its yield compares favourably with the six-rowed."

Geo. Newby, Lovering, got between 40 and 50 bushels, and says: "I am going to sow no other kind next year but the two-rowed barley."

Thomas Casey, Crossland, had 40 bushels per acre, and says: "Sowed six-rowed barley in the same field; it yielded 10 bushels less per acre."

Lambert Wilson, Churchill, divided his bag with a neighbour; had 24 bushels from 1 bushel sown on a little over half an acre, and says: "It yielded much better than our six-rowed barley."

Wm. Draper, Cookstown, had 30 bushels per acre, and says: "This was sown alongside in same field with six-rowed barley, and the two-rowed yielded the best."

John Darby, Crown Hill, had 30 bushels, sowed one bag on 1 acre, and says: "It was too thick on the ground; shall sow $1\frac{1}{2}$ bushels next season."

Edward Pentland, Collingwood, got 34 bushels.

R. W. Benton, Crossland,—total yield, 50 bushels. R. T. Kearns, about 32 bushels per acre.

Sheldon Brooks, Holly, 30 bushels. Asks: "What do you think of this sample of barley." It was a good, bright sample, weighing 54 lbs. per bushel.

John A. Brest had 40 bushels, 35 bushels per acre, and says: "Sowed too thick; I think it will do well."

James Kerr, Avening, 49 bushels 35 lbs. on 1 acre.

VICTORIA.

John Calvert, Reaboro, got about 40 bushels per acre, and says: "I would advise to sow 4 pecks per acre, many of my neighbours sowed $1\frac{1}{2}$ bushels, and it went down more than that thin sown."

W. H. Teherne, Downeyville, had 42 bushels from $1\frac{1}{4}$ acres.

John Campbell, jr., Woodville, sowed one bag on 2 acres, and had 60 bushels. He says: "I think had it been sown a little thicker it would have yielded better. I am so pleased with it I shall sow no other barley the coming season."

Samuel Mitchell, Dunsford, had 40 bushels on a little over an acre, and says: "Sowed it too thick, and it lay down. I never had a crop that paid as well; am selling it to my neighbours at \$1 per bushel."

Thomas Newman, Lindsay, had 50 bushels from about an acre, and says: "Sown too thickly; think it did fairly well, better than six-rowed barley."

John Westlake, Manilla, had 40 bushels per acre, and says: "The two-rowed did better in this part than the six-rowed." Joseph McGahey, Eden Valley,—total yield 51 bushels, 38 bushels per acre. says: "We like it well." Issac W. Read, Reaboro, total yield, 50 bushels; 30 bushels per acre; J. S. Cruess, Cambray, about 30 bushels per acre; James Taylor, Oakwood, 41 bushels from one bag sown on a little over one acre. He says: "I am more than satisfied with my returns of this barley." Thos. Delehay, Reaboro', 30 bushels; Alex. McGee, Fenelon Falls, about 40 bushels on $1\frac{1}{4}$ acres; Thos. Robinson, Omemee, 30 bushels per acre, who says: "The two-rowed yielded more per acre than any six-rowed I sowed."

HURON.

Andrew Taylor, Londesborough, had 35 bushels per acre. He says : " Am tolerably well satisfied with the results, considering the chance it had. My six-rowed barley yielded 28 bushels per acre."

Alex. Gardner, Brussels, had 36 bushels. He says : " This sample took first prize at East Riding show against all other varieties of two-rowed."

Richard Armstrong, Brussels, had 30 bushels per acre, and says : " It did better with me than the six-rowed barley."

Peter Cantlon, Porter's Hill, had 40 bushels from one bag, sown on $1\frac{1}{4}$ acres of land. He says : " It would have been better if it was not sown so thick ; but it made a better yield than the six-rowed barley in the same field beside it."

Charles McKea, Belgrave, had 40 bushels per acre. He says : " I am well pleased with the result."

O. Creswell, Egmondville, had from 42 to 45 bushels to the acre. Says : " I am well pleased with the result."

John McDovall, Westfield, had 30 bushels per acre. Says : " I am going to sow 6 acres in the spring of this barley."

