



Arkansas Plant Health Clinic Newsletter

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Mimosa

Mimosa trees are common trees in the south. They are valued for their pink flowers and the tropical look they add to landscapes. The biggest disease problem with mimosa is Mimosa Wilt, a vascular wilt caused by *Fusarium oxysporum f. sp. perniciosum*. Symptoms include leaf yellowing and leaf wilt by midsummer. Most infected trees die branch by branch over several months, but some die within a few weeks of starting to wilt. Almost all infected trees die within a year of first wilting. In advanced stages, infected trees ooze a frothy liquid from cracks and grow sprouts on their trunks. Brown streaks may be seen within roots and branches. This is a soilborne disease, and unfortunately, not much can be done for a tree with vascular wilt. Never use high-nitrogen fertilizers. A balanced fertilizer (10-10-10) may help alleviate symptoms in infected trees that aren't too far gone. Infected trees should be watered frequently to decrease wilt symptoms, and dead branches should be removed and burned. Two wilt-resistant varieties are available: Charlotte, with light-colored flowers, and Tryon, with deeper red flowers.

Mimosa Wilt-*Fusarium oxysporum f. sp. perniciosum*



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension



Mimosa Wilt-*Fusarium oxysporum* f. sp. *perniciosum*



Photo by Amy Simpson, University of Arkansas Cooperative Extension

Grape

Downy Mildew of grape is a common disease of grapes in Arkansas. The causal agent, *Plasmopara viticola*, can attack all green parts of the plant, including leaves, petioles, stems, and fruit. Leaf lesions are yellowish and oily, or angular, yellow to reddish brown, and limited by the veins. A dense, white, cottony growth of sporulation occurs on the underside of the leaf. Infected shoots curl into a shepherd's crook and become white with sporulation, eventually turning brown and dying. Leaves with numerous Downy Mildew lesions drop prematurely, reducing sugar content in the fruit

and decreasing winter hardiness of the buds. Young berries are also highly susceptible. Infected berries appear grayish in color and covered with downy, felt-like sporulation. They do not ripen normally and instead remain firm, eventually dropping from the vine. As with all Downy Mildews, good soil drainage is essential. The cleanup of fallen leaves and berries, and the removal of infected shoots helps limit inoculum, but rarely are these measures sufficient in themselves to control Downy Mildew in areas with high disease pressure. Fungicides must be applied, starting at 3-6" shoot growth. Abound, Aliette, Captan, Gavel, Mancozeb, Pristine, Reason, Rovral, Scala, Sovran, and Ziram are labeled for Downy Mildew control.

Grape Downy Mildew-*Plasmopara viticola*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Grape Downy Mildew-*Plasmopara viticola*



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Grape Downy Mildew-*Plasmopara viticola*



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Tobacco Mosaic Virus

Tobacco Mosaic Virus (TMV) is known to infect 125 individual species, including tobacco, ajuga, amaranths, apple, beans, beets, California bluebell, calendula, rose campion, carrot, celandine, celosia, centaurea, chrysanthemum, cleome, cowpea, cranesbill, cucumbers, currants, delphiniums, dogwood, eggplant, elder, euphorbia, figwort, foxglove, gloxinia, gooseberry, grape, groundcherry, water horehound, impatiens, marigold, morning-glory, mullein, muskmelon, mustards, nierembergia, orchids, pear, pennyroyal, American penstemon, pepper, petunia, pepper, phacelias, phlox, *Physalis* spp., polygonum, potato, proboscis flower, purslane, salpiglossis, scabiosa, snapdragon, speedwell, spinach, squash, sugar beet, sunflowers, tasselflower, tomato, turnip, verbena (white), wisteria, zinnia, a number of other ornamental plants, and many weeds. TMV is transmitted mechanically from infected crops or weeds. The virus can also be transmitted via unwashed hands or clothing that has met infected plants or tobacco products. People who use tobacco products are often the unwitting means of transmission. TMV can also be transmitted by tools. Additionally, the virus can persist in the soil on root debris for at least two years. Viruses are not curable. A plant diagnosed with TMV should be removed from the planting. The best method of control is the use of resistant cultivars whenever possible. People who use tobacco products should thoroughly wash their hands before handling plants.



Dogwood Tobacco Mosaic Virus (TMV)-*Tobamovirus*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Hosta Tobacco Mosaic Virus (TMV)-*Tobamovirus*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Impatiens Tobacco Mosaic Virus (TMV)-*Tobamovirus*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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.



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