

dealing with this insect as perhaps any man in America, has this to say on the subject: "On the Parry nursery where the scale was originally introduced in 1886, there is now an orchard of Kelfer pears in full bearing where the trees have been infected for years, and when the pears came off this season, as I am informed, with scarcely a blemish. Now, by all the cautions promulgated by the extremists in the direction this orchard should have been absolutely destroyed as soon as the insects were found to be generally distributed through it. Yet what a pity this had been and what an injustice to the grower! Could I justify to myself an order requiring any grower to sacrifice an orchard of bearing fruit trees because it was infested by an insect which could be reduced to harmless numbers?" And this brings us to the last point which I wish to consider, namely the question of the possibility of

Exterminating the Pest.

In 1896 it was found in the following states: Alabama, Arizona, California, Delaware, Florida, Georgia, Idaho, Indiana, Louisiana, Massachusetts, Maryland, New Jersey, New York, New Mexico, Ohio, Oregon, Virginia, West Virginia, Washington and Kansas, with probably many others where its presence had not been discovered. It is known to feed upon the following plants: Almond, peach, apricot, plum, cherry, spirea, raspberry, rose, hawthorne, pear, apple, quince, gooseberry, currant, persimmon, acacia, elm, English walnut, pecan, alder and willow. It would seem to me that with so minute an insect, so widely distributed throughout the country and feeding upon such a variety of plants, the possibility of even exterminating it is out of the question, and when we consider the question of keeping it out of the Dominion I should regard it as equally hopeless. Allowing that we shut off all communication in the way of traffic which is naturally impossible, it can only be a question of time when the insect will find its way

across the border from the United States. And besides all this we already have it in Ontario, where, though every attempt has been made to stamp it out, it is, according to the last accounts I can get, still found in abundance in certain localities. I can but feel that the attempts which have been made in Ontario to check this insect by cutting down infested orchards, however well meant they may have been, are a great mistake. Unless we admit that this insect is too much for us and decide to abandon the field to it I cannot see the utility of his method.

Not Effective Cure.

All that is accomplished when an orchard is destroyed is to remove that much food from the pathway of the scale and the ultimate end of this method must be the extinction of our orchards. The whole question would seem to hinge on whether this scale is to continue to be as destructive as it has been in the past and whether it is possible to exterminate it. As to the first fruit, the past history of all insects would lead us to expect its destructiveness to diminish year by year. As to the second let me quote from Mr. Marlett, of the department of entomology at Washington. He says: "Does anyone think for a moment and at all seriously that the San Jose scale is to be exterminated and that its dissemination is to be prevented, whatever may be the legislation and whatever quarantine steps may be adopted or exterminative measures put in operation? Undoubtedly this scale insect will overspread North America within the possible climatic range of the species and ultimately and at a not far distant date will become established in Europe despite all possible preventive efforts."

Q. Will this scale kill outright?

Prof. Sears: They will spread over the tree, and will eventually kill the tree if it is not treated.

Dr. Saunders: Is it the crude petroleum treatment that you refer to as effectual?