

Agriculture and Colonization.

tive remedies. By carefully conducted experiments we have found which are the best poisons to use and in what proportion they should be applied, the best time to apply those remedies, and the cheapest way to get good results. During the past two years particularly, a large amount of work has been done in spraying fruit trees and other crops, and exceedingly good results have followed. In addition to the work done at the Central Experimental Farm and the other stations under the control of the Dominion Government, the Provincial Government of Ontario are now helping this work along by publishing valuable instructions and reports, and I think it may be said now that there is no farmer or fruit grower in Canada who may not get much help from his own Government's reports on all the different parts of his agricultural work. The Ontario Government during the past year has carried out a very successful series of experiments in spraying orchards by means of object lessons conducted by Mr. A. H. Pettit, of Grimsby, a man of energy and intelligence and of great experience as a fruit grower.

In the province of Quebec there are a great many active farmers and fruit growers adopting the same methods. In Nova Scotia and British Columbia the same thing is going on, and the results are always satisfactory.

I have been preaching the gospel of spraying for ten years, and at the Experimental Farm we have done all we can to spread the requisite knowledge, by publishing bulletins, and by pushing the work along in every possible way. Last spring, Mr. Craig and I went to the Niagara district and held a series of meetings in the places most convenient for the fruit growers to meet us. This series of meetings took about a week and we were able to meet a large number of the best fruit growers of the district. This effort has had a good effect. At any rate it is evident from our correspondence that a great many have adopted spraying, which they had not before used, and with considerable success. I think spraying is now recognized as part of the necessary annual work of fruit growers. They recognize it now as a method to be adopted, as a matter of course, whereas, a few years ago, we had trouble to persuade them that it was a thing they ought to try and from which they would get good results.

The Canker Worm.—A large number of the insects one notices every year in Canada are not necessarily injurious, and experiments are necessary to find out which are injurious, and which are likely to be most injurious, so that particular attention may be paid to them. This work can only be done by specialists, but a good many are doing it, and there is no reason why the farmers should not take advantage of the results. They can get information by asking for it and, by promptly applying the remedies advised, they may save themselves a good deal of trouble and avoid a great deal of waste in labour and in money.

Among the insects which have been brought very prominently to my notice from their frequent occurrence during the past year, I would just mention one or two. The canker-worm, well known by that name, has been injurious in Ontario and Nova Scotia, and I bring it before the Committee because there is a good deal of difference of opinion in various parts of the country as to what is the best remedy of dealing with this pest. Now, there are very few insects concerning which there are not a dozen or even a score of different methods which may be tried by way of remedies, and the great object for everybody who wants to get practical results, is to get to know the *best* of these. If there are a dozen remedies before the public it is very likely that none will be used, because while you are making up your mind which is the best, the opportunity for applying any of them passes away. If there is only one remedy recommended, we are likely to get the good results that we wish for, because the farmers are in no doubt as to what ought to be done. In Nova Scotia the general opinion is that the best remedy for the canker worm is banding the trees with some viscid or sticky substances to prevent the moths climbing up the trees. With respect to nearly all these injurious insects it is of the utmost importance to study their life history. Unlike many others, the insects of which we are speaking appear late in the autumn or early in the spring. The females, which lay the eggs from which the caterpillars are produced in the spring, when the eggs are hatched and the caterpillars come out, appear late in the autumn. They have no wings, and they climb up the trees to lay their eggs on the branches. The eggs stay there during the winter, and the young caterpillars hatch during the spring.