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No Danger from San Jose Scale-Infested Fruit

WHEN the last issue of THE CANADIAN HORTICULTURIST was on the press, the newspapers of Ontario and the fruit growers of the Grimsby section of the Niagara district were much excited over the importation of San Jose scale-infested fruit from the United States. The fruit was imported for canning purposes. It came from New Jersey, not from Maryland or Delaware, as was erroneously reported. An inspector was commissioned with instructions to investigate the situation and to take steps to prevent the spread of the pest from the infested fruit to the orchards of the locality. The inspector called a meeting of the fruit growers to discuss the question and to obtain suggestions. Two meetings were held, and a deputation of fruit growers waited upon the Minister of Agriculture at Toronto.

Three carloads of the fruit were badly infested; the others did not have so much scale. The inspector in charge had the cars sealed and notices posted forbidding the removal of the fruit, except under Government supervision. The pears were carried to the factory in sacks, carefully guarded. Before peeling each sack of pears was immersed in boiling water for five minutes. After peeling, the skins were boiled again for fifteen minutes to make sure that none of the scale would escape. The cars and storage buildings were fumigated. All bags, baskets and crates that had contained the pears were burned to ashes, together with all sweepings from both cars and factory. One of the cars was deported. Another, that had been delayed at St. Catharines, was also sent back. All these precautions, while prompted by a commendable object, were unnecessary.

It is practically impossible for San Jose scale to spread by means of infested fruit. Experiments on this continent and in Europe prove this to be so. Not one instance of infestation of scale from this source is known. The leading authorities in Canada and the United States are emphatic in the opinion that there is no danger of dissemination by this means. Further comments on the

question appear in the editorial columns of this issue.

In reply to some questions sent by THE CANADIAN HORTICULTURIST to a number of prominent entomologists in Canada and the United States, many interesting and valuable letters have been received. Some of them are published herewith. Others will appear in the January issue. These letters are from men who know.

For Horticultural Societies

The Napanee Horticultural Society was organized twelve years ago, and since its organization, the society has subscribed for THE CANADIAN HORTICULTURIST for its members. Experience has taught us that it is the one publication devoted specially to our interests, and that we would not be doing our duty if we did not place a copy in the hands of each of our members. We have observed the improvement that has taken place in the paper from time to time. The many useful hints given for the benefit of amateur horticulturists are of particular value. What is true of the Napanee society is equally true of every society in the province. I know of no way in which the directors can spend their money so profitably as in subscribing for THE CANADIAN HORTICULTURIST.—W. S. Herrington, President Napanee Horticultural Society, Napanee, Ont.

Prof. Wm. Lochhead, Biologist, Macdonald College, Ste. Anne de Bellevue, Que., contributes the following: "In these days when large quantities of fruit infested with San Jose scale are shipped to markets in all parts of the country, it becomes a matter of much importance whether or not the San Jose scale can be spread by such shipments. Germany and other countries have very stringent quarantine regulations regarding the importation of fruit infested with scale, believing that scale can be spread by

infested fruit. The German authorities have failed, however, after many experiments extending over several years, to find a single instance of infestation of scale from such a source. This result is such as we might naturally expect. None of the scales found on fruit shipped for export are mature; the large percentage of them are but half-grown. When scales are dislodged from the skin of the fruit their mouth-parts are usually broken, so that they are incapable of feeding and growing. Should parings of infested fruit be thrown on the rubbish heap or in the back yard it is hardly probable, scarcely possible, that the immature scales will find conditions suitable for their development for three months up to maturity, and the production of living young. The parings soon lose their moisture and become dried up, followed by the death of the young scales.

"Sometimes sparrows and ants, which have an attraction for rubbish heaps, have been accused of being agents for the carrying of the scale to shrubs and trees. To my mind we need fear nothing from this source, as the scales to be carried are not in the active, crawling stage. They are, as I have said, in the immature stage, torn from their resting place, and with a long period of development ahead of them.

"On the other hand, I have sometimes seen the crawling larvæ of the San Jose scale on market fruit that had been picked but a few days. In my judgment there is a possibility in such cases that the scales may be spread to shrubs and trees by such agents as sparrows and ants before the fruit is consumed. I remember a case where a tree became infested with scale that had escaped from baskets piled occasionally at the foot of the tree. This danger of possible infection is referred to in my bulletin, 'The San Jose and Other Scale Insects,' page 21, published in 1900 by the Department of Agriculture, Toronto. However, as soon as the crawling larvæ become fixed and secrete a scale, there is no danger that it will survive after disturbance even if transplanted. Therefore, in long shipments, where the crawl-