

Least Toxic Methods of Insect Pest Control

IN- HOUSE BULLETIN #157

GUIDELINES FOR APPLYING HORTICULTURAL OILS

Common pest targets for horticultural oils are immature scales, aphids, adelgids, lacebugs, mealybugs, whiteflies, leaf beetle larvae, mites and spider mites.

DO NOT APPLY:

- With sulfur products (e.g., cooper sulfate spray for citrus); check label for waiting period (usually 3 weeks), between oil and sulfur-containing sprays.
- When temperature is over 90 or during periods of intense sunlight; best when temperatures are between 40 and 80F.
- When freezing temperatures are expected.
- When plant is under drought, heat, moisture or other stress (all oils slow down transpiration/respiration).
- With certain insecticides (e.g., Sevin or Cygon) or certain fungicides (e.g., Daconil, Captan (check labels)). Check labels for incompatibilities.
- When rain is imminent.
- When plants are in flower.
- On new transplants, newly rooted cuttings or tender growth which may burn.

DO APPLY:

- By spraying in early a.m. or late afternoon in summer months (not in full sun).
- When plants are dry and humidity is below 90%.
- To give thorough coverage, and to point of run-off.

Horticultural oils: Labeled as such in garden centers, these products are used as sprays.

To make your own oil spray, mix:

- 2 tablespoons vegetable oil (can clog sprayer)

- 2 tablespoons mild liquid dish soap (Ivory, Palmolive)
- 1 gallon water

Agitate while spraying

NOTE: This is not a University recommendation and should be tried on a few plants first

to check for burn on leaves or fruit. If damage were to develop, it would show up in 2 to 7 days.

ALWAYS READ LABEL THOROUGHLY!

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GUIDELINES FOR USING INSECTICIDAL SOAPS

Common pest targets for insecticidal soaps are adelgids, aphids, leafhoppers, mealy bugs, plant bugs, psyllids, sawfly larvae, scales, spider mites, whiteflies and woolly aphids.

- Never spray when plants are suffering from drought, overwatering or other stress.
- Do not use with sulfur products.
- Do not spray when temperature is higher than 90F.
- Do not spray in full sun. Best time is early morning or evening when temperature is cooler.
- Avoid spraying transplants, newly rooted cuttings or tender new growth which may burn.

Insecticidal soap:

To make your own effective spray, mix:

- 2½ tablespoons of mild liquid dish soap (Ivory, Palmolive)
- 1 gallon of water

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to check for burn on leaves or fruit. If damage were to develop, it would show up in 2 to 7 days.

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FOR CATERPILLAR CONTROL

Bacillus thuringiensis (Bt): A bacterium that infects and controls some types of caterpillars. Available commercially in liquid (spray) form and dusting powder. Be sure to read the label for complete information.

Common caterpillar pests that are effectively controlled with Bacillus thuringiensis var. kurstaki (Bt) include:

- European corn borer in corn • Indianmeal moth in stored grain
- Cabbage looper • Imported cabbageworm
- Diamondback moth • Tomato/tobacco hornworm
- Gypsy moth • Spruce budworm
- Tent caterpillars • Fall webworm
- Mimosa webworm • Bagworms
- Spring and fall cankerworm

Common caterpillar pests that are **NOT** effectively controlled with Bacillus thuringiensis var. kurstaki (Bt) include:

- Corn earworm (on corn) • Codling moth
- Peach tree borer • Squash vine borer

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