

APPENDIX No. 1

which was passed through the fumigating house and been kept there for the prescribed 45 minutes, showed a single living scale insect. This plan is also applicable for small trees and fruit bushes out of doors, but on account of the size and cost of the tents required for larger trees, as well as their perishable nature and the difficulty of handling them on windy days, the expense of this remedy has prevented it from coming into very extensive use. Where fumigating can be practised, it is perhaps the surest remedy of all.

The hydrocyanic acid gas is very deadly to all animal life, and if applicable to large trees would undoubtedly be the best treatment of all for the San José Scale.

By an hon. member:

Q. Does it require the use of a tent ?

A. It requires the use of a tent, and these tents are very perishable. The handling and raising and folding of them, seems to destroy them much sooner than might be expected from the use of ordinary tents. The splashing of the sulphuric acid, which sometimes takes place when the cyanide is dropped into it, makes it boil up for a moment, and if it fall on the canvas, it destroys the tent. On small trees and bushes such a makeshift as an ordinary tight barrel gives excellent results. This is convenient for use on rose bushes, gooseberry and currant bushes. Excellent work has been done by Mr. Fisher, in Ontario, with ordinary tight apple barrels with the cracks closed with clay, &c. Petroleum barrels are too heavy to handle. The apple barrels gave excellent results. On bushes treated early in the spring, there was no sign of the insect in the autumn.

These are the three remedies which I consider are practical if applied carefully, whale-oil soap, in the proportion of two and a-half pounds to one imperial gallon of water, and, when this soap is made with potash, it remains liquid and can be used through an ordinary spraying nozzle. Crude petroleum applied as a mechanical mixture with water, one-fifth of the whole mixture being oil, and fumigation with hydrocyanic acid gas for 45 minutes—for every 100 cubic feet one ounce of cyanide of potassium, one ounce of sulphuric acid and three ounces of water. The cubic contents of the inclosure must be calculated and the gas generated to the required amount.

THE LOCUST PEST,—REMEDY FOR IT DISCOVERED.

The outbreak of injurious insects which probably was of most importance from the injury done last year, was of locusts or grasshoppers in Manitoba. This occurred over exactly the same area as during the year before. Owing to the phenomenal wheat crop of 1901, in the west, little was known of the injury except in the localities where the loss was felt.

The announcement I wish to make now, is of a very excellent practical remedy which was discovered by a wideawake young farmer of Manitoba, named Mr. Norman Criddle, of Aweme. This gentleman, who is a student of natural history, had noticed in driving along the roads, that grasshoppers always collected thickly wherever there were any horse droppings on the road. The old remedy, which had given good results in checking the ravages of grasshoppers in California, viz., a mixture of bran and Paris green had been used to some extent. This remedy, however, seemed to those who had not tried it, such an unpractical remedy that it was difficult to get farmers to adopt it, especially when they had to pay \$18 to \$20 a ton for bran. Although very effective, it certainly was, with bran at such a price, an exceedingly costly remedy. When Mr. Criddle noticed that the grasshoppers devoured the horse droppings so greedily, it occurred to him to substitute that material for the much more costly bran. Having collected a supply of this material, he poisoned it with Paris green, and distributed this around the edges of his wheat fields and secured most satisfactory results. He took an ordinary coal oil barrel, cut it in half, and put the two tubs thus made, on a waggon, having filled them with the poisoned mixture. He then drove around the