

high. The bottom of the rack could be made of loose slats raised a few inches above the ground to allow room to place the gas generator under the rack. When the rack is filled with trees, a piece of gas-tight canvas thrown over the whole and fastened down at the sides by throwing dirt on the margins would complete the apparatus. One side could be left open till the water and chemicals are placed in the dish and the dish slipped beneath the rack. This gas is a deadly poison, and great care should be used not to breathe it while placing the dish under the rack.

"To generate the gas pour three fluid ounces of water in a glazed earthenware vessel, to this add one fluid ounce of sulphuric acid; place under the trees and then add one ounce by weight of fused cyanide of potassium. This will make gas enough to fill a space of 150 cubic feet." An hour's exposure will likely kill all the scale insects.

2. One of the most effectual remedies, and one readily applied, is the use of whale-oil soap, two pounds in one gallon of water. Apply this in the fall just as the leaves drop off, before the scales harden, and again in spring just before the trees bloom. Some recommend a weaker solution in the fall, one pound to one gallon of water, then just before the buds swell in spring, the stronger solution, two pounds to one gallon of water. Even the use of common soap has been followed by good results, but whale-oil or fish oil soap is preferable. Kerosene emulsion, diluted with nine parts water, or whale-oil soap, one pound to four gallons of water, is good for summer treatment, as soon as the lice are moving. Three or four applications of this at intervals of ten days will destroy many insects, but as the females are continually producing young throughout the summer, the spraying should be kept up to be effectual. Fall or winter treatment with strong solutions is decidedly the most successful.

3. Pure kerosene is destructive to the scales, but will kill the trees unless great care is observed in its application.

The use of resin washes, though successful in California, has not given very decided results in the east.

There are two enemies to the scale among insects, both of which are reported to aid very materially in keeping the scale in check. One, the "Twice-stabbed Ladybird" (*Chilocorus bivulnerus*), is very common on infested trees, apparently feeding upon the scale; the other is a chalcid parasite (*Aphelinus fuscipennis*).

SUGGESTIONS.

1. Examine carefully sickly trees and trees or scions brought from nurseries in infested districts.
2. If only a few trees are infested destroy them.
3. Trees infested, if well cut back and treated with whale-oil soap, as directed, may be largely saved.
4. Orchards set out within the last six years with trees from infested States, may be suspected. They should be carefully examined.
5. Examine fruit from infested localities.

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