

Agriculture and Colonization.

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 was about 40 years and the average of others was 20 or 25 years. Since I have been at the Experimental Farm I have had samples of "mummy" wheat sent to me from different parts of Canada. I made this statement at a farmer's meeting last year and a gentleman got up in the audience and said, "I have got some wheat, at any rate, that is 40 years old, and you can try that and see if it will not grow." Well, it did not grow, and I do not think you will ever get wheat or any other grain of that age to grow. But weed seeds in the state of nature buried deeply in the soil will certainly last much longer than by any method of artificial preservation. I have a suspicion, too, that the stories about wild goose wheat having been taken out of the crop of a wild goose, are very much of the same nature as mummy wheat. Any curious kind of wheat is liable to have the wild goose story tacked on to it—particularly the very strange-looking Polonian wheat.

By Mr. McGregor :

Q. I have seen an old meadow turned over after a lapse of ten years and the mustard came up freely afterwards?—A. Yes, I have no doubt of that. I think, too, that weed seeds or any other seeds, buried deeply in the soil will germinate when the soil is turned up and exposed. We know that in destroying weeds one of the best methods is to scarify or cultivate lightly the surface of the soil, so as to bring those seeds that are a little too deep to germinate, to the surface, when they will get air, light and moisture. They will germinate at once, and should be ploughed or cultivated down immediately.