Samuel Ferris, Holmesville, had a total yield of 40 bushels, 35 bushels per acre. Says : " It's yielding qualities are all that could be desired, being almost double that of the Canadian, sown side by side."

Wm. Burrows, Goderich, had 36 bushels per acre, which weighed 54 lbs. per bushel ; T. Colbur, Goderich, 31 bushels of similar weight per bushel ; Henry Warren, Clinton, had 30 bushels per acre ; Wm. McCracken, Brussels, a total yield of 40 bushels ; Sam. McBurnie, Wingham, had 84 bushels from two bags sown.

James Aulton, Belfast, had 30 bushels. Says : " Barley was a very poor crop around here this year."

P. H. Elliott, Holmesville, had a total yield of about 50 bushels.

Alex. Cox, Porter's Hill, had a total yield of 45 bushels, 36 bushels per acre.

Wm. Bryans, Belgrave, had 30 bushels per acre. Says : " I think the two-rowed barley will do well in this country."

Wm. Johnston, Wingham, had 30 bushels, and Malcolm McTaggart, of Clinton, 28 bushels per acre.

GREY.

John White, Meaford, had 46 bushels 32 lbs. from one bag sown on 1 acre, weighing 53 lbs. per bushel. Says: "The barley exceeds my expectations."

W. S. Porter, Oxenden, had 45 bushels per acre. Says: "I think this barley will do very well in this section."

Thomas McArthur, Flesherton, had 41 bushels 16 lbs. per acre. Says: "This barley will do well in this country; ripens about ten days later than six-rowed."

John J. Vickers, Heathcote, had a total yield of about 40 bushels.

E. Berwick, Shelburne, had 33½ bushels per acre, 235 bushels from 7 bags, sown one bag per acre. Says: "Crop was much too thick; think the yield and quality would both have been a good deal better if sown thinner."

Thomas Kells, Vandeleur, had 31 bushels per acre. Says: "I believe the County of Grey just the place to cultivate this barley with success."

Daniel McMichael, Shelburne, had 40 bushels per acre. Says: "It ripened very well. A good part of it was laid down; but for all that it was a good crop."

W. G. Noble, Horning's Mills, had 30 bushels per acre; says it gave him satisfaction.

Hugh McCorkindale, Desboro', had 20 bags from 112 lbs. sowed, and says: "The best yield I ever saw for barley."

Thomas Brown, Lake Charles, had a total yield of 40 bushels, or 32 bushels per acre. Says: "Sowed the bag on 1½ acres, and it stood out so that it was altogether too thick."

H. Rozel, Egremont, had a total yield of between 35 and 40 bushels.

G. Adams, Walter's Falls, had 36 bushels. Says: "The ground I did not consider at all favourable for the crop, but I wanted to see what it would do under unfavourable conditions, and I am well satisfied with it, as it was a heavy crop."

Wm. Stephens, Cedarville, reports a yield of about 50 bushels per acre, and Chas. Emery, of Meaford, 48 bushels per acre.

BRUCE.

Peter Watson, Lucknow, had a yield of about 50 bushels from one bag, or 40 bushels per acre. Says: "Sown 8th May; harvested 9th August. It did very well for the first time of sowing."

M. Campbell, Lucknow, had 50 bushels from one bag, or 43 bushels per acre. Says: "This lot took second prize at the Lucknow Agricultural Show. Is about eight days later than the old barleys sown, but is heavier and better grain."

Oliver Cole, Kincardine, had 24 bushels. Says: "My experience in this one trial is that for feed I would prefer the two-rowed barley to the six-rowed."

J. Taylor, Cargill, had 30 bushels per acre.

Wm. Cannon, Chesley, had a yield of 37 bushels, or 30 bushels per acre. Says: "Barley was received too late to give it a fair chance. It was somewhat inclined to lodge; will give it a better chance next year."

BRANT.

J. B. Howell, St. George, had 40 bushels from one bag sown. Says: "I find this barley great for stooling. Quantity sown was $1\frac{1}{2}$ bushels per acre; $1\frac{1}{4}$ is plenty. Intend sowing 6 acres the coming season."

