

Plant Clinic Fact Sheet: **Emerging Diseases in Illinois**



Bur Oak Blight (*Tubakia iowensis*)

Bur Oak Blight, also known as BOB, is a disease caused by a fungal pathogen. This disease only affects bur oaks (*Quercus macrocarpa*). It has been identified in multiple northern and western counties in Illinois. It is widespread in Iowa, Minnesota, and southwestern Wisconsin. This disease is characterized by distinct, wedge-shaped necrotic (dead) areas of the leaves. The necrotic area begins at the tip of the leaf and usually stops at major veins, giving the lesion a V or wedge shape. BOB is most severe on mature trees in upland or former savannah sites. While it can kill susceptible trees over the course of several years, injected applications of the systemic fungicide propiconazole has been shown to be effective at managing the disease. The fungicide does not need to be applied every year; current recommendations are to treat symptomatic trees in late spring just after the leaves have fully expanded, and re-apply the year following a severe outbreak.

Downy Mildews (Family Peronosporaceae)

The downy mildews are a collection of related diseases caused by oomycetes (fungal-like pathogens, also known as water molds). These diseases generally cause leaf discoloration followed by rapid and thorough defoliation. Two recent introductions to Illinois are basil downy mildew and impatiens downy mildew. Cucurbit downy mildew is a common problem in Illinois. Coleus downy mildew has not been identified in the state, though it has been found in the Midwest. Symptoms first appear as diffuse yellow areas on the upper sides of leaves. Dark brown spores are produced on the undersides of leaves, giving them a dirty appearance. Defoliation occurs rapidly, leaving the stems bare. Depending on the species of host, these diseases are managed through resistance and fungicide applications.



Rose Rosette Disease (Rose Rosette Virus)

The Rose Rosette Virus (RRV) is widespread across the United States. While roses appear to be the only hosts for this virus, a wide variety of rose groups including hybrid tea, floribunda, grandiflora, and miniature roses are susceptible. Due to the recent popularity of the susceptible Radrazz roses (better known by their registered trademark name, Knock Out® roses), this disease has the potential to become more common in landscapes. The virus is transmitted via mites. Symptoms of the disease include a proliferation of prickles (thorns), distortion of flower petals and new leaves, abnormal red coloration to new growth, and witches' brooms. There is no cure for this disease. Infected plants should be removed immediately from the landscape to reduce the risk of further infection.

Plant Clinic Fact Sheet: Threatening Diseases to Illinois

Note: New disease confirmations are announced via Facebook, the Plant Clinic Blog, and various newsletters (see below for a list of resources). **All three of these diseases are considered a threat to Illinois, and all are regulated. Please contact us if you see a suspect plant.**

Boxwood Blight (*Calonectria pseudonaviculata*, syn. *Cylindrocladium buxicola*)

Boxwood Blight is caused by a fungal pathogen. Hosts are limited to the Buxaceae family, including boxwood and pachysandra. It has been identified in over 20 states, mostly along the eastern seaboard and Oregon. In the Midwest, it has been confirmed in Illinois, Ohio, and Missouri. The three characteristic symptoms of infection are: 1. brown leaf spots with a yellow halo; 2. dark brown or black linear stem cankers; 3. complete defoliation of the plant. (Photo credit: Julie Herbert)



Sudden Oak Death (SOD) (*Phytophthora ramorum*)

This disease is caused by a fungal-like pathogen. It has been identified and eradicated on nursery stock in several states except in California and Oregon, where it has become established. SOD affects a wide range of hosts including rhododendron, camellia, viburnum, some maples, fir, Douglas-fir, and oaks in the red oak and intermediate groups. Symptoms include large necrotic leaf lesions and shoot dieback on most hosts, with “bleeding” trunk cankers on infected oaks. (Photo credit: Joseph O’Brien, USDA Forest Service)

Thousand Cankers Disease (TCD) (*Geosmithia morbida*)

TCD is caused by a fungus that is transmitted via small beetles or weevils. It affects walnuts and butternuts, and is especially lethal to eastern black walnut (*Juglans nigra*). The disease is wide-spread in the West, and has been confirmed in 7 Eastern states within the native range of *J. nigra*. Symptoms include wilting, yellowing foliage, canopy dieback, and tree mortality. Minute, round exit holes of the insects may be observed on young, smooth-barked branches. (Photo credit: USDA NIFA IPM Program)



Resources:

Plant Clinic Facebook: <https://www.facebook.com/UofiPlantClinic/>

Plant Clinic Blog: <http://web.extension.illinois.edu/blogs/eb387/>

Home, Yard, and Garden Pest Newsletter: <http://hyg.ipm.illinois.edu/>

The Bulletin (Field Crops): <http://bulletin.ipm.illinois.edu/>