



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.

## Soybean

The Plant Health Clinic received an interesting soybean sample this week. The plant had dramatic white and green leaf variegation. This condition is known as chimera. Plant chimeras are often due to mutation during cell division. A chimera is a single organism composed of two genetically different types of tissue. Chimeras may also originate by grafting, induced mutation, mixed callus cultures, or protoplast fusion. Obviously, the soybean chimera was produced through spontaneous mutation. Chimeras do not come true from seed. There are many examples of chimeras that have been established as important landscape cultivars, such as variegated dogwood, variegated vinca minor, varieties of hosta, and variegated ajuga, among others.

## Soybean chimera



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## Soybean chimera



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## Hydrangea

Hydrangeas are hardy, easy to maintain shrubs when planted in ideal locations. Although tolerant of a range of soils and pH, they prefer evenly moist, well-drained soil with afternoon shade, particularly in the mid-south. They are prone to *Cercospora* leaf spot, caused by *Cercospora hydrangea*, especially when they are grown under overhead irrigation. Symptoms on big leaf varieties are small, circular purple to brown spots appearing first on lower leaves and spreading upward through the plant. The centers of the spots become tan to light gray with age, surrounded by a purple halo. Leaves with numerous lesions turn yellow and fall from the plant. Lesions on oak leaf hydrangea are more angular than circular. Good sanitation is important in controlling *Cercospora* leaf spot. All fallen leaves should be raked up and removed from the planting. Hydrangea should be watered at ground level and the use of sprinklers avoided. Fungicides containing chlorothalonil, or myclobutanil, or thiophanate-methyl, or mancozeb, or azoxystrobin, give good results.



## Hydrangea Cercospora Leaf spot-*Cercospora hydrangeae*



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environmental issues such as drought, winds, storms, and nutritional issues.

## Corn Crazy top-*Sclerophthora macrospora*



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## Corn

The Plant Health Clinic has seen only one example of Downy mildew (Crazy top of corn) this season, due mostly to extremely dry conditions. Crazy top, caused by *Sclerophthora macrospora*, only occurs in the presence of excess water. We see Crazy top where fields have been flooded shortly after planting or before plants are at the four to five leaf stage. Water trapped in the whorl of young plants can also lead to infection. Soil or leaf saturation for 24-48 hours is enough for infection to occur. Symptoms of Crazy top depend at what stage of growth the corn was infected, and the severity of the infection. The most common symptoms are excessive tillering (six to ten tillers per plant), rolling and twisting of the upper leaves, and leafy proliferation of the tassel. Leaves may be stunted, strap-like, leathery, and chlorotic. There are no chemical controls for Crazy top. Good soil drainage is the only preventative.

## Corn

We've had several examples of poor pollination of corn, resulting in substandard ears. Poor pollination is due to

## Corn Poor pollination



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## Willow

Willows are popular landscape trees despite being relatively short lived trees that shed a lot of litter by way of fallen twigs and leaves. Among the most popular is the Weeping willow, greatly admired for its size and graceful form. Willow of all species can be attacked by the willow blister mite, a microscopic mite belonging to the Eriophyid group of mites. Symptoms are grayish-white and red blister-like growths on the upper and lower surfaces of willow leaves. Old galls turn dark brown to black. The adults overwinter on the bark. At bud swell in the spring, they migrate to the emerging leaves. Their feeding activity causes the leaf edges of the new leaves to swell, crinkle, and curl to form a protective chamber. As the season progresses additional galls forms on the leaf surfaces. Large numbers of the mites cause the leaves to develop black blotches around the galls. The leaves become curled and distorted. The damage is usually more cosmetic than serious. Applications of insecticides such as carbaryl, fine horticultural oil, imidicloprid, permethrins, pyrethrins, or malathion may be applied 7 to 10 days prior to bud break. Dormant oil may be applied in late winter or early spring when the plant is dormant.

### **Willow Blister mite-*Aculops tetanothrix***



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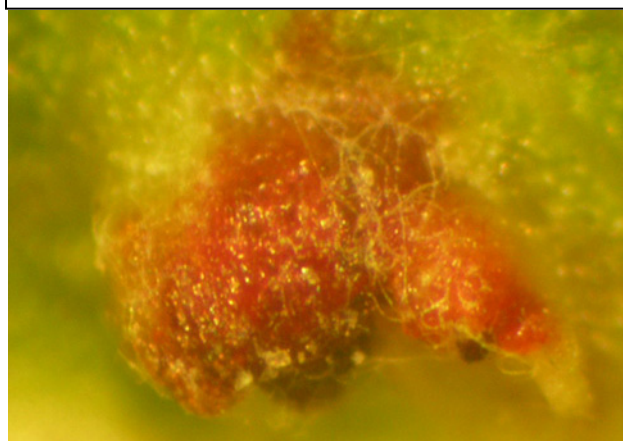
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**Willow Blister mite-*Aculops  
tetanothrix***



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