

Upright Dieback and Viscid Rot of Cranberry

Upright dieback is a poorly understood disease complex that can cause significant damage to new or established beds of cranberry. It is called a “disease complex” because it is apparently caused by a combination of different fungi and environmental conditions that interact. In Wisconsin, *Phomopsis vaccinii* (also called *Diaporthe vaccinii*) is apparently the major fungal species involved in upright dieback. *P. vaccinii* is also the cause of viscid rot, a soft rot of fruit. Viscid rot is generally considered a minor post-harvest disease that affects fruit in storage, but it occasionally appears in the field in Wisconsin.



Figure 2. Healthy cranberry fruit (left) compared to soft, off-color fruit with viscid rot (right).

Symptoms

Diseased uprights initially are mottled or show general yellowing. Later, uprights may turn orange-bronze before they eventually turn brown and die. Diseased uprights are dispersed among healthy vines and may

be adjacent to apparently healthy uprights on the same runner (Figure 1). This scattered distribution of disease among healthy uprights gives the cranberry planting a “salt and pepper” appearance.

In general, large patches of dead uprights are not the result of upright dieback caused by *P. vaccinii*. Fruit with viscid rot are soft and pale compared to sound fruit and are sometimes mottled and wrinkled (Figure 2).

A stringy, viscous substance can be drawn out from the cut surfaces of rotten berries (Figure 3). Other diseases will rot cranberry fruit and make it soft, but the slippery, stringy substance is characteristic of viscid rot.



Figure 1. An upright affected by upright dieback adjacent to apparently healthy uprights on the same runner.

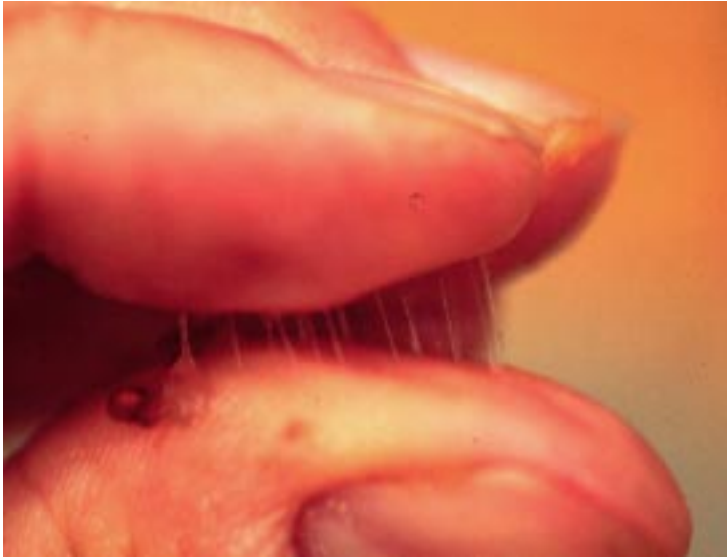


Figure 3. Viscous, stringy substance from a cranberry fruit with viscid rot.

Disease Cycle

The disease cycles for upright dieback and viscid rot are unclear. In the spring, *P. vaccinii* can be isolated from the previous season's uprights. The fungus can be isolated from flower pedicels and pistils in June and from the current year's stems after July. The fungus can also be isolated from apparently healthy uprights. Although *P. vaccinii* is frequently associated with upright dieback, how, when, and where the fungus

infects the cranberry plant is not known. Circumstantial evidence suggests that uprights are infected as they resume growth in the spring and that fruit are infected during bloom. Symptoms of upright dieback are usually not apparent until late summer, sometimes after periods of hot, dry weather stresses vines.

Control

Cultivar resistance to upright dieback and viscid rot has not

been tested, but in Wisconsin, 'Searles' appears to be especially susceptible. Practices that minimize heat and drought stress, and encourage vigorous but not rank vine growth, should minimize the incidence and severity of upright dieback and viscid rot. When establishing a new planting, obtain vines from a source with little or no history of upright dieback or viscid rot. Fungicide performance has been inconsistent, but application when shoots are about $1/2$ inch long is probably the best time for preventing upright dieback. By bloom and later, fungicides will not control upright dieback. By this time the fungus has apparently invaded shoots and is out of reach of fungicides. Check annual pest recommendation bulletins for currently registered fungicides. Refer to a current product label for up-to-date information on rates, methods of application, and appropriate safety precautions.

Patricia McManus
Department of Plant Pathology
University of Wisconsin-Madison
April, 1998