Macrophoma Rot of Grapes

articles.extension.org/pages/31524/macrophoma-rot-of-grapes

Damon Smith, Oklahoma State University

Symptoms

As grapes mature, lesions develop that are dark and can be sunken. Fruiting bodies of the fungus will form in scattered patterns within the lesions. Lesions can continue to expand, resulting in a watery rot of the berry. Infected fruit will drop from the cluster, becoming shriveled and hollow. Pycnidia that form during the current season can serve as reservoirs for spores that can cause new infections.

Symptoms of Macrophoma rot on berries. *Photo by Turner Sutton, North Carolina State University.*

Cultural Management Options

Sanitation is extremely important to eliminate the primary source of spores generated from fungal structures formed in old plant tissue, which result in new infections. Proper dormant pruning and destruction of canes, clusters, and other plant parts can significantly reduce the number of spores. Also, canopy management during the season can help to increase airflow, which reduces free moisture and within-canopy humidity. Practices such as shoot positioning and strategic leaf pruning can reduce drying time.

Chemical Management Options

A complete fungicide program targeting black rot will help manage damage by other fungi early in the season and reduce the risk of early infection. If conditions are favorable for macrophoma rot near harvest time, apply fungicides. If you are contemplating using a fungicide near harvest, remember to check on the pre-harvest interval (PHI) of that fungicide to be sure you can use it close to harvest. Consult with your county Extension office for current fungicide recommendations for macrophoma rot management.

Causes

Macrophoma rot is of greater concern on muscadine grapes (*Vitis rotundifolia*), although it is also a disease of bunch grapes (*V. vinifera* and *V. labrusca*). The fungus is a common pathogen of many plants causing stem cankers on a variety of hosts and fruit rots of apple, avocado, and citrus.

Macrophoma rot, caused by the fungus *Botryosphaeria dothidea*, overwinters in small fruiting bodies (pycnidia) on old, infected plant material. Many infections are thought to occur during the flowering period; however, infection can occur anytime from bloom to harvest. Temperature favorable for growth and sporulation is thought to be approximately 82ºF. After infection, the fungus remains inactive until fruit begin to ripen.

Recommended Resources

Managing Summer Bunch Rots, *University of Maryland*

Late-Season Fruit Rots, *University of Massachusetts* (scroll down to page 11)

Midwest Small Fruit and Grape Spray Guide

Field Guide for Integrated Pest Management in Pacific Northwest Vineyards, *Washington State University*

Reviewed by Ed Hellman, Texas AgriLife Extension and Stephen Jordan, University of Wisconsin-Madison