



## CORNELL COOPERATIVE EXTENSION - SUFFOLK COUNTY



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### Using Oil Sprays For Insect Pest Management

These highly refined petroleum oils are manufactured specifically to control plant pests. They are paraffinic, degrade rapidly through evaporation, and have very low toxicity to humans and wildlife when used properly.

Horticultural oils, applied both in the summer and when plants are dormant, have gained wide acceptance in pest management programs. They are relatively safe for plants and the environment and control many insect and mite pests. They are also relatively nontoxic to the applicator and leave no toxic residue.

Horticultural oils interfere with respiration and membrane function, causing suffocation, and disrupt feeding activities of certain insects and mites. Complete coverage of the infested parts of the plant is essential.

Horticultural oils are most effective against eggs, immature forms, and soft-bodied adults. Aphids, scales, mealybugs, leafhoppers, whiteflies, mites, and eggs of almost all species are readily killed.

Several grades of horticultural oil are available. Some are strictly limited to dormant use; others can be applied to actively growing plants in spring and summer. Most trees can be treated in the summer, but check the label to be sure. Under adverse spraying conditions such as high heat and relative humidity, sensitive species may suffer from phytotoxicity. The following plants appear to be sensitive: maples, hickories, and black walnut (dormant sprays); smoke tree and certain varieties of azalea (summer sprays); and cryptomeria (both). The following plants show a tendency toward sensitivity: beech, redbud, spruce, and Douglas fir (dormant sprays); savin junipers and photina (summer sprays); and Japanese holly (both). Glaucous evergreens (those with a bluish bloom) may temporarily lose their blue color if oil is applied, and the natural bloom may not return for one to two years. Never spray when trees are under stress or temperatures are expected to be 90° F or above.

A preventive application in late winter and early spring when trees are dormant can save valuable time later in the season. The oil is applied to above-ground plant parts and is effective against scales, adelgids, and mites in their overwintering stages. Oil should not be applied to plants for 48 hours before or after freezing temperatures occur or are predicted.

Spring and summer applications are safe on a wide variety of plants when used properly. Phytotoxicity may result if plants are under moisture stress. The biological stage of the pest will determine whether a dormant or summer application is needed.

Some pests that can be controlled by horticultural oil include:

Aphids	Elongate hemlock scale	Juniper scale	Pine needle scale
Balsam twig aphid	Euonymus scale	Magnolia scale	Rust mites
Cooley spruce gall adelgid	European red mite	Maple bladdergall mite	Spruce spider mites
Cottony maple scale	Fletcher scale	Oystershell scale	Twospotted mite
Cottony taxus scale	Hemlock scale	Pine bark adelgid	White prunicola scale
Eastern spruce gall adelgid	Hemlock woolly adelgid	Pine eriophyid mites	

Reprinted from "Horticultural Oils", 2009-2010 *Pest Management Around the Home – Part II – Pesticide Guidelines*. 2009

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