

DISSEMINATION.

by Mr. McGregor :

Q. Is there any danger of bringing in the scale on imported fruit, such as oranges and pears, from California and other districts affected by the scale?

A. I believe there is no danger at all of importing the scale on fruit. The scale does not occur on orange trees in California.

There are several points bearing on this question which may be considered. In the first place fruit infested by the scale is conspicuously disfigured by purple spots, so that it is not likely to be packed. It is easily detected, and there are laws in all the infested States providing that fruit bearing scales shall not be exported, so that it is unlikely after a short time that any infested fruit will be exported, but, on the other hand, it may be said that it has been exported in the past. That, however, was before attention was so prominently brought to it as is now the case. Even if infested fruit were imported into this country it is very unlikely that the scale would get from that fruit on to the trees in orchards. The scale dies when once removed from the tree or fruit; it is only the young that are born after the scale has been imported into this country, that could possibly get to the trees. After the young are born they are able to crawl, at the longest, for about two days only; they are exceedingly minute, it requires a strong magnifying glass to see them at all. With good eyes you could detect them as a fine powdery dust, but nothing more than that. On trees badly infested, in the Niagara district, in June, one of my correspondents described the appearance of infested trees at the time the young were hatching as looking as if they were covered with powdered sulphur, because the yellow-coloured young bark-lice spread over the trees in millions. These insects are so minute that they cannot travel very far. The full-grown scales die very soon after a branch is cut from a tree, forty-eight hours is perhaps the longest time they can live on a severed branch, because they require sap to live on all the time, and by that time the branch would have dried up too much for them to get nourishment. The insect is attached to the tree by means of a hair-like sucker or beak and it is only while the tree is living that it can get the sap that it requires for its sustenance. If a bough were cut from the tree the evaporation of the moisture within two days, and probably within a few hours, would kill all the scales on the bough. It is only the young insects that are born while the bough is alive that can spread. On a dormant tree with a root like nursery stock at the time of shipping, the scales are also dormant and can last longer. Another point about bringing in the scale on imported fruit, the people who grow fruit in this country are not those who are likely to purchase the imported article. It would be bought chiefly in the towns and for the scale to get into the country districts would be practically impossible. Should a farmer buy a box of California pears it would be very unlikely that the peelings of these pears, which would dry up soon, would be carried into his orchard from his back yard or that the young would be born in these few hours that the peelings remained moist, and in that way be carried to the trees. I must say I can see no danger from the importation of fruit under existing circumstances.

Q. Is there danger from birds disseminating the disease?

A. Yes, there is danger from birds; they are one of the usual means by which the insect is disseminated. The minute young crawl on the birds which perch in infested trees, and are thus carried from tree to tree, but the birds which carry young scales to orchards would be hardly likely to be hopping about where the peelings were thrown during the short time that the young could be born. At a meeting held last spring in Washington, of entomologists, nurserymen and fruit