Two kinds of soft scale—cottony camellia scale and brown soft 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. Brown soft 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 brown soft scale (left) and cottony camellia scale (right). Note the unsightly black fungus.
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:

Brown soft 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
Cottony egg masses present. Scales varying in size, but many of them of one size.

Control

For best control of brown soft 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 in the egg stage, which occurs during June and July; the exact time varies somewhat from year to year.

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 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.

<table>
<thead>
<tr>
<th>Spray Solution Chart</th>
<th>AMOUNTS PER GALLON OF WATER</th>
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</thead>
<tbody>
<tr>
<td>Insecticide</td>
<td>Wettable powder</td>
</tr>
<tr>
<td>Diazinon</td>
<td>3 tablespoons, 50%</td>
</tr>
<tr>
<td>Sevin</td>
<td>2 tablespoons, 50%</td>
</tr>
<tr>
<td>Malathion</td>
<td>6 tablespoons, 25%</td>
</tr>
</tbody>
</table>

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.