

## **Winter Horticultural Oils – Why and When to Use Them**

As the days shorten and get colder in the late fall, most of us shift our focus from pest management to other winter services. Certainly, winter watering, pruning, and snow removal are important, but it's easy to forget about horticultural oils and their place in our Integrated Pest Management programs.

### *What are horticultural oils?*

Horticultural oil is a refined petroleum product, formulated with an emulsifying agent, and mixed with water to create an insecticide. It is usually mixed at a 1-2% solution, and controls insects by smothering (i.e., blocking the breathing tubes or 'spiracles' on the insect's body, suffocating them). Horticultural oils can also be used to protect against certain plant diseases, such as powdery mildew.

### *Why use horticultural oils?*

Horticultural oils were initially developed to impact hard to control insects, but today, they can be used in a variety of applications. One of the primary uses is to help control bothersome insects, such as aphids and mites, during the dormant season, while they are overwintering. Oils applied to the bark and twigs of plants will help control the insects overwintering there. It also provides another mode of action for difficult to control insects such as Kermes scale or European elm scale. Lastly, use of horticultural oils in the dormant season reduces the impact on the environment and beneficial insects, targeting the pests while the beneficials are inactive. The low residual effect also reduces the impact on beneficial insects.

### *What are the risks of the use of horticultural oils?*

While mostly safe for people, beneficial insects, and the environment, some precautions need to be taken to reduce risk when applying horticultural oils. Oils should not be applied when the temperature is below freezing, as the emulsion may break and cause damage to plants. Some plants are sensitive to the oil, so check the label before applying. Oils should not be applied to plants which are drought stressed.