A. Clement, Paris, had a total yield of 30 bushels, 24 bushels per acre. Says: "It yielded a little better with us than the six-rowed variety, which only gave 22 or 23 bushels per acre, although we usually grow 35 as an average crop."

H. E. Egleston, 'Ancaster, had a total yield of 40 bushels, 30 bushels per acre. Says: "Sown a little late in the season; wants to be in early and on land not too strong."

James Richmond, Washington, had 36 bushels per acre. Says: "The common barley was not so good in that same field."

David Shultis, Rockwood, had 21 bushels per acre. Says: "The barley was sowed on the worst field on the farm, and water smothered part of it. I had six-rowed barley in the rest of the field, which was almost a total failure."

S. B. Lawrason, St. George, had 36 bushels per acre. Says: "Sowed one bag on 1 acre; was too thick; $1\frac{1}{4}$ bushels per acre would be plenty."

Thomas Aulsebrook, Paris, had a total yield of 36 bushels, 30 bushels per acre. Says: "I think it would have been better if sown two weeks sooner."

Charles Baxter, Drumbo, total yield 36 bushels; W. B. D. LaPere, Paris, had 79 bushels from 2 bags sown.

George Aitkins, Glen Morris, had a total yield of 38 bushels, or 30 bushels per acre. Says: "It stood the heavy rains as good as the six-rowed—I mean, it did not lodge any worse."

H. D. G. Hamner, Mount Vernon, had a total yield of 40 bushels, 27 bushels to the acre. Says: "The season has not been as favourable as last year. I believe with high cultivation and favourable weather a fair sample can be produced." Mr. Hamner's sample weighed $52\frac{1}{2}$ lbs. per bushel as received.

Robert Spiers, Richmond, had a total yield of 38 bushels, 30 bushels per acre. Says: "Suited very well; will sow again, but not so thick."

John Taylor, Lancaster, had 53 bushels per acre. Says: "I intend to sow 14 acres in spring if I can find a market."

FRONTENAC.

R. J. Dunlap, Kingston, had a total yield of 31 bushels, about 30 bushels per acre. Says: "The two-rowed barley did better generally than the six-rowed. I think there will be no trouble growing it."

Stephen Fairfield, Collin's Bay, says: "I had a total yield of 45 bushels, about 18 bushels per acre. I was very well satisfied with the barley. It did very well this season, although the weather was against it. I think it will answer in this part of Ontario."

James F. Gibson, Cataraqui, had about 30 measured bushels per acre, and says: "I think we can grow this barley, if we can only find a market for samples such as I sent you. I am afraid we cannot make it 56 lbs. to the bushel." Samples sent weighed 51 lbs. as received and $52\frac{1}{2}$ lbs. after cleaning.

PERTH.

James Wilson, Mitchell, had 45 bushels per acre. He says: "I am well pleased with the grain; think it did better than the ordinary barley. My 2 bushels were sown broadcast on rather less than an acre. We had 20 full bags from the threshing machine. Have a number of applications for the grain."

Thomas Driver, St. Mary's, had 40 bushels per acre. He says: "The barley has done very well indeed. I think it will be suitable to the country."

F. G. Ballantyne, Atwood, Ont., had 40 bushels per acre. He says: "It does not suit this climate; season rather short, but will try it next year." No sample was received with this report.

Robert Simpson, Sebringville, reports a total yield of about 40 bushels.

Wm. Makin, Stratford, had a total yield of 28 bushels. He says: "It would have been a big yield, but it got lodged with storms in June."

Alex. Crawford, Linwood, had a total yield of 34 bushels.

Henry Lawrence, Mitchell, had a total yield of $34\frac{2}{3}$ bushels, or 26 bushels per acre. He says: "It looked beautiful until the heavy rains in June; then the lower leaves turned yellow and the rust struck it, which hindered the yield a great deal."

