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Wm. A. Schoenfeld, Director
Corvallis

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SPRAY PROGRAM FOR THE CONTROL OF DISEASES AND INSECT PESTS
OF PEACHES IN WESTERN OREGON

by
Departments of Botany and Entomology^{1/}

Peaches are becoming one of the chief commercial and garden fruit crops in Oregon. The control of diseases and insect pests of the trees and fruit is essential for crop production.

BROWN ROT^{2/}

Brown rot causes both a blossom blight and a fruit rot. The prevention of blossom blight requires the application of sprays at blossom time while the control of the fruit rot necessitates spraying or dusting as the fruit approaches maturity.

Control of Blossom-blight. Experience has shown that brown rot blossom blight can be controlled best by spraying when the blossoms are wide open rather than in the pink bud stage. Since the blossoms usually open slowly and irregularly rather than all at once, it is better to make two applications during the blossoming period, as follows:

- (1) When first blossoms begin to open. Use either fermate $1\frac{1}{2}$ lbs. plus $1\frac{1}{2}$ lbs. hydrated lime plus $1/3$ lb. casein spreader to 100 gallons, or bordeaux 6-6-100.
- (2) When in full-bloom stage. Use same materials as (1).

Control of Fruit Rot. The best known materials for the control of brown rot on peach fruit are wettable-sulfur spray and sulfur dust. These are about equally effective and the grower may use whichever he prefers or is equipped to use. If dust is preferred, use 325-mesh sulfur or finer.

Time and Number of Applications will vary with weather conditions, but the following recommendations will fit the average year.

- (1) First Application. About five weeks before harvest, or earlier, according to weather. Use wettable sulfur or dusting sulfur.
- (2) Later Applications. Repeat once a week, using same materials as No. (1).

^{1/} Prepared by S. C. Jones, S. M. Zeller, and C. E. Owens.

^{2/} Caused by Sclerotinia fructicola and S. laxa.

- (3) Last Application. Make the last application of dust or spray just a few days before picking. This is very important in order to have sulfur on the fruit when picked. (See program on page 3.)

Other Precautions Recommended: In addition to a well-planned and executed spray program there are certain other practices which should help materially in reducing the amount of brown rot in peaches after picking.

- (1) Exercise the greatest care in picking and handling to avoid punctures and any other fresh abrasions. Any break in the skin of the fruit enables brown rot to gain entrance more easily.
- (2) Avoid placing fruit with any brown-rot spots in the lugs when picking.
- (3) Dust thoroughly both the lugs and the packing boxes inside and outside with dusting sulfur before using. The lugs should be dusted each time they are used. This precaution is most important.

BLIGHT^{1/}

This disease may cause serious damage to peach trees. It blights the buds and produces small cankers on the twigs during fall and winter, and may cause a spotting of fruit, leaves, and twigs during spring and early summer. The most important control measure consists of a spray of bordeaux applied early in the fall to prevent the bud and twig blight, which occurs soon after the fall rains begin. If this fall spray is not applied properly, another application may be needed in the spring after the shucks fall. The complete schedule is as follows:

- (1) Most important application. As soon as peaches are picked. Bordeaux 8-8-100.
- (2) Spring application. As soon as shucks fall. Use wettable-sulfur spray. (See program on page 3.)

LEAF CURL^{2/}

Peach-leaf curl will kill susceptible varieties of peach trees if not controlled. This disease can be prevented by one application of bordeaux if done properly and at the right time. This spray should be put on during the dormant season and must be done before the buds swell in the spring, preferably in December. (See program on page 3.)

THE PEACH-TWIG MINER

Probably the most important insect pest of peaches for which spraying may become necessary is the peach-twig borer. The insect hibernates over the winter in tiny chimney-like hibernaculae which the larvae construct in the crotches of peach trees. About the time the peaches begin blooming in the spring, the larvae become active and enter the developing twigs, killing them back three or four inches. One larva may attack several twigs. Later broods may cause serious injury to the fruit.

1/ Caused by Coryneum beijerinckii.

2/ Caused by Taphrina deformans.

This insect can be controlled by spraying the peach trees just before the blossoms open, using basic-lead arsenate, three pounds to 100 gallons of water. It may be necessary to repeat the application as a petal-fall spray.

BUD MOTH AND APHIS

The larva of the bud moth is about 1/3 of an inch long, chocolate-colored, and may be found inside a mass of webbed leaves at the tip of peach twigs in the spring. A spray of basic-lead arsenate in the pre-blossom spray will control this insect. If plant lice are present, add one pint of nicotine sulfate to this spray.

DUST AND SPRAY PROGRAM FOR PEACHES

<u>Time of Application</u>	<u>Insect or Disease</u>	<u>Spray Material and Strength</u>
1. <u>Leaf curl spray.</u> Preferably in December but definitely before winter buds swell.	Peach-leaf curl.	Bordeaux mixture 12-12-100. Cover every bud.
2. <u>Pre-blossom spray.</u> Blossoms pink just before opening.	Brown rot. Bud moths, aphid, twig miner.	Cultivate to destroy brown rot arising from mummies on or in ground. Basic-lead arsenate, 3 pounds to 100 gallons. If aphids present, add 1 pint nicotine sulfate to 100 gallons.
3. <u>Just as first blossoms open.</u>	Brown-rot blossom blight.	Bordeaux 6-6-100 or fermate (1½ lbs. plus 1½ lbs. hydrated lime plus 1/3 lb. casein spreader).
4. <u>At full bloom.</u>	Brown-rot blossom blight.	Same as No. 3.
5. <u>First fruit spray.</u> As soon as shucks fall.	Peach blight, mildew, or brown rot.	Use wettable-sulfur spray or dusting sulfur.
6. <u>Summer sprays or dusts.</u> First, about 5 weeks before harvest or earlier if disease appears; repeat at weekly intervals; last application just a few days before harvest.	Brown rot, mildew, mites.	Same as No. 5.
7. <u>Early fall spray.</u> As soon as each variety is picked.	Peach blight, die-back.	Bordeaux 8-8-100. Cover every bud.