

plant. The seeds are held sufficiently tight in the pods when the plant is blown across the prairie for the seeds to be dropped only a few at a time. I have no doubt that a dry plant of this tumbling mustard could be blown a hundred or a hundred and fifty miles over the snow and leave a trail of seed behind it all the way. It has spread now, as I saw myself, more than twenty miles from the railway in one direction.

*By Mr. Pridham :*

Q. It is an early plant, is it not? It comes early in the season?—A. Yes, it comes early in the season like the other mustards.

*By Mr. McGregor :*

Q. Would not ploughing and summer fallowing have overcome it?—A. Yes, it would, if they had attended to it at once.

Q. When this little old fashioned mustard gets in, it is very hard to remove, but by ploughing and summer fallowing it can be removed largely?—A. It is the great extent of the farms and the comparatively small number of settlers in that part of the Dominion which is the difficulty, also the vast area of prairie over which the tumblers can be blown without meeting any obstruction. Wherever there is a badger hole or an unevenness of the ground, the seeds are left there and if they get to a cultivated spot the plants spring up vigorously. I saw it at Fort Qu'Appelle and other places north of that. By this habit of blowing and tumbling across the prairie it has a great means of spreading.

*Hare's-ear Mustard.* There is also another weed in the west, the "Hare's-ear mustard" which is going to be one of the worst pests they have had in the North-west, unless they at once set to work to get rid of it. It is not a tumbler, but is very troublesome in binding grain and also chokes out grain crops. I procured from the Keewatin Milling Company of Rat Portage—a very large company—which receives grain from many districts, about thirty or forty samples of seeds from as many different localities, and made a critical examination of them. Only in one of these samples did I find a few grains of the tumbling mustard. The reason was this: The seeds were so small that the ordinary methods of cleaning were effective, but with regard to the Hare's Ear mustard, the seeds are larger and not so easily cleaned. The small seeds of tumbling mustards, however, would not appear among the small grain and larger weed seeds, but would be left with the dust and rubbish where the grain was threshed.

There was one point with regard to weeds, which I found was not sufficiently recognized in Manitoba and the North-west. There is no doubt what a marvellous country we have there for the production of grain crops. We should have the magnificent crops like we had last season, every year, if—that little "if"—the rainfall and snowfall were always sufficient, that is just a little heavier every year. Now, then, one of the great injuries weeds do to a district is to pump up the moisture out of the earth and give it out by evaporation through their leaves. The Hare's Ear mustard has big leaves as large as my hand, and these plants are continuously pumping up the moisture from the soil and evaporating it through their leaves. Yet while this is well known, farmers, many of them at least, do not recognize the importance of keeping the weeds down, if only to prevent the moisture from being drawn from the land. If the land was cleared of these coarse succulent weeds they would be able to save at any rate the amount of moisture they use up to help to grow good crops. This should be an inducement to the farmers of the North-west to use greater efforts to get rid of the weeds. Mr. Richard Waugh, of Winnipeg, was the only man I met in the west who realized the importance of this aspect of the value of keeping down weeds on account of the moisture which they extract from the soil. What a difference it would make to the whole Dominion, if all our farmers in the North-west could be got to realize the importance of keeping the weeds down, if only to save the large amount of moisture they take from the soil. Figures could be easily given of the amount of moisture extracted by different trees and plants, but it would not be advisable to detain the committee now.