Messrs. Hay Bros., Listowel, Ont., had a total yield of 30 bushels. They say: "Past season too much rain, and fear it will not work in this locality." This sample was one of the heaviest of all the samples received from Ontario.

John Miller, St. Mary's, had a total yield of about 50 bushels. He says: "Sown with drill at the rate of $1\frac{1}{4}$ bushels per acre. One bushel would have been enough."

George Langford, Milverton, reports a total yield of 37 bushels, or 30 bushels to the acre.

OXFORD.

J. D. Eddy, Scotland, had a total yield of 35 bushels. He says: "I think early sowing very important. Everything considered, am well satisfied. Will plant all of my seed the coming spring."

Henry Hewitt, Bright, had a total yield of 30 bushels, or 28 bushels to the acre, and says: "I am well pleased with the barley, it is the best we grew this year out of 26 acres."

Patrick Carney, Eastwood, had a total yield of 45 bushels. He says: "My opinion is that it will be the coming barley."

George Weir, Cathcart, had 30 bushels from one bag sown. He says: "We sowed the rest of the field with the common six-rowed variety, which grew and ripened much earlier but did not turn out so well."

M. Payson, Bright, had 36 bushels or 24 bushels per acre. He says: "Sowed part of it at the rate of 1 bushel per acre, the rest at $1\frac{1}{2}$. Thin seeding thick enough. Best sample of barley weighed 53 lbs. to the bushel. Yielded as well as Canadian barley grown in the same field on land prepared the same. Would grow all English barley if I thought we would have a good market for it."

John Cuthbert, Sweaborg, had 30 bushels per acre. He says: "I sowed my six-rowed barley at the same time and alongside of Carter's Prize Prolific. The latter turned out the best, and also stood up the best. Season was not favourable for barley in this section. I am satisfied we can raise "Prize Prolific" if you can find a market."

James Virtue, Woodstock, had a total yield of 40 bushels from one bag, at the rate of 30 bushels per acre. He says: "Season wet and unfavourable for barley. Had six-rowed growing alongside of two-rowed. Have done away with the six-rowed and will sow nothing but two-rowed."

William Roberts, Medina, had 32 bushels from $1\frac{1}{2}$ of an acre. He says: "At the time of ripening we had four or five weeks of hot, dry weather, which hastened the ripening at least ten days and injured the crop."

William Donaldson, South Zorra, had 35 bushels to the acre.

George Allen, Oriel, had a total yield of 30 bushels, 24 bushels per acre. He says: "Barley in this section this year is far below the average yield."

WATERLOO.

Alex. McPhail, Galt, had 36 bushels from 1 acre. He says: "It was eight days later in ripening than the six-rowed, yielded fully as well as the six-rowed, stood up well."

Thomas Allison, Galt, had 31 bushels per acre. Sowed one bag on an acre. He says: "I sowed too thick. If sown early on good ground and not too thick, I am satisfied it would do better."

C. Mundy, Breslan, had 30 bushels per acre.

George Oliver, Galt, had 25 bushels from 1 bushel sown. He says: "Believe it will do well, and yield as much to the acre as six-rowed will."

Andrew Herman, Elmira, had a total yield of 33 bushels, 27 bushels per acre.

G. Dorin, Wellesley, reports a yield per acre of about 35 bushels.

R. Campbell, New Hamburg, 27 or 28 bushels and Wm. McKenzie, Galt, 35 to 40 bushels per acre.

MIDDLESEX.

John Wallis, Ferguson, had a total yield of 39 bushels, or 35 bushels to the acre. He says: "Our six-rowed in the same field is not so productive or heavy. For feeding, we are satisfied that it is far superior to six-rowed."

John C. Zavitz, Amiens, had 20 bushels per acre. He says: "Wet weather in June hurt my barley. It yielded better than the six-rowed by the side of it, and was better in quality."

Thomas Redway, Harrietsville, had 32 bushels per acre. He says: "My Canadian barley went 27 bushels to the acre."

William Pentall, Exeter, had 35 bushels per acre.

Henry Anderson, Wilton Grove, had a total yield of 36 bushels, or 30 bushels per acre.

