

**insect and disease
control
for home gardens**

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**SMALL FRUITS
BERRIES**

COOPERATIVE EXTENSION SERVICE • COLLEGE OF AGRICULTURE • WASHINGTON STATE UNIVERSITY • PULLMAN

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Cooperative Extension Service, J. O. Young, Director

PRECAUTIONS IN USING INSECTICIDES

This publication lists and describes the control measures suggested for control of the more common injurious insects normally encountered. The pesticide recommendations are based on research by scientists of Washington State University, the USDA, and by other agencies. Those suggested are considered safe to use (when directions on label are followed carefully) and known to be effective.

In many cases additional information on description of the insects, their damage, their life cycles, and their control may be desired. If your insect problem goes beyond the scope of this discussion, you can get additional help from your county Extension agent or from the Department of Entomology, Washington State University, Pullman.

Insecticides are poisonous to men and animals. Use them only when needed and handle them with care. Follow the directions and heed all precautions on the labels.

Keep insecticides in closed, well-labeled containers in a dry place. Store them where they will not contaminate food or feed, and preferably in locked storage where children and animals cannot reach them.

Avoid contact with pesticides. If any is spilled on skin or clothing, wash it off the skin thoroughly with soap and water and change clothing immediately.

Avoid inhalation of insecticide dusts or mists.

When handling insecticides, wear clean, dry clothing.

Wash your hands and face before eating or smoking and immediately after completing insecticide application.

To protect fish and wildlife, do not contaminate lakes, streams, or ponds with insecticide. Do not clean spraying equipment or dump excess spray material near such water.

Dispose of *empty* insecticide containers at a sanitary landfill dump, or bury them at least 18 inches deep in a level, isolated place where they will not contaminate water supplies. If you have trash collection service, wrap small *empty* containers in heavy layers of newspapers and place them in the trash can.

To simplify the presentation of information, it is sometimes necessary to use trade names. No endorsement of products is intended nor is criticism of unnamed products implied.

INSECT AND DISEASE CONTROL FOR HOME GARDENS

SMALL FRUITS AND BERRIES

This control program is designed to control the most serious insects and diseases. Occasionally, however, special problems arise and more specific recommendations are needed. If so, contact the local county Extension office.

Time of application	Crop	Insect and disease	Materials and amounts per 1 gallon of water ¹
Early spring (before or just after buds swell)	Raspberry and trailing berries	Anthracnose, cane blight, rust, berry mites	Lime sulfur, 2/3 cup (0). Apply as dormant or delayed-dormant spray.
Green tip stage (new growth 1/2 to 1 inch long)		Rust (Washington variety of raspberry only)	Lime sulfur, 2/3 cup (0). Apply as thorough spray.
Prebloom treatment (April)	Strawberry and raspberry	Strawberry weevils	*Apply 3 T. of chlordane 44% EC, per 1000 sq. ft. in enough water for even coverage of crowns and between rows. (Do not apply after fruit begins to form.)
		Obscure and woods weevils	Apply malathion 57% EC, 1 T. for raspberry (1), for strawberry (3) as spray to plants. Spray in the evening.
Just before bloom	Strawberry and caneberry ²	Spittle bug, aphids, foliage worms, and fruit rots	Diazinon 25% EC, 2 t. (7) <i>plus</i> captan 50 WP, 1 T. (0).
		Fruit rots only	Captan 50 WP, 1 T. (0). Repeat weekly during bloom period.
	Blackberries	Redberry mite	Lime sulfur 1/2 cup (0). Spray thoroughly.

¹EPA has initiated cancellation of most uses of chlordane. This action has been appealed by the manufacturer and a final decision is not expected for several months. Before using chlordane, be certain it is approved.

Time of application	Crop	Insect and disease	Materials and amounts per 1 gallon of water ¹
During bloom and fruit formation	Strawberry, caneberries	Fruit rots	Captan 50 WP, 1 T. (0). Apply at weekly intervals especially during cool, cloudy, damp weather or Benlate, note instructions.
Post-harvest (Sept.)	Trailing berries, especially evergreen blackberries	Cane and leaf spots	Fixed copper, 4 T. (0). Spray after old canes have been removed, about September 15, or before the fall rains begin.
Between October 1 and March 1	Caneberries	Crown borers	Diazinon 25% EC, 5 t. (7). Apply to crown and lower 3 ft. of canes.
Delayed-dormant, at beginning of bloom and just after bloom	Currant, gooseberry	Powdery mildew	Lime sulfur 8 T. (0) at delayed-dormant; 5 T. at beginning of bloom and just after bloom as the first fruits are set. (Proper timing of last spray is critical.)
Bloom through growing season	Currant, gooseberry	Fruit worms, aphids	Malathion 25% EC, 2 t. Repeat at 10-day intervals. Currants (1), gooseberries (3).
Periodically throughout the growing season	Grapes	Powdery mildew (susceptible varieties only)	Dust with sulfur when shoots are 6, 12, and 18 inches long, and then repeat at 2-week intervals until harvest (0). Do not apply when temperatures are above 100° F.
		Grape leafhopper	Malathion 25% EC, 2 t. (3). Spray as needed.

¹T = level tablespoonful; t = level teaspoonful; WP = wettable powder; EC = emulsifiable concentrate. Add a spreader-sticker to spray mixes according to label directions. Do not use spreader-sticker with lime sulfur.

Numbers in parentheses, e.g. (5), indicate minimum days required between last application and harvest.

²Caneberries include red and black raspberries, blackberries and trailing berries.