



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Salvia

Cucumber Mosaic Virus (CMV) infects 191 host species in 40 families by more than 60 different aphid species. Although Cucumber Mosaic Virus is spread primarily by aphids, it can also be spread mechanically by tools, or through infected seed. The virus overwinters in reservoir hosts, such as many common perennial weeds. Aphids pick up the virus by feeding on infected hosts for a few seconds to a minute, then feeding on garden plants. Annual salvia, *Salvia splendens*, a staple of the bedding plant industry, is one of the many species of plants susceptible to CMV. Symptoms are ringspots and mottling. The virus can also cause distortions and strap-like leaves. There is no cure for virus. Good weed control helps reduce reservoir plants. Monitoring for aphids and using insecticides can help reduce the spread from plant to plant. Plants with virus symptoms should be destroyed to prevent spread to nearby healthy plants.

Salvia with CMV



Sherrie Smith University of Arkansas Cooperative Extension

Salvia with CMV



Sherrie Smith University of Arkansas Cooperative Extension

Grape

Grapevine Fanleaf Virus, (GFLV), is the oldest recorded virus of grapes. Symptoms are distorted, asymmetrical, and puckered leaves. Chlorotic mottling, open petiole sinuses, and acutely dentate leaves are also common symptoms. Leaves may have large bright yellow areas or veinbanding or mosaic patterns. Shoots may also be deformed with double nodes, abnormal branching, short internodes, fasciations, and zigzag growth. Poor fruit set, small berries, and irregular ripening are fruit symptoms. Viruses are not curable. This virus is vectored by *Xiphinema* spp. of nematodes. Nematode control is not possible in established vineyards. Sites selected for new plantings should be checked for nematodes and soil fumigation used, as well as prolonged fallow, and weed control to limit or eliminate vector nematode populations. Selecting virus-free stocks from reputable companies along with adequate site preparation helps reduce the incidence of Grapevine Fanleaf Virus. Herbicide injury, cold injury, and nutritional deficiencies and toxicities can cause similar symptoms. Testing for GFLV is available at no charge at The Plant Health Clinic.



Cold injury suspected



Sherrie Smith University of Arkansas Cooperative Extension

Grapevine Fanleaf Virus



APS Image Library, A.C. Goheen

Grapevine Fanleaf Virus



APS Image Library, D.J. Raski

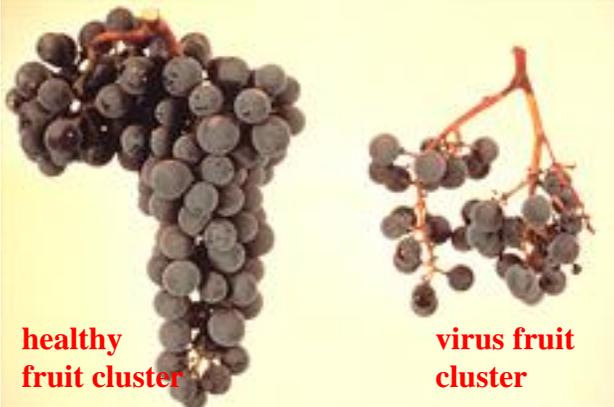
Grapevine Fanleaf Virus



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Grapevine Fanleaf Virus



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Green bean Brown Spot- *Pseudomonas syringae* p.v. *syringae*



Sherrie Smith University of Arkansas Cooperative Extension

Green beans

Bacterial Brown Spot is caused by the bacterium *Pseudomonas syringae* pv. *syringae*. Lesions on the leaves are small, circular, brown, necrotic, and often surrounded by a yellow halo. Lesions may coalesce and fall out giving a tattered appearance to the leaves. Pod lesions are circular, and initially water-soaked, becoming brown and necrotic. Pods may become distorted where the lesions are located. The bacterium survives on weeds, as well as beans, and peas. It may also be spread by equipment used in contaminated fields, and by people or animals walking through the field. It has also been found on seeds. The primary method of spread of the bacterium is splash dispersal onto uninfected leaves and plants by rainfall or sprinkler irrigation. Control consists of managing weeds, crop debris, using pathogen free seeds (certified seed), and resistant cultivars, for example Great Northern Wehling. Working in fields while the foliage is wet should be avoided. Fungicides containing fixed coppers may be used to help control secondary spread and limit severity. Application should be made to susceptible crops during the late-vegetative to early-flowering periods of plant development.



Green bean Brown Spot-
Pseudomonas syringae p.v. syringae



Sherrie Smith University of Arkansas Cooperative Extension