G. H. Marlock, Crediton, had 36 bushels per acre.

Andrew Duncan, Springfield, had a total yield of 33 bushels.

Charles Harvie, Exeter, had 30 bushels per acre. He says: "It yielded as well as the six-rowed in the same field, but went down bad where the land was strong."

Thomas Sharpton, Exeter, had a yield of 40 bushels from $1\frac{1}{2}$ acres.

Angus Campbell, Appin, 32 bushels. He says: "I am well pleased with the English barley and intend to sow 10 acres of it in the spring."

C. J. Hayes, Park Hill, had a total yield of 38 bushels, or $27\frac{1}{2}$ bushels per acre.

Samuel S. Michel, Strathroy, had 55 bushels from one bag sown on $1\frac{1}{4}$ acres.

Richard Haskett, Park Hill, had a total yield of 43 bushels, or 34 bushels to the acre.

Gerad Brown, Exeter, had a total yield of 35 bushels. He says: "Will sow most of the two-rowed Prize Prolific next year."

LANBTON.

Arthur Vance, Bosanquet had 70 bushels from 2 bags sown and says "It yielded about 5 bushels per acre more than Canadian barley. I mean to try it again next year."

Thomas Bowman, Mandaumin, had a total yield of 27 bushels, or 25 bushels per acre. He says: "It looked well until the heavy rains came; then it began to change."

George Forbes, Kertch, had 30 bushels in all. He says: "Yield would have been much larger, if I had sown thinner. It stood wonderfully; 1 bushel per acre would have been plenty."

George Lucas, Lucas, had 35 bushels per acre. He says: "Being late in sowing, decreased the yield."

HALDIMAND.

Thomas Harris, Hagersville, had 23 bushels, or 22 bushels per acre. He says: "Six-rowed barley in the same field averaged 20 bushels per acre."

William Chambers, of Jarvis, had 24 bushels. He says: "The yield has been much better than the six-rowed, which has not been more than 15 bushels; season unfavourable."

Thomas Berry, Tyneside, had 22 bushels per acre. He says: "This barley yielded nearly twice as much as my other barley did. I intend to sow 10 or 11 acres next spring."

Walter Jones, Garnet, had 20 bushels per acre. He says: "I had six-rowed barley in the same field. It didn't yield over 16 bushels."

PETERBOROUGH.

E. Hawthorne, Warsaw, had a yield of 25 bushels per acre. He says: "It yielded better than any six-rowed I have seen threshed in this neighbourhood." John Buckham, Beresford, had a yield of 36

bushels, 25 bushels per acre and says : " It has been a poor season for barley in this section, the common six-rowed not yielding so well as the two-rowed has done with me."

Chas. Nicoll, Norwood Station, had 38 bushels from one bag sown; Wm. Stewart, Peterboro, a total yield of 35 bushels, 28 bushels per acre.

F. Birdsall, of Birdsall's, sowed four bags on 5 acres; yield, 30 bushels to the acre. He says: " In several places in this neighborhood it has turned out better than the six-rowed."

Geo. A. Grover, Norwood, had 31 bushels, or 26 bushels per acre. He says: " A poor year for barley; the six-rowed did not yield 10 bushels per acre on same soil, this is the best crop on the whole farm in bulk and if a price is once established will be profitable."

C. Stirton, Bensfort, had 42 bushels from one bag of seed, or 34 bushels per acre. He says: " Weather wet and unfavourable, it did not ripen very evenly, I intend to try a few acres of it next season."

A. Scott, of Peterboro, had 30 bushels per acre, L. Hunter, Lakefield, 24 bushels per acre, and E. M. Sanderson, Springville, 29 bushels. He says: " I think my barley has done very well, as it was a very poor season."

HALTON.

Andrew Elliot, Kelso, had 38 bushels from one bag sown on 1 acre. He says: " I am very much pleased with the result, and have no doubt if a market can be had for it the six-rowed will soon be displaced." Mr. Elliot's sample weighed $54\frac{1}{2}$ lbs. per bushel.

