

Disease Description

Grapevine yellows is an economically important disease complex of grapevines associated with bacteria-like organisms called phytoplasmas. Grapevines infected with grapevine yellows disease exhibit a decline in vine growth, significant yield loss, and poor fruit quality.

Host Range

All varieties of *Vitis vinifera* are susceptible to grapevine yellows. American rootstock varieties demonstrate weak symptoms but may serve as reservoirs for the disease. Some of the most important grape varieties are highly susceptible to grapevine yellows including Chardonnay, Cabernet Sauvignon, Sauvignon blanc, Pinot noir, Pinot blanc, Pinot gris, Reisling, and Sangiovese.

Symptoms

Leaves of infected vines exhibit downward leaf rolling which causes the leaves to assume a triangular shape. Infected vines also develop a distinctive leaf discoloration and the leaves may become wrinkled and brittle. In white-fruited varieties, leaves develop small yellow spots which enlarge to form yellow bands along the veins. These yellow bands gradually expand to cover the entire leaf surface. Red varieties display similar leaf symptoms but the leaf discoloration is reddish in appearance. Shoots of susceptible grapevines demonstrate uneven ripening and fail to lignify. Infected shoots have a thin, rubbery appearance and often die during the winter. In addition, numerous small pustules may appear along diseased branches of susceptible varieties. Fruit set is reduced on infected grapevines and berries become brown and shriveled.



Figure 1. Leaves showing yellowing and downward leaf rolling. Leaves appear triangular in shape. Image courtesy of EPPO. **Figure 2.** Leaves of a white grape variety exhibiting yellow bands along the veins. Image courtesy of EPPO. **Figure 3.** Leaves of a red grape variety showing symptoms of red discoloration and downward leaf curling. Image courtesy of CABI Crop Protection Compendium. **Figure 4.** Shoot of an infected grapevine demonstrating uneven ripening and lignification. Image courtesy of the Canadian Food Inspection Agency.

Identification

Confirmation of grapevine yellows disease can only be made through molecular diagnosis. Questions and further information about grapevine yellows diagnosis and sample submission can be directed to:

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