

Horticultural Oils

What are horticultural oils?

Horticultural oils are highly refined paraffin oils which have insecticidal activity. Oils kill insects in one of two ways: either via suffocation by blocking the breathing apparatus of the pest; or by disruption of cellular membranes.

Two types of oil are commonly used: dormant oil and summer oil. Dormant oil is a heavier weight oil and is applied to plants during the dormant season, that is prior to bud break in spring and after leaf drop in fall. Summer oil is of lighter weight and can be applied to plants that are in active growth and in full leaf.

Why use oils?

Horticultural oils are very safe to use and pose no safety problems to applicator nor the environment when used according to label directions. Oils have no residual effects. Insect resistance or tolerance to oils is rare since the mode of action is mechanical rather than chemical. Also, the use of dormant oils to kill eggs and other overwintering life stages of pests during late winter and early spring allows the pest control operator an extra window of opportunity for managing pest problems in the nursery or landscape.

What pests do they control?

Horticultural oils are used mostly to control sucking type pests, or soft bodied, insects including adelgids, aphids, scale insects, mealybugs, psyllids, and mites. During the growing season, control of scale insects with oil requires that oil be applied while the insects are in the vulnerable crawler stage of development.

How should oils be applied?

1. Horticultural oils must be mixed with water prior to application. Oils contain emulsifiers which permit the oil to be mixed with water. Oils are not compatible with some pesticides, so check the label before combining oil and pesticides.

2. Oils must be applied while the target organism is present. Oil has no residual effect. Thorough coverage is essential.

3. Dormant oils may only be used on plants in the dormant state, while summer oils may be used both during the growing season and dormant season. Always READ THE LABEL to be sure you are using the product appropriately and safely.

4. Apply when temperatures are between 40⁰ F and 100⁰ F. Do not apply just before rainfall or while leaves are wet. Damage to plant tissue usually occurs when oil does not have a chance to evaporate in a timely manner. Therefore, do not apply oil when humidity is expected to remain above 90% for a period of 36 or more hours.

5. Do not apply dormant oils when buds are fully open nor when shoots are actively elongating.

6. Avoid applying oils to sensitive plants. Among oil sensitive plants are: beech, black walnut, maples, hickory, smoketree, azaleas, Japanese holly, redbud, spruces and Douglas fir. Always read the label for information on sensitive species.

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March 1998*