Wm. Patterson, Milton, had 40 bushels from one bag on 1 acre. He says: " The six-rowed only yielded 20 bushels to the acre. I intend sowing the two-rowed again next year."

Geo. Hume, Ashgrove, had 32 bushels from one bag sown. He says: " It grew very rank, and part of it lodged before it headed, but for this the sample would be better."

Wm. Cline, Nelson, had over 40 bushels from one bag, which weighed 54 lbs. per bushel.

John Alexander, Tansley, a yield of 40 bushels, 25 bushels per acre.

Thos. Cameron, Acton West, had 30 bushels per acre. He says: " I sowed too thick; $1\frac{1}{4}$ bushels to the acre is plenty."

Wm. D. Johnston, Esquesing, had 26 bushels per acre; and M. Dice, Milton, a total yield of 30 bushels, or 24 bushels per acre. Mr. Dice says: I am well pleased with the result of this season's crop."

WENTWORTH.

John Marshall, Hamilton, had 27 bushels per acre. He says: "This was sown on same day as our Canadian barley, and in the same field; Canadian barley went 20 bushels to the acre."

Robert Arnes, Glenford, had 36 bushels per acre. He says: "I sowed the bag on 1 acre, but it was too thick. Had it been thinner I am satisfied I should have had 10 or 12 bushels more. I am satisfied with the turnout I got from the 2 bushels. My six-rowed turned out 36 bushels per acre, but I put it on good ground that was in hoed crop the year before. The general turnout of six-rowed here has been 20 bushels."

John A. Bruce, of Hamilton, had 618 bushels from 24 acres, or over $25\frac{1}{2}$ bushels to the acre, says: "Sowed 2nd May, on sandy loam with some clay; harvested 5th August. The soil would not be termed good barley land: had been worked for 20 years in growing vegetables and seeds. Considering the season and conditions of soil, the results were fairly satisfactory. The yield per acre and weight of grain place the two-rowed as the largest crop in this locality." The sample sent by Mr. Bruce weighed $52\frac{1}{2}$ lbs. per bushel.

John Marshall, Barton Township, had 27 measured bushels. Says: "Weight, 52 lbs. to bushel. It was sown on the poorest part of the farm, to give it a fair trial. Two bushels of six-rowed were sown alongside and produced 20 bushels, weight 49 lbs. to bushel."

Mr. G. E. Tuckett, of Hamilton, had 334 bushels from 10 bags of seed sown on 10 acres of land equal to $33\frac{4}{10}$ bushels per acre.

A. Marshall, North Glanford, had 30 bushels per acre.

E. Blagdon, East Flamboro' a total yield of 40 bushels or 20 bushels per acre; E. Dyment, Dundas, 32 bushels per acre.

CARDWELL.

Wm. Campbell, Mono Mills, had 45 bushels per acre and says: "I intend to sow a considerable quantity next spring."

James Burke, Fintona, had a total yield of 45 bushels, 38 to 40 bushels per acre. Robert Burke, of the same place, a yield of 45

bushels, 40 bushels per acre. Jacob Cunningham, Mono Road, 35 bushels or 30 bushels per acre. Robert Murphy, Arlington, had 35 bushels from one bag sown on $1\frac{1}{2}$ acres. Says: "Straw did not stand up like Canadian six-rowed; all barley was far below the average this year. Will try two-rowed again another season."

Mr. H. Harris, Caledon, had 28 bushels from one bag sown on one acre, says: "It was sown too thick. Next year I mean to sow $1\frac{1}{4}$ bushels per acre." Hugh Wilson, Mono Road, had a total yield of about 35 bushels and says: "I think it will do well," and Thos. Wilson, Mono Road, 40 bushels. Wm. Lindsay of the same place had 30 bushels. He says: "The barley arrived about ten days too late to have a fair trial, but yielded about five bushels more per acre than the six-rowed. John McKim, Caledon, had 30 bushels per acre, and says: "The two-rowed was the best we had."

LEEDS.

Wm. Dunn, Sweet's Corners, had a total yield of 35 bushels, and says: "The season was too wet; we are well suited with the grain and think it will do well here."

