



Insecticidal Soap

An alternative to chemicals

★What is Insecticidal Soap?

All soaps are made of salts and fatty acids, but not all soaps are good for killing insects. Some soaps can be highly destructive to plants and are useful as herbicides. *Insecticidal soaps*, however, are specifically formulated to kill insect pests while having few adverse effects to people, plants and the environment.

★How do they work?

Insecticidal soaps work on contact in two ways. First, they wash away the protective coating (the cuticle) on the surface of the insect's body. Once inside, the soap will break the cell membrane and the cell will die. Insecticidal soaps are most effective on small, soft-bodied insects such as aphids, spider mites, thrips, whitefly and mealybug. They are only somewhat effective in controlling larger insects such as caterpillars and leafhoppers. Root mealybug and springtails can be controlled with a drench application to the soil.

★What are the benefits?

Insecticidal soaps are generally non-toxic to birds, mammals and people. Soaps may be applied to both food and nonfood plants, and may be used the day of harvest if necessary.

As soon as the leaves have dried, beneficial insects can be reintroduced. Soaps can be used with some insecticides, and have been shown to improve their performance. Be sure to check labels for compatibility.



★ Are there any drawbacks?

Insects must come in contact with the soap before it dries in order to be controlled. Therefore, thorough coverage to both tops and bottoms of leaves is essential. Do not apply insecticidal soaps directly to water or use near a water source. Multiple applications are needed to control most insects. Hard water is not effective for mixing soap sprays, so use softened or distilled water for best results. Tender young growth of evergreens and shrubs in the spring can be sensitive to insecticidal soaps. (Don't apply until hardened-off)

Tips for using Insecticidal Soaps:

- ★ **Know your pest** before you treat-Consult your local extension office when in doubt.
- ★ **Read the label**-Is your target pest listed? Are you mixing at the proper rate? Is your plant listed on the label?
- ★ Thorough coverage is a must!
- ★ Apply soaps in the morning or evening when drying time is the longest.
- ★ Avoid treating plants in direct sun.
- ★ Don't treat moisture or drought stressed plants-you may burn leaves.
- ★ Allow new shoots in the spring to harden off before applying soap.
- ★ Avoid treatment when the relative humidity is 90% or above.
- ★ Don't apply soap when temperatures are high (90° F or above).
- ★ Repeat applications according to label directions.

Plants that may be sensitive to soaps:

- ★ Ferns, Bleeding Heart
- ★ Gardenia, Jade
- ★ Lantana Sweet Peas
- ★ Crown of Thorns
- ★ Nasturtium
- ★ Easter Lily, Violets
- ★ Hawthorn, Cherry
- ★ Japanese Maple
- ★ Chestnut, Mountain Ash
- ★ Others as listed on the label

Some varieties of geranium, impatiens and poinsettias have shown injury with soaps. Consider testing a small sample before making a full-scale application.

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