PLANT DISEASE CONTROL NOTES
EXTENSION DIVISION ● VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

FRUIT DISEASES

BROWN ROT OF PEACH AND NECTARINE AND ITS CONTROL IN VIRGINIA

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C. R. Drake
Associate Professor of Plant Pathology and Extension Specialist, Plant Pathology

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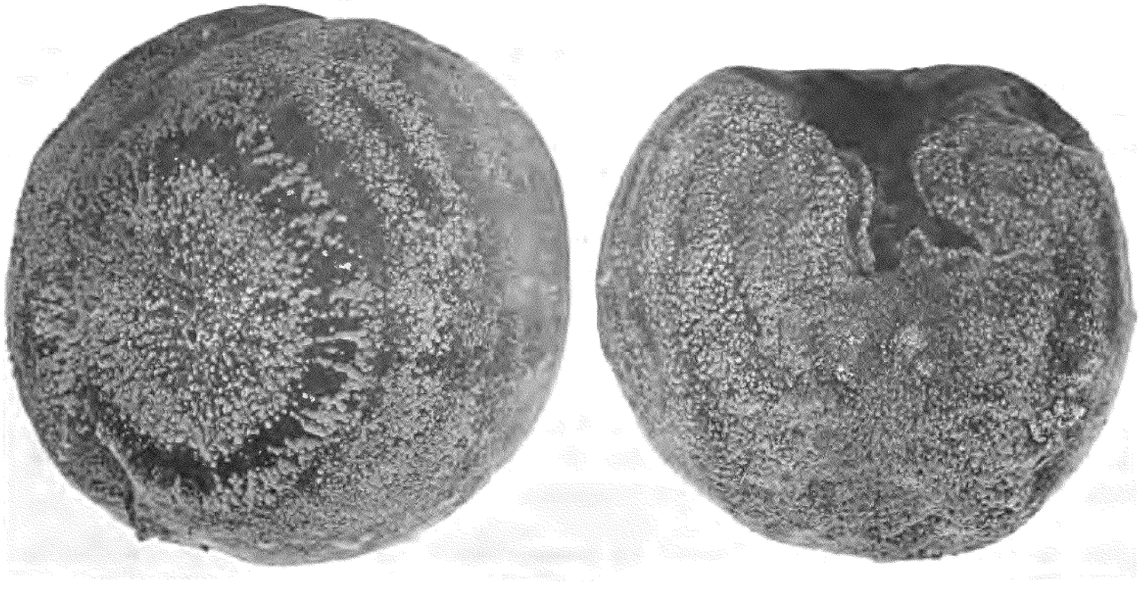
Brown rot caused by a fungus, Monilinia fructicola, is the most destructive disease of peach and nectarine. Brown rot is found in all countries where stone fruit is grown. It is particularly destructive in the Southeastern United States.

The brown rot fungus may overwinter on mummies (old decayed fruit) on the ground, mummies on the tree, and in twig cankers. All these overwintering sources may supply inoculum for infection in the spring.

The brown rot fungus becomes active about the time pink begins to show in the buds, provided there is sufficient rainfall. The brown rot fungus spores attack the blossoms, twigs, and fruit. Blossom blight and early twig infections establish centers of infection which may supply inoculum for fruit infection during periods of rainfall throughout the growing season. Therefore, it is important to control these early infections. Brown rot on the



Brown rot on peach fruit. Note the mass of spores on the fruit that may cause infections on other fruit.

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fruit becomes more evident as the fruit approaches maturity. The first evidence of the rot is the appearance of a small, circular brown spot that enlarges very rapidly as the fruit approaches maturity. The rotted fruit soon becomes covered with ash colored tufts of conidia. These masses of spores supply inoculum to infect other fruit.

The greatest loss from brown rot occurs from fruit rot in the orchard, in transit, and in the market place. The fungus decays or rots a mature fruit very rapidly. For example, 50 percent or more of a mature crop of peaches or nectarines that are not protected by fungicides, may be decayed by the brown rot fungus in 36 to 48 hours if the weather is hot and humid with showers. Thus, good control practices should be closely adhered to with this disease.

RECOMMENDED CONTROL

Cultural: Orchard sanitation is of major importance in controlling brown rot. Trees should be pruned to eliminate weak and dead wood, including small twigs, that may have been killed by brown rot the year before, and to open them so good spray penetration can be obtained. Avoid excess use of nitrogenous fertilizers.

Mummies on the ground may produce both ascospore and conidial spore stages of the fungus, and both stages can cause infection. Mummies of the peach, plum, and apricot may be a source of brown rot infection. Therefore, the importance of removing these sources of infection cannot be overemphasized. Plum and apricot trees should not be maintained near peach orchards unless they are properly pruned and sprayed.

Chemical: CAPTAN: Use 2.0 lbs captan 50% WP per 100 gals or 2 tablespoons per each gallon of spray. Apply 250 to 350 gals. of spray per acre, or 3 to 5 gals. per tree depending on tree size. Apply the sprays when buds show pink; at blossom, petal fall, shuck-split, shuck-fall; and continue at 10 to 14-day intervals on peaches and 7 to 10-day intervals on nectarines until 1 week before harvest. If the weather is warm and humid just prior to harvest, more frequent applications will be necessary. Captan may be applied during harvest if necessary to control brown rot. The residue tolerance for captan is 50 ppm.

OR

DRY WETTABLE SULFUR: Use 6.0 lbs dry wettable sulfur 95% per 100 gals or 6 tablespoons per each gallon of spray. Time of application and gallons per acre or tree are the same as for captan.

CAUTION: Wettable sulfur may leave an undesirable residue if applied during harvest. This residue problem may be avoided by substituting captan for sulfur during the last 2 sprays.

OR

BENOMYL (BENLATE): Use 0.5 lbs Benlate 50% WP per 100 gals of spray. Apply in late petal-fall to early shuck-fall, three weeks and again 1 week before harvest and during harvest if needed. Use captan or sulfur as listed above in all other sprays.

Benlate can be used in the hydrocooler. Do not graze treated areas. The residue tolerance for Benlate is 15 ppm .

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KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.