John E. Stacey, Lansdowne, had a yield of 19 bushels or 15 bushels to the acre, and says: "The whole crop was injured by excessive rains, this was 75 per cent. ahead of the six-rowed barley."

Having now reached those counties which have had an average of less than 8,000 acres in barley for the past eight years and where but little barley is raised for export fewer details will be given.

CARLETON.

Wm. Mansfield, Manotick, had a total yield of 30 bushels, 23 bushels per acre, he says: "Compares favourably with six-rowed." James Craig, North Gower, had 28 bushels per acre, says: "The barley grew stronger than the six-rowed and stood up much better."

DUNDAS.

Duncan McDonald, Ormond, had a total yield of 30 bushels or 20 bushels to the acre, and says: "The exceedingly wet season was unfavourable."

KENT.

Alex. Pick, Williams, reports the yield per acre at 30 bushels by guess, and says: "Not yet measured, crop lodged badly, sowed too heavy." Geo. Cook, Chatham, had a total yield of 50 bushels, or 40 bushels per acre.

NORFOLK.

G. H. Chrysler, Port Dover, had a yield of 38 bushels, or 26 bushels per acre, and says: "Six-rowed barley almost an utter failure in this locality, yielding only 10 or 12 bushels to the acre, am well pleased with the Prize Prolific." H. C. Hagarth, Culloden, had 31 bushels, or 25 bushels per acre. W. H. Teeter, Teetersville, 84 bushels from two bags sown on three acres, or 28 bushels per acre. O. Ansley reports a total yield of 50 bushels, or 25 bushels per acre, and C. A. Dunkin, of Victoria, between 24 and 25 bushels to the acre. Mr. Dunkin says: "I am well satisfied with the barley and expect to sow a number of acres of it in the spring."

ELGIN.

John Edkins, Union, had 36 bushels, he says: "Our land was poor and unfit for barley, but I determined to try it first on poor land; am pleased to say it gave me the greatest satisfaction. There was not as good a piece of barley of any kind in this part of the township." David J. Watson, Fingal, had 25 bushels per acre. He says: "Was sown three weeks later than my own and the yield was five bushels more."

LINCOLN.

Isaac Tufford, Beamsville, had a total yield of 30 bushels, about 30 bushels to the acre. Says: "I have no doubt the barley would do well here with a favourable season."

Thos. R. Merritt, St. Catharines, sowed 9 bags on 10 acres and had 254 bushels, a little over 25 bushels per acre. He says: "Sown April 30, harvested July 31, should have been sown early in April; the ground was ready but the seed did not come in time for early sowing."

W. W. Claus, Jordan, had a total yield of 35 bushels, or 28 bushels per acre.

LANARK.

B. W. Dunnett, Pakenham, had 75 bushels from two bags sown, or 25 bushels per acre. Says: "Takes two weeks longer than six-rowed; does well on clay land."

ESSEX.

Alex. St. Louis, Walkerville, had 25 bushels per acre. He says: "Sown May 5, harvested August 10. I got mine about one month too late, if I had sown it about the last of March it would have been much better."

STORMONT.

J. R. Cryslér, of Cryslér, had a total yield of 36 bushels, or about 34 bushels to the acre.

GLENGARRY.

D. R. McLennan, Lancaster, had 35 bushels per acre. He says: "I think the barley is very good, I only sowed one acre this year.

RENFREW.

Jas. Carney, Pembroke, had a yield of 26 bushels from $\frac{3}{4}$ of an acre, or over 34 bushels to the acre. He says: "Sown 5th June, harvested 10th September. This was sown late and stood well, but the season was unfavourable." This grain when cleaned weighed $51\frac{1}{2}$ pounds per bushel.

SUMMARY.

In the summary which has been presented, the experience of 320 farmers in Ontario has been given, covering, I believe, every district where the two-rowed barley has been grown. This list might have been greatly increased with similar testimony equally good, but enough has been given to show that there is not much fault to be found with the barley. A proportion of the reports are less favourable than some of those which have been given, but in most instances these may be attributed to a very wet season, lack of drainage, or want of care in the preparation of the land. Many think that the straw is a little weak, but a very wet season does not afford a good opportunity for correct judgment on this point. There is no doubt that two-rowed barley takes a longer time to mature than the six-rowed, and that it should be sown early.

