Master Gardener Newspaper Articles

Volunteer Program

Tulare/Kings Counties

February Q & A

by Michelle Le Strange, UC Master Gardener Advisor

Q. Is it too late to apply a dormant spray? I am confused about what to apply. Should I use oil, copper, lime sulfur, an insecticide or a fungicide? I have a peach, nectarine, apple, and two pear trees that are 6 years old.

A. Dormant sprays are a generic term for any spray applied to leafless deciduous trees during fall, winter, and early spring. Some dormant sprays are applied to control over-wintering insects, while others are used to prevent disease infection. Dormant sprays are applied from late November to the latter part of February. A delayed dormant spray (which is recommended for plum and prune trees) means February to the middle of March, depending upon when buds swell for the particular variety. Each fruit and nut tree has its own set of insects and diseases, so try to familiarize yourself with the pests most common on the types of trees in your yard. As trees mature they are more likely to encounter the common pests in the valley.

Insect & Mite Control: Dormant season applications of specially refined oils, often called narrow range, supreme, or superior type oils with or without the addition of an insecticide (like diazinon, sevin, or malathion) are effective against many insects common to most deciduous fruit and landscape trees. These sprays have no effect on diseases.

Dormant oil sprays DO control peach twig borer, European red and brown mite eggs, San Jose scale and most soft scales, aphid eggs, and mealybug. For better control of peach twig borer add an insecticide to the dormant oil spray. Dormant oil sprays DO NOT completely control codling moth, oriental fruit moth, navel orangeworm, or two-spotted and pacific spider mites.

Disease Control: Dormant season applications of copper sulfate, lime sulfur, Bordeaux (a mix of powdered copper and hydrated lime), or a synthetic fungicide are used to limit infection and prevent the spread of certain bacterial and fungal diseases like fire blight, brown rot, leaf curl, powdery mildew, and shot hole.

A fixed copper fungicide contains some sort of elemental copper, such as tribasic copper sulfate, copper oxychloride sulfate or cupric hydroxide. Copper sprays should contain at least 50 percent copper to be effective. For diseases with a long infection period like fire blight, it may be necessary to make several applications to protect new emerging shoots and flowers, especially during rainy spring weather.

Lime sulfur (calcium polysulfide) is not as widely recommended as a general use dormant spray; however, it is a useful tool when powdery mildew is a menace. To protect fruit from powdery mildew, spray soon after petal fall and 2-3 weeks later, if needed. Lime sulfur and other sulfur containing compounds should not be applied within 3 weeks of an oil application or tree damage will result. Avoid using lime sulfur on apricot trees, since they are particularly sensitive to sulfur.

A Bordeaux spray is a mixture of copper sulfate, hydrated lime, and water. Bordeaux is an outstanding fungicide and bactericide that has been used for decades mainly because it is very persistent on the trees and is able to withstand winter rains. However, it takes longer to mix and requires careful preparation, it stains surfaces blue, and is not compatible with other pesticides.

Synthetic fungicides: Commercial fungicides like Daconil (chlorothalonil), Chipco 26019 (iprodione), Clearys 3336 (thiophanate methyl) and orchard sanitation are the solution to brown rot disease, which is less of a problem in the southern part of the valley compared to the northern San Joaquin Valley where there is more rainfall.

All fruit and nut trees and many landscape trees are susceptible to aphids, mites, scale and specific insect and disease problems affecting fruit quality and tree health. The dormant spray is the most important, least disruptive (to beneficial insects and the environment) and easiest to apply of any spray application. In the commercial orchard (with the exception of walnuts) the dormant spray is essential. In the backyard orchard a dormant spray may not be warranted every year, except where peach leaf curl is consistently a problem. Decide if you need to apply by noting the amount of insect and disease pressure during the growing season.

Specific disease and insect pests for trees & shrubs: Brown rot (fungus) - almond, apricot, cherry, nectarine, and peach (sometimes plum). Codling moth - apple, pear, plum, and walnut. Downy mildew (fungus) - grape and rose. Fire blight (bacteria) - apple, crabapple, pear (ornamental and fruiting), pyracantha and quince. Leaf curl (fungus) - nectarine and peach. Peach twig borer - apricot, nectarine and peach (sometimes almond, plum, prune). Powdery mildew (fungus) - grape and rose (occasionally apricot, cherry, nectarine and peach). Rust and black spot (fungi) - rose. Shot hole (fungus) - almond, apricot, nectarine, and peach.

For more information on specific pests please visit our website at cetulare.ucdavis.edu. Click on Master Gardener Program, Pest Information Links, Home and Landscape Pest Notes.

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