



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.

## Strawberry

Angular leaf spot of strawberry, caused by *Xanthomonas fragariae*, is found in many strawberry growing regions of the world. Symptoms begin as tiny, water-soaked lesions on the lower leaf surface. Lesions enlarge to form angular spots, usually delimited by small veins. During wet conditions, lesions weep a bacterial exudate which dries into a whitish, scaly film on the leaf. A yellow halo may surround the lesion. Older lesions become visible on the upper surface of the leaf as irregular, reddish-brown spots. Infection sometimes follows the major veins, resulting in veinal water-soaking. Heavily infected leaves may die. New growth in the spring becomes infected from overwintered infected plants and leaves. Therefore, strict attention to sanitation is very important in controlling angular leaf spot. Bactericides such as streptomycin sulfate, oxytetracycline, cupric hydroxide, and copper ammonium carbonate are effective when used as directed.

### Strawberry Angular leaf spot- *Xanthomonas fragariae*



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## Vinca

Under normal circumstances, *Vinca minor* is a fast growing, perennial, evergreen vine. It is so vigorous that it can be difficult to eradicate once established. *Vinca minor* is one of the few groundcovers that compete very well under trees, and is happy in most soils. However, some stands of vinca are plagued by Phoma stem blight, caused by the fungus *Phoma exigua* var. *exigua*. Symptoms are black lesions on the stems, yellowing, wilting, and death. Small black pycnidia (fruiting bodies of the fungus) may be seen with a hand lens. Wilting and death of the stem occurs when the lesion completely encircles the stem. Wet weather and overhead irrigation favor disease development and spread. Generally, Phoma stem blight slows its progression with hotter, drier weather. The exception is the in beds that have a history of the disease and are under overhead irrigation. It helps to improve air circulation by pruning overhanging plants. Decaying and dead tissue should be removed from the bed if possible. Work should only be done in



the beds when plant foliage is dry. Where the problem is severe, planting through perforated weed barrier to keep the vining parts from direct soil contact has proved helpful. Copper fungicides and mancozeb are among the fungicides that are effective. Sprays should be applied from bud break in the spring until midsummer.

**Vinca Phoma Stem blight-*Phoma exigua* var. *exigua***



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**Magnolia**

Verticillium wilt, caused by *Verticillium albo-atrum* and *V. dahlia*, is a soil-borne fungal disease of many ornamental plants, including many favorite landscape trees. Magnolias are among those trees that are very susceptible to Verticillium wilt. Symptoms are leaf scorch, branch by branch decline and dieback, or overall thinning of the crown, followed by death of the tree. Verticillium enters the plant through wounds in the roots, or by direct penetration of the root tissue. The fungus colonizes the water transport system of the plant, plugging the cells and preventing the movement of water. Discolored streaking in the vascular tissue is diagnostic. Depending on the tree species, streaking ranges from olive to tan, brown or black. In magnolia, the discoloration is a general browning of the sapwood. There is no cure for Verticillium wilt. Some trees die the first season, while others survive for years in an enfeebled state. Verticillium wilt progresses faster in drought stressed trees. Trees should receive a deep watering once a week during dry conditions and fertilized



per soil test. Where there is a history of Verticillium wilt, susceptible species should be avoided. Some plants resistant to Verticillium wilt are crabapple, apple, mountain ash, beech, birch, boxwood, dogwood, sweet gum, hawthorn, holly, katsuratree, honey locust, oak, pear, juniper, Pawpaw, Yew, London plane tree and sycamore, rhododendron, willow, and zelkova.

### **Magnolia Verticillium wilt- *Verticillium* spp.**



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### **Squash**

Watermelon Mosaic Virus (WMV) is found wherever cucurbits are grown. It can infect legumes such as peas, vetch, clover, and alfalfa as well as watermelon, squash, cucumber, and pumpkin. WMV is a Potyvirus;

### **Squash-Watermelon Mosaic Virus (WMV)**



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Potyviridae. Potyviruses are aphid transmitted viruses. The green peach aphid, cowpea aphid, spirea and potato aphid, among others are known to transmit the virus. Symptoms are stunting, leaf malformation, rugosity, blistering, mottling, and vein banding. Fruits may be misshapen, dwarfed, mottled or spotted. An infected plant may have all these symptoms, a few symptoms, or be asymptomatic. As with all viruses, there is no cure. Plant debris, alternative hosts such as wild cucurbits and legumes, and volunteer seedlings should be removed. The virus can be mechanically transmitted via tools, so sanitation of tools and equipment is helpful. WMV is not seed transmitted. Scouting for aphids should start early in the season. Malathion, Thionex 3 Ec, and Thionex 50 WP, are labeled for aphids on cucurbits. For cucumbers you may also use Brigade 2 EC, Beleaf 50 SG, Mustang Max 0.8 EC, and Hero. The best defense is the use of resistant cultivars.



*Sherrie Smith*

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