

AGRICULTURAL EXPERIMENT STATION
Oregon State College
Wm. A. Schoenfeld, Director
Corvallis

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LECANIUM SCALE CONTROL ON STONE FRUITS

S. C. Jones, Associate Entomologist
Paul Mowry, Research Assistant

Lecanium scale on stone fruits has caused considerable anxiety among stone fruit growers in recent years. This applies particularly to prune, peach, and cherry growers in the Willamette Valley where the infestations have been heavy.

There are two species of Lecanium scale insects infesting stone fruits in Oregon that are of economic importance. Both may be readily recognized from other scales as large humped scales on limbs and twigs of stone fruits. The species most prevalent on cherries is a very large conspicuous scale nearly globular and measures 8 to 10 mm. in diameter. The scale is brown in color, and the live specimens are partly covered with a white powdery wax. The Lecanium scale most destructive to prunes and peaches is much smaller in size. It is hemispherical, slightly longer than broad, shiny and brown in color. Both species are controlled by oil sprays.

Seasonal History

Both species spend the winter in a partially grown condition. The insects grow rapidly during March and April, and reach maturity in late April and May. Egg laying begins in May when each female lays hundreds of pearly white eggs under the armor of the scale. The eggs soon hatch and the nymphs or crawlers migrate to the new succulent twigs and foliage. They soon find a suitable place to settle and pierce the foliage or twigs with their long thread-like beak and begin their long period of feeding. Just before the foliage drops in the fall, the nymphs crawl back to the twigs and remain there until the following spring. There is one generation a year.

Injury

Heavily infested trees are devitalized by either species. Dead twigs and limbs soon appear and later the entire tree may die or become unproductive. The presence of a scale infestation can be detected readily in the summer by the black sooty appearance of the twigs and foliage. This is a

fungous growth on the sticky honey-dew secreted by the Lecanium scale. The obnoxious sticky honey-dew also adheres to the fruit, making it disagreeable to harvest, and sometimes unsalable.

Control

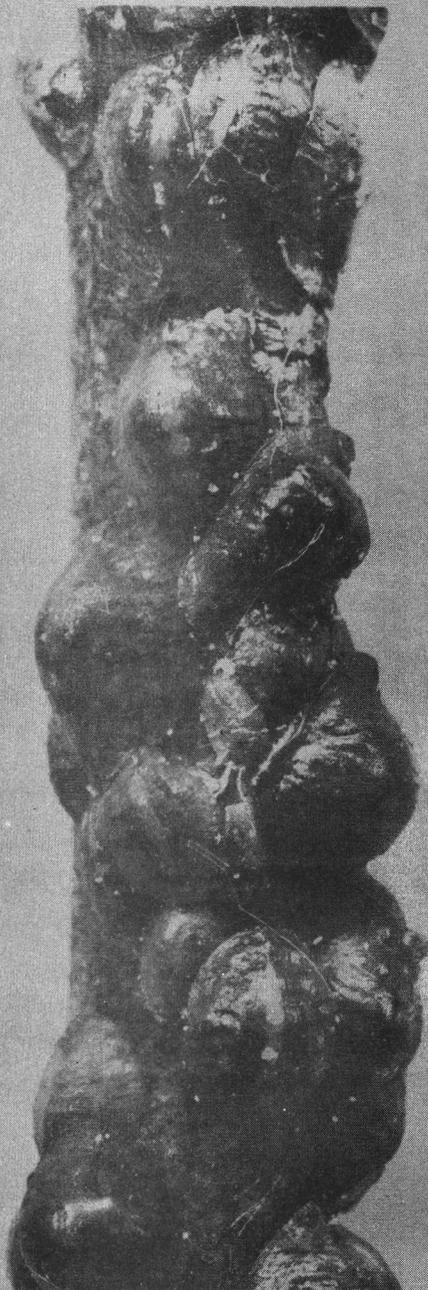
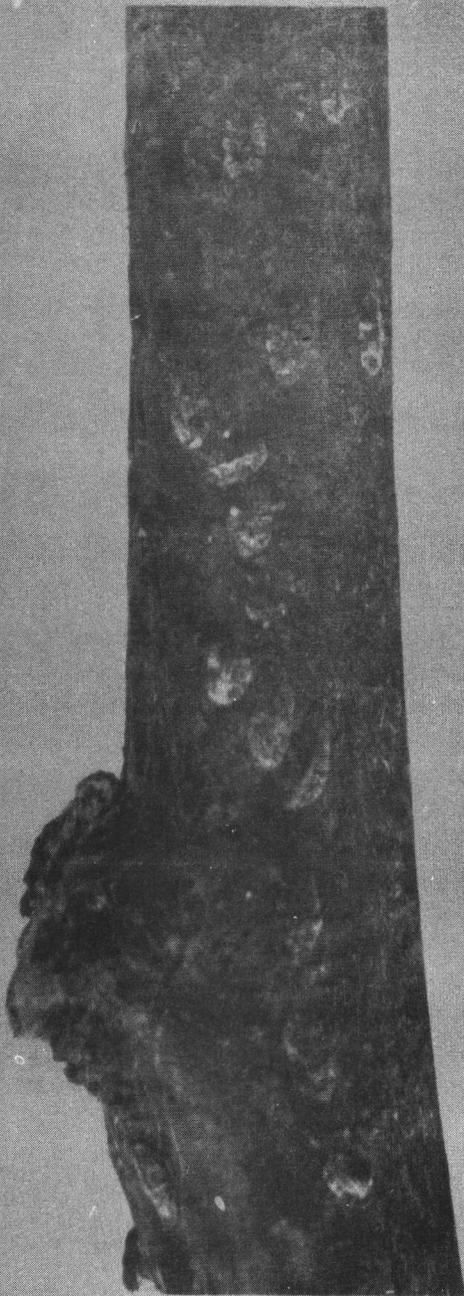
Recent experiments conducted by the Oregon Experiment Station indicate that 4% dormant oil in the dilute oil emulsion spray will control both species of Lecanium scale. This spray must be applied when the trees are strictly dormant. Spraying after the foliage begins to show on the tree will result in serious injury. Since the insects are killed by contact, the spray must be very thorough. The scales must be thoroughly wetted by the spray for effective control.

Experimental trials indicated that lime sulfur when used at dormant strength was not as effective as 4% dormant oil emulsion against Lecanium scale insects.

Since commercial oil emulsions vary greatly in percentage of oil they contain, the grower should refer to the oil spray dilution table given below for the exact amount of 4% oil emulsion to use in 100 gallons of spray.

Oil Spray Dilution Table for 4% Oil Emulsion

Percentage of oil in concentrated emulsion	70%		75%		80%		85%		98%
	Gal.	Qt.	Gal.	Qt.	Gal.	Qt.	Gal.	Qt.	Gal.
4 per cent	5	3½	5	1½	5	-	4	2 ¾	4



Both photographs were taken of Lecanium scale on prunes in late May. Photograph on left shows dead scales which were killed by a spray of 4% oil emulsion. Photograph on right shows unsprayed live mature scales. (enlarged 10 times)