It is scarcely necessary to refer here in like detail to the results obtained in the other Provinces, as the number of returns is relatively small and a correct general idea can be got by consulting the table of averages.

GERMINATING POWER OF CANADIAN GROWN TWO-ROWED BARLEY.

It has been stated that the two-rowed barley grown in this country deteriorates so rapidly as to become deficient in vitality. To test the validity of this statement the germinating power of 685 samples of last year's growth in Ontario has been determined, and the average is $94\frac{1}{2}$ per cent.; 29 samples from Quebec averaged 92 per cent.; 17 from New Brunswick $87\frac{1}{2}$ per cent.; 7 from Prince

Edward Island 96½ per cent.; 27 from Manitoba 88 per cent.; and 13 from the North-West Territories 88¾ per cent., making a total of 778 samples tested. These were all samples of the Prize Prolific barley sent by farmers who had obtained the seed from the Government importation. These figures require no comment, and the objection referred to falls to the ground.

MARKETS.

With regard to a market, there seems no doubt that Great Britain can take all the surplus that Canada will want to export, and the price paid for it will depend on the quality of the article. It is the opinion of the largest dealers in Canadian barley in Ontario that the six-rowed barley, during the past season, has been at least two pounds lighter than the average of past years. If this be so, it is reasonable to suppose that the same influences have affected the two-rowed barley in similar degree. An average of two pounds in weight added to such two-rowed barley as was grown the past season, would bring a very large proportion of it up to a standard of quality which would command remunerative prices in the British markets. Judging from the valuations of the samples sent to England last year, which were published in Bulletin 7, there is every reason to hope for profitable returns from this trade. The comments of the judges, at the recent Brewers Exhibition in London, England, who examined the samples of Canadian grown two-rowed barley shown there, give evidence that favourable opinions have been formed regarding Canadian barley, even where the weight has not exceeded 52 pounds per bushel. Many enquiries have been made of late for consignments of Canadian two-rowed barley for the English market, but no sufficient quantity has been available this season for the purpose. Fifty quarters or 400 English bushels of the two-rowed of last season's growth, weighing about 52 pounds per bushel, were procured and this barley has been forwarded to England to have its market value determined, also its quality for malting and brewing. Another lot of 320 bushels, of similar quality has been secured for a comparative brewing test in Canada. As soon as these tests are completed and the information which is sought available, the results will be promptly given to the public. It is not to be expected that two-rowed barley of *prime* quality can be grown in all parts of Canada; this cannot be done in England or Scotland, where some districts produce much finer

samples than others. But in those localities less favourable for producing fine malting barley the two-rowed varieties will be profitable to grow for feed, as the experience gained seems to show that they are more prolific than the six-rowed sorts. In preparing barley for market it should be thoroughly cleaned, and all the light grain separated. The separating of 10 or 15 per cent. of the poorer grain adds much to the value of the better barley remaining, and the screenings can be used with profit at home as food for stock.

BARLEY CULTURE.

I desire to refer once more to the importance of early seeding and of a thorough preparation of the soil before sowing. The figures given in the early pages of this Bulletin on the results of the tests of the past season show in the increase of crop the advantage of sowing barley after roots, but where this is not practicable a good mellow piece of ground should be selected, one that has been well worked and is in fair condition as to fertility. This crop will not give good returns when sown on cold, wet ground, or on land that has been too much impoverished by frequent cropping and scanty manuring. The roots of the young barley plant make rapid growth under favourable conditions, but they do not strike so deeply in search of food as those of some other cereals; hence, the nutritive elements they need should be presented to them in the soil in such a well digested condition as to admit of its being readily taken up by the growing rootlets. A little experience will no doubt enable our intelligent Canadian farmers to obtain in favourable localities and average seasons good results from this promising crop.

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