

nificent 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 those 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.

DURATION OF VITALITY IN SEEDS.

By Mr. McMillan :

Q. Has the seed of the tumbling mustard as much vitality as the common mustard with us?—A. We do not know sufficient about it to answer that question. It has only been in the country six or seven years. In Nova Scotia, from one experiment which came under my observation, I know that the seed of the ordinary wild mustard or cadluck will live for 20 years at least without being injured. Colonel Blair, the superintendent of the Branch Experimental Farm at Nappan, told me that, when a boy, his father's farm was infested with cadluck. His father determined to clear the farm and year by year had every spear of it taken up and buried six feet deep in a marsh, so that the farm was at last made a perfectly clear farm; not a spike of mustard was to be seen. Twenty-one years after the farm was sold, the whole farm burst out suddenly into mustard again. It was such a strange thing that it drew forth much comment and the question naturally arose as to how it occurred. It is well known in Nova Scotia that they get alkali as a fertilizer for their land by digging marsh-mud. The purchaser of the farm had dug his marsh-mud from where the mustard had been buried 21 years before, at any rate. So you will see that the mustard seeds had retained their vitality all this time and possibly longer, because the seeds which grew when exposed to the air by being spread on the land may have been buried some years before the period of 21 years which had intervened since the farm was sold.

While, of course there are a great many instances reported of the longevity of seeds, this is an actual fact. In artificial treatment we have never been able to keep seeds of any kind longer than about 20 or 25 years. Statements are frequently made in newspapers and elsewhere about mummy wheat. I suppose I have been shown a hundred times, to be moderate, different kinds of plants that were stated to have been grown from seeds taken by some man's father or some other reliable authority out of a mummy. Now, unpleasant as it is to say so, not one of the statements was true, although those who made them may have thought so. People sometimes reflect upon a certain matter or statement they have heard and talk it over until they actually begin to believe it to be a fact they have witnessed, but there was never a grain of wheat or any other seed taken out of an old Egyptian mummy that has ever been grown. Yet, probably, all of us have been shown, all over the world, wheat said to have been grown from grain taken from a mummy. The Royal Society of England some time ago conducted some very careful experiments, and I think, if I remember rightly, that beans retained their vitality longest of any seeds; I think for these it

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