



ANR-53-O

ALABAMA A & M AND AUBURN UNIVERSITIES

Fruit Culture in Alabama

# Controlling Insects and Diseases

If you do not plan to follow a good pest control program, you will be disappointed in the quality and quantity of fruits produced. Apples, pears, peaches, plums, strawberries, and bunch grapes especially will require spraying to prevent damage by insects and diseases. The number of applications will vary with the kind of fruit, variety, and weather conditions. Successful control will depend largely on:

- Use of the right material at the correct concentration
- Timeliness of applications. Control of diseases is almost entirely preventive.
- Thorough coverage

Chemicals used to improve the growing environment and to protect the fruit plant are insecticides, fungicides, bactericides, herbicides, miticides, and nematocides.

**Insecticides** are used to control harmful insects, but beneficial insects may also be killed if they are on the plant. Therefore, you must first identify the pest and then use the proper insecticide. Never use insecticides during bloom. Insect pollination is required by many plants before fruit development can occur. If insecticides toxic to these beneficial insects are applied during the bloom period, the insects will be killed, pollination may not occur, and cropping will be poor.

**Fungicides** can be used to control diseases that are caused by fungi. Like insecticides, certain fungicides control specific diseases, while other fungicides are required for others. The use of fungicides is essential for fruit production in the humid Southeast where disease pressure is high.

**Bactericides** are used to control bacterial diseases such as fire blight on apples and pears and bacterial spot on peaches. Streptomycin and terramycin are among the common bactericides used to control fire blight. Certain copper compounds function as fungicides and bactericides on several types of fruit plants.

**Herbicides** are used to kill weeds in commercial orchards. For the backyard gardener, mulching and hoeing are more practical. However, certain herbicides that control existing grasses and

broadleaf weeds are now available for home use. Do not use chemicals such as glyphosate around fruit plants younger than 4 years old.

**Miticides** are used commercially to control mites. Mites are not insects; they are related to spiders. They can also be suppressed or controlled with certain insecticides. Mite problems are especially bad on apples and strawberries.

**Nematocides** are used to control nematodes, which are microscopic worms in the soil. Nematode-infested soil can be especially troublesome in trying to grow figs, peaches, plums, and strawberries. Nematocides are no longer available for use in home gardens. Thus, other methods of control must be used where possible, and they do not always control the problem. Crop rotation, mulching, rootstocks, or solarization of the site using plastic can be used to reduce nematode problems, depending on the fruit type.

## A Home Orchard Spray Program

A home orchard spray containing one or two fungicides for disease control and one or two insecticides for insect control is recommended for the general spray program on most fruits. Home gardeners can purchase chemically prepared mixes or prepare their own sprays, using individual chemicals. Homeowners are always interested in growing fruits that may require few or no sprays for pest control. The truth is, all fruit types usually benefit from at least one or more annual sprays to control problem pests. Ideally, the home fruit producer should learn to recognize the most common pest problems for the fruit being grown and only spray as needed, especially for insects and mites.

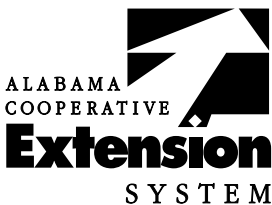
Some fruit types require more demanding spray programs for keeping plants healthy and producing quality fruit. From 6 to 12 applications will be necessary to obtain good control for peaches and plums. Some 12 or more sprays may be needed for apples. Homeowners can get by with fewer sprays on apples if they are willing to accept less-attractive fruit with greater rot problems. Hard pears and pomegranates are commonly grown with no

sprays; rabbiteye blueberries and figs may need no spraying, or they may require 2 or 3 sprays per season. Dark-colored muscadine varieties can get by with only 2 or 3 sprays per season if the grower will tolerate a light to moderate level of fruit rot. Kiwifruit needs 1 or 2 sprays per season for insect control and 1 or 2 sprays for disease control. Satsumas will probably be satisfactory with only 2 to 4 sprays per year.

See Extension publication ANR-50, "Home Fruit Spray Guide," for further insect and disease information and spray programs. Commercial producers are referred to the following Extension publications available from your county Extension office:

- IPM-8, "Peach IPM"
- IPM-11, "Apple IPM"
- IPM-478, "Small Fruit IPM"
- ANR-816, "Home Applications of Fungicides"

(The IPM publications are revised annually to reflect current pesticide recommendations.)



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**Arlie Powell**, *Extension Horticulturist*, Professor, **David Himelrick**, *Extension Horticulturist*, Professor, **William Dozier**, Professor, and **David Williams**, *Extension Horticulturist*, Associate Professor, all in Horticulture at Auburn University

**For more information**, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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UPS, 13.8M03, **New June 1999**, ANR-53-O