

understood that they grow well as far north as Barrie, so the experiment might be extended.

Mr. CARLING. We are experimenting with all the different kinds of forest trees here, and at all the other experimental farms. We have four or five hundred varieties of forest trees, including walnut and chestnut now under experiment.

Mr. MULOCK. It would be well to bear in mind, if you are going to grow your trees from nuts at the experimental farm here and then transplant them, that it is not giving them a fair chance. A nut bearing tree is very difficult to transplant, as a rule. While the experiment might be successful if commenced with nuts, it might prove wholly unsuccessful if the trees were transplanted. Now, I wish to ask a question with regard to Ladoga wheat. I observe that the Government gave some attention to the cultivation of Ladoga wheat in the North-West. The Minister will remember there was a good deal of difference of opinion amongst millers and grain men as to the value of Ladoga wheat as compared with Scotch Fife. It was advanced as an argument in favour of Ladoga wheat that it matured earlier. I would like to enquire whether the reports that you have in regard to Ladoga wheat in any way throw light upon the controversy that existed some years ago. The Minister will remember that the millers' section of the Toronto Board of Trade passed a resolution disapproving of the efforts of the Government to encourage the growth of Ladoga wheat in lieu of Scotch Fife, whilst I believe the similar section of the Montreal Board of Trade pronounced in favour of the Ladoga wheat. I would like to know how the controversy has been settled.

Mr. CARLING. It has never been recommended in the department that Ladoga wheat should replace Red Fife; but it has been found that the Ladoga wheat will stand the climate in some parts of the North-West better than the Red Fife, and it matures some ten or twelve days earlier than the Red Fife. It is very much sought after in the district of Prince Albert and in the northern part of Manitoba. We are now experimenting with a carload of Red Fife and a carload of Ladoga wheat, at Toronto. Our chemist has tested it at the experimental farm, and he shows clearly that there is as much gluten in the Ladoga as there is in the Red Fife. Bread, made from Ladoga wheat, is considered equal to that made from Red Fife, although somewhat darker in colour. Experiments with it have also been carried out throughout Ontario. We find that the yield of Ladoga is not so much per acre as the yield of Red Fife, but it answers this purpose, that it ripens earlier and has succeeded in the North-West where Red Fife has not; it is well thought of, and has been asked for by many farmers in the North-West. Altogether, I would not recommend that it should replace Red Fife, because there is no better wheat than Red Fife, but it is more suitable than it in some districts.

Mr. MULOCK. I understand that one difficulty arises from the fact that the two-rowed barley cannot be malted with the six-rowed. I have heard it suggested that the difficulty can be overcome and a good market for our six-rowed barley obtained in Liverpool, if we can get some maltsters there to take it up and malt it. English maltsters have become so accustomed to the two-rowed that they are averse to experimenting with the six-rowed. But, surely, if

all that is necessary to get a market for our six-rowed is the securing of some firm to malt it, it is a difficulty that can be overcome. There is a pretty settled conviction that we are endeavouring to grow two-rowed barley which will not grow in Canada. I know the Minister points with satisfaction to the reports, and I only wish they were borne out by the average experience of a few years. But it must be borne in mind that last year was especially favourable for cultivating two-rowed barley, that the season was a long growing one, that the ripening season was postponed to the end of July, and the grain was not dried out. It is not likely in twenty years that we shall again have as favourable a barley season as 1891; and, of course, the character of the season benefited all kinds of grain crops. While I would not wish to discourage the two-rowed barley enterprise if likely to be successful, I feel that we are undertaking a task which is destined to be a failure. When the July sun comes the growing time of barley is at an end, and then filling takes place. In England they have a long season, and thus their barley grows to be heavy, 56 pounds or over, but it is not so in Canada. The six-rowed is a lighter variety, and seems, on an average, to be the best we can raise. I happened to have a conversation with an old experienced farmer not living very far from Toronto. He raised barley, not for market, but to sell for seed, and he is a little more than an ordinary farmer in that way. He is, indeed, one of the best farmers in Canada, and he obtained the gold medal of the province, on one occasion, for his farm. I shall have no objection to giving the Minister his name, if he desires it. This farmer assured me that he had been growing two-rowed barley for 20 years for seed purposes, and only once had it come up to the weight of 56 lbs. That is an experience which tells us pretty plainly that we are not going to be able to raise two-rowed barley of the weight required for the English market. Therefore, I think the Government would be acting wisely if they could manage to secure facilities for malting our six-rowed barley, which we can cultivate to advantage here, and thus surmount to a certain extent this barley difficulty. I am not aware whether barley can be malted here and exported to England, but a person in the trade made the suggestion to me, which I give to the Minister, that we should endeavour to arrange for our six-rowed barley being malted in England.

Mr. CARLING. 20,000 quarters of six-rowed barley have been shipped to England this winter, and it is being tested by English maltsters. When the test has been made, we shall be able to ascertain whether it is suitable for the English market. I am of the opinion that it will not suit the trade in the old country, because the two-rowed variety gives a much better yield, contains a larger quantity of saccharine and makes a larger quantity of beer than does the six-rowed. I have spoken to American brewers and they prefer the two-rowed, but they cannot get it in quantity except in California. I consider the two-rowed is the best barley, taking everything together, for it gives the largest yield and brings the best price. The difficulty is to get our people to make the change. They have been growing the six-rowed so long that our Canadian barley is nothing to what it was 20 or 30 years ago.