

which it is parasitic, and which was produced by a plant similar to itself previously. I am sorry to say that the muggy, warm weather we are experiencing at the present time will probably do much harm to the magnificent crop of this year. The rust is just starting now, and I fear, unless we get some dry, windy weather, we shall suffer greatly from rust.

A serious plant disease that has now been brought considerably within control, through the studies of scientific men, is the potato rot. The experiments in connection with this murrain which has caused more than one famine in Ireland, have been most satisfactory, and consist of treating the plant with copper mixtures. What is known as the Bordeaux mixture has been used extensively in France, and this year I read that the English Government is trying it both at home and in Ireland. In the United States it has also been used successfully at some of the experimental stations. I have arranged a series of experiments at the farm for treating both the scab and the rot of the potato. The Bordeaux mixture consists of 6 pounds of copper sulphate dissolved in 16 gallons of water, and 4 pounds of fresh lime dissolved in 6 gallons of water—dissolved separately, but afterwards strained and mixed, and then sprayed over the foliage. For the treatment of the potato beetle and potato rot at the same time, the article known as "London Purple" is to be used for mixing with the Bordeaux mixture, in preference to Paris Green, on account of its chemical nature.

Potato rot.
A successful
remedy for.

In my last annual report it may be noticed that much attention has been given to cultivation of the different fodder grasses. Those experiments have been taken up, I may say, with one special object in view, and that object has been this: All through the Dominion, farmers have been buying at high prices mixed grasses and permanent pasture mixtures, which are sold at these high prices on their English reputation. There is hardly a seedsman in Canada—in fact I do not know a single one—who grows in Canada the seeds he offers for sale. They get their supplies from English houses, which again, in many instances, obtain their seeds from the mountains in Germany, the collectors being small farmers or children who live in the mountains and have no special or technical knowledge. They might, therefore, mix a dozen different kinds of grass seeds, some good, others useless, which would be sold under one name. In cases where the English seedsmen grow the grasses in the English climate for cultivation there, they may give satisfactory results; but I maintain that in many instances English grown seed is not suitable for this climate. This spring I found on my grass plots that many of the varieties reputed to be most valuable, and, in fact, the most important of all the English pasture grasses, could not stand our Ottawa climate. With few exceptions they had been winter-killed, yet these very grasses form the bulk of the seeds that the seedsmen of Canada are selling at high prices, in some cases at \$10 or more per bushel. They sell them in Canada for the same purposes and for cultivation in the same soils as they are recommended for in the English catalogues, while, as a matter of fact, they may be altogether unsuitable for cultivation here in our climate. You may ask what can we get instead. Well, we have native grasses here which are very valuable, and, I believe, are much better suited to our requirements, and I am endeavouring to prove this at the Experimental Farm.

Fodder
grasses.

By Col. O'Brien:

Q. Have you ever tried Italian rye grass?—A. Yes; I have tried it here three years running, in different soils, but it always kills out in the winter. Another grass which will succeed in some parts