

was about 40 years and the average of others was 20 to 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 farmers' 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.

Q. In the west, after the first crop is taken off and the land is left idle, it frequently happens that in two or three years the grass will come up and kill the weeds?—A. Naturally the grass will come back to the land and destroy the weeds. Many of the grasses are perennial and have strong running rootstocks by which they increase rapidly, and they would, in that way, produce again the old prairie which existed beforehand.

*By Mr. Carpenter :*

Q. Can you account in any way for the mustard seed lying in this marsh you speak of for 20 odd years without its productive qualities being destroyed? It seems something remarkable to me, seeing that it was a moist place. Considering that it was moist all the time one would suppose that the seed would rot and become perfectly harmless?—A. I think the reason that the mustard seeds retained their vitality so long, is that they contain a large quantity of oil. This is a well-known fact, as any one can find out by crushing them.

Q. I think there must be something in that. Any other seed would be destroyed in a very short time?—A. Then it must be remembered that it was six feet deep, and the seeds would not be subject to changes of heat and cold, and would get very little air.

*By Mr. Powell :*

Q. Then there is a remarkable preservative power in the marsh mud. The fence posts sunk in the marsh never rot. The remains of the old French tramway down there are still preserved as perfect as ever. There may be something in that?—A. Yes, that is very true; it certainly was a remarkable occurrence. It was not that a few plants grew, but the whole farm sprang out with mustard, so that it seems likely that most of the seeds were preserved.

*By Mr. McGregor :*

Q. I do not think it uncommon at all. I have known case after case where mustard has been turned down for 10 or 15 years, and has come up again as strong as ever?—A. Yes. I believe it is frequently so, but the point Mr. Carpenter brought out was that of it lying in the wet mud all that time.