

## Plant Pathology Fact Sheet

# Phomopsis Cane and Leaf Spot and Eutypa Dieback Diseases of Grape

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“Cane and leaf spot” and “Eutypa dieback” were once thought to be the same disease. However, it is now known that each is a distinct disease caused by a different fungus. Grapes grown in areas where a moist environment persists are especially vulnerable to these fungal diseases.

### Cause, Symptoms & Disease Cycle

#### CANE AND LEAF SPOT

This disease is caused by the fungus *Phomopsis viticola*. Infections on new canes appear as reddish spots which later become brown and slightly elongate. Spots may coalesce and form black, irregular, scabby or crusty areas on the canes. Dark, sunken spots may also appear on leaf petioles and fruit cluster stems. The spotted tissue may crack open once the lesions run together.

The fruit may also become infected under unusually wet conditions, resulting in fruit rot. Fruit infection occurs during bloom and decay symptoms may not appear until just before harvest. The berries become dried and shrivelled in appearance.



STEM LESIONS DUE TO PHOMOPSIS CANE AND LEAF SPOT

Leaf spots appear in early spring as small irregular, light green spots. These spots darken and enlarge to form black-brown lesions. As these lesions become more numerous, they may run together along the veins, forming large dead areas. Symptoms could be confused with black rot, another grape disease; however, black rot tends to form brown, rather than black, stem and leaf spots. In addition, black rot leaf lesions tend to be angular and distinct.

The fungus overwinters in infected canes. In the spring, spores are carried by wind and

rain with infections occurring during periods of prolonged cool, wet weather. *Phomopsis* spores infect tender young shoots.

#### EUTYPA DIEBACK

The most conspicuous symptom of this disease is the appearance of dead or weakened canes in the spring. The fungus infects the trunk or a main branch, resulting in the formation of a canker. Each year the canker enlarges until it eventually girdles the trunk or branch, and kills the distal portion. New shoots developing near the canker are weak and stunted. These may result in failure of the vine to leaf-out or in the formation of dwarfed, yellowish, crinkled leaves. Infected canes which survive through the summer often die during the following winter.

Eutypa dieback is caused by the fungus *Eutypa armeniacae*. The fungus overwinters in infected canes and through spores carried by wind and rain, infect grapevines during late winter and early spring wet weather through wounds caused by pruning or winter injury.

#### Disease Management

- Prune and destroy dead and diseased portions of the vines.
- If the entire vine is affected, it should be cut off near the ground level and new shoots be allowed to develop. Be sure to cut well below the lowest canker found.

- The double trunk system of training vines can be used to minimize crop losses. Normally each trunk is pruned to carry one half the total number of buds. However, when one trunk has to be removed due to Eutypa dieback, the remaining trunk can be left with the full number of buds until the second trunk can be re-established.

- For cane and leaf spot management, fungicide sprays can be applied from bud breakthrough bloom. For a listing of registered fungicides, commercial growers should refer to *Commercial Fruit Pest Management Guide* (ID-232), while homeowners should refer to *Disease and Insect Control Program for Homegrown Fruit in Kentucky* (ID-21).

#### Additional Resources

- Commercial Fruit Pest Management Guide (ID-232)

[http://www2.ca.uky.edu/agcollege/plantpathology/ext\\_files/PPFShtml/ID-232.pdf](http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/ID-232.pdf)

- Disease and Insect Control Program for Homegrown Fruit in Kentucky, including Organic Alternatives (ID-21)

<http://www.ca.uky.edu/agc/pubs/id/id21/id21.pdf>

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