

Soap, oil and Bt products control most garden insects

The majority of pest insects can be controlled with one of three environmentally friendly products – Horticultural Oils, Insecticidal Soaps and Bt Products.

Keith Mickler, Extension Agent with University of Georgia, and I describe these products and explain how they work in today's article.

Horticultural oil is especially formulated for use on plants. It is a petroleum-based oil with an emulsifier added that allows it to mix with water. It kills scales, mites, aphids, whiteflies and other soft-bodied pests that are present by suffocation, plugging up the insects breathing pores.

Horticultural oils are classified as dormant oils, summer oils or superior oils. Dormant oils are the heaviest of the horticultural oils. Apply these oils during winter dormancy and before plants begin spring growth. Do not use dormant oils during the growing season unless the label specifically states that such use is safe. Summer oils are lighter than dormant oils and are formulated for use during spring and summer. Superior oils are the most refined of all petroleum oils and are excellent products for horticultural pest control in any season. Superior oil products allow greater flexibility in their use and have been tested at temperatures in the mid 90s with no damage to shrubs.

Only a few of the soaps manufactured are effective insecticides. Insecticidal soaps basically are made from potassium salt of oleic acid, which is present in high quantities in olive and other vegetable oils. Insecticidal soap causes insects to dehydrate by physically breaking down the insect's outer protective layer (cuticle).

Thorough spray coverage is essential when using oils and soaps. Since these products are not poisons and must contact the pest, all plant surfaces, tops and bottom sides of leaves and stems must be coated with spray for best results.

Horticultural oils are sold under various descriptive names such as "dormant oil," "oil emulsion," "pesticidal oil," "summer oil" and "superfine oil." There are several soaps available for purchase, such as Safers Insecticidal Soap and M-Pede.

Another environmentally friendly product for controlling caterpillars is Bt (*Bacillus thuringiensis*). Bt is an insecticide stomach poison for use only against caterpillars. Bt should be used when the caterpillars are young. The caterpillar must ingest the Bt for it to be effective. After ingesting a lethal dose of Bt, the caterpillar stops feeding and will die within several hours to days. Bt can be found under several brand names such as Dipel, Thuricide and Sok-BT

Though horticultural oils, soaps and Bt products are less toxic than many insecticides, it is important to use them with caution. Read and follow the label carefully.

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