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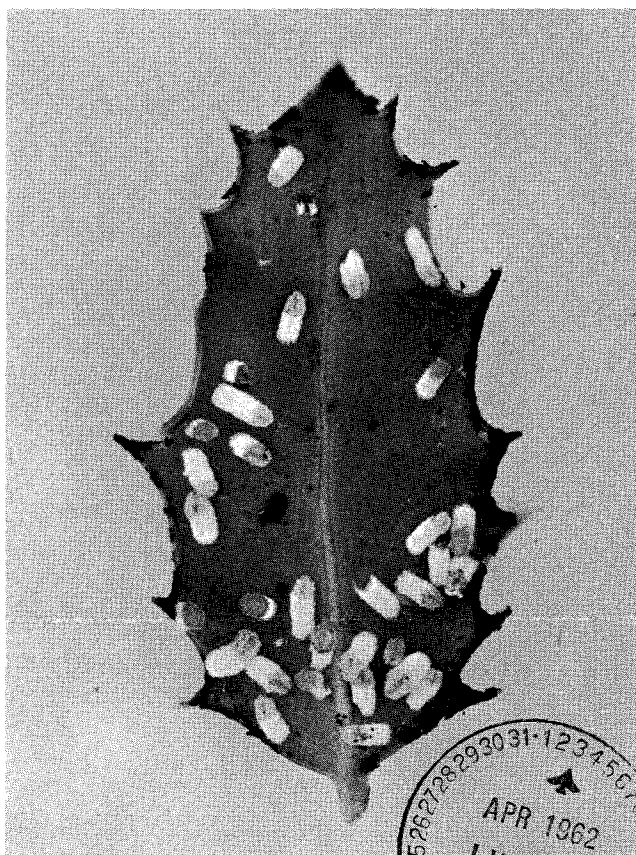
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Cottony Camellia and Soft Brown Scales and Their Control

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Two kinds of soft scale—cottony camellia scale and soft brown scale—are common on many kinds of shrubs. These scale insects are frequently responsible for a sooty appearance of the leaves. Cottony camellia scale infests only camellia and holly. Soft brown scale

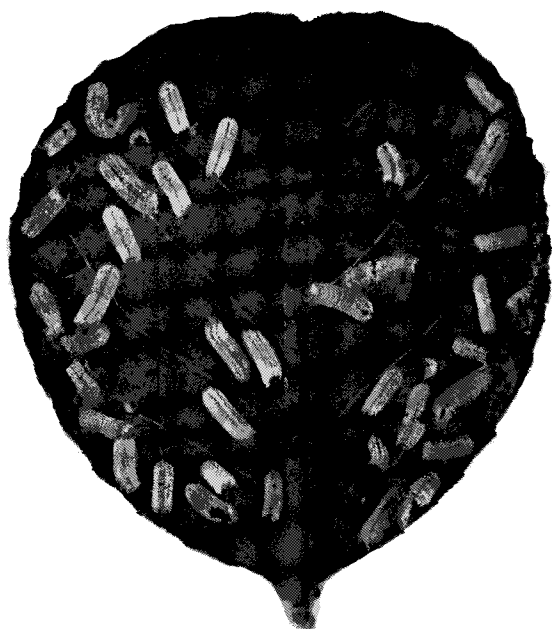
infests these two shrubs and others. The sooty appearance of the leaves is caused by a fungus which develops in the excrement of the insects. Development of the black mold will stop when the scale insects are controlled.



Holly leaves showing soft brown scale (left) and cottony camellia scale (right). Note the unsightly black fungus.



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Cottony camellia scale on camellia leaf.

Identification of Scales

To get good control of these scale insects, it is necessary to distinguish between the two kinds. This can be done as follows:

Soft brown scale

Scales varying in size present at the same time. No cottony egg masses.

Cottony camellia scale

Scales all of the same size. Presence of cottony egg masses.

Both scales present

Scales varying in size. Cottony egg masses present.

Control

For best control of soft brown scale, apply Diazinon or Sevin any time from May to late September. For best control of cottony camellia scale, apply Diazinon or Sevin during May or from August through September. Sprays are not effective against this insect during June and July since only the egg stage is present during this period.

Diazinon and Sevin will give complete control of the scales, if thoroughly applied to the upper and lower sides of the leaves. Malathion may also be used against

these insects if applied at the times suggested for the other insecticides. Malathion is less effective, however, and may require several applications for successful control.

A light-medium summer spray oil may be applied during early spring, but it is less effective than summer treatment with Diazinon or Sevin. Summer-type oils vary in their concentration and should be mixed with water in accordance with the manufacturer's directions.

Spray Materials

Spray materials can be purchased as emulsifiable liquids or solutions. When mixed with water they form

SPRAY DILUTION CHART IN AMOUNTS PER GALLON OF WATER

Insecticide	Wettable powder	Emulsifiable liquid
Diazinon	6 tablespoons, 25%	2 tablespoons, 25%
Sevin	2 tablespoons, 50%	
Malathion	6 tablespoons, 25%	1 tablespoon, 55%

a milky solution. This type of formulation is best suited for use in compressed-air hand sprayers, but it can be used with other kinds of sprayers also.

Spray materials may also be purchased as wettable powders. When mixed with water they form a suspension. Unless the mixture is agitated, the suspended insecticide will settle to the bottom of the tank. When using a compressed-air sprayer, shake it frequently to prevent settling of the insecticide.

Diazinon and malathion are available in small containers as both wettable powders and emulsion concentrates. Sevin is commonly marketed as a wettable powder and may not be readily available in small packages. However, it is a stable material, and a five-pound bag can be stored for several years without losing its effectiveness.