



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.

Viburnum

Bacterial leaf spot of Viburnum is caused by the bacterium, *Pseudomonas syringae* pv. *Viburni*. Symptoms are round to angular dark brown to black spots on leaves and petioles. Spots will often have a chlorotic halo. In severe cases, leaf distortion and premature leaf drop may occur. The disease is most prevalent during cool, wet weather, and under overhead irrigation. Rake and destroy all fallen leaves. Remove infected leaves and shoots from the plant. Do this only during dry weather. Sterilize pruning tools between cuts in a 10%, (1 cup bleach to 9 cups water), bleach solution. Copper fungicides may be of some benefit. There are resistant cultivars available such as *Viburnum burkwoodii* 'Mohawk', *Viburnum carlcephalum* 'Cayuga', *Viburnum lantana* 'Mohican', and *Viburnum rhytidophyllum* 'Alleghany'.

Viburnum bacterial leaf spot



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Lilac

How delightful is the smell of lilacs blooming in the spring. Lilacs are hardy, long-lived favorites in the shrub border. In full sun planted in decent garden soil with adequate moisture and good drainage, we seldom see problems. However, under less than optimum conditions they can get several fungal and bacterial diseases. One disease is Cercospora leaf spot. Symptoms of Cercospora leaf spot, caused by *Cercospora* spp., are round to angular lesions that may coalesce to form large blotches on the leaf. The centers of the lesions turn an ashy-gray color as they age. Badly affected leaves may fall prematurely. All fallen leaves should be raked up and destroyed. Fungicides containing chlorothalonil, or propiconazole, or myclobutanil applied in the spring before leaf spotting becomes a problem are effective.

Lilac Cercospora leaf spot



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Okra

Those who like okra can't get enough of this favorite southern vegetable. Okra grows best on sandy, well drained loamy soils with a pH of 6.5 -7.0. It has minor disease problems when adequate growing conditions are provided. However, okra is susceptible to wilt diseases caused by verticillium or fusarium species. Symptoms are yellowing and wilting of leaves and eventual collapse of the plant. When the stems are cut open, brown streaking and flecking can be seen in the vascular bundle. It is impossible to tell which pathogen is responsible for the wilting with certainty, without culturing tissue in the lab. Verticillium is more common during cooler weather, and the streaking is sometimes darker brown to black in color. There is no real resistance to these diseases in okra. The only control measures are to clean up all plant debris every season, and to practice crop rotation.

Okra verticillium wilt



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Strawberry

Four species of *Colletotrichum* cause anthracnose diseases of strawberry. Flower buds, sepals, pedicels, peduncles, leaves, crowns, and fruit may all be infected. The most common species found is *Colletotrichum fragariae*. It causes crown rot, petiole and runner lesions, and black leaf spots. Infection usually starts in the newly opening flower buds. The flower dries up and a dark lesion runs down the petiole. If infection occurs after pollination, a small hard fruit will develop with a dark brown lesion. Masses of salmon to orange conidia may be observed during moist, warm conditions. Lesions also occur on vegetative stems, where they may girdle the stem, resulting in wilting and death of the plant parts above the lesion. Leaf lesions are small (<1/4"), round, and black, often resembling ink spots. Spots may become abundant on leaflets without killing the leaf and often appear first on expanding leaves of runner plants. Primary sources of inoculum are infected nursery plants and contaminated soil on transplants. The spread of disease can be limited by culling of diseased plants and fruits, avoidance of overhead irrigation, and the use of fungicides. It should be noted that minimal amounts of nitrogen should be used in problem fields as high rates of nitrogen encourage anthracnose development. Captan, Abound, Pristine, and Cabrio are labeled for anthracnose on strawberry.

Strawberry anthracnose



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Soybean

Prolonged wet weather is causing problems in many soybean fields. As the seeds swell with excess water, pods burst along the suture. We have seeds germinating inside the split pods. In some fields the damage is significant.

Soybean pod split



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Germination inside pods



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