



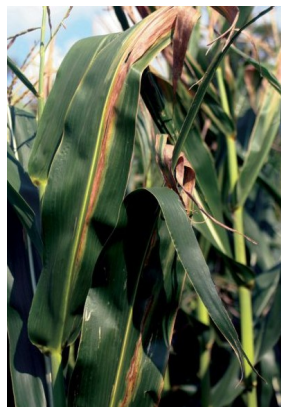
Plant Disease in Kansas

Corn and soybeans with disease reports

Special points of interest:

- *Goss's wilt of corn*
- *Windstorm damage to maples predisposed by cankers*

Despite hot dry weather conditions the corn and soybean crops have had some disease issues this summer. In corn, Goss's wilt (GW) has been found in a number of counties by Kansas State University, private seed companies, and KDA staff. This disease which generally causes a leaf blight of upper leaves can kill plants and does significantly reduce yields in susceptible hybrids.



GW can be very difficult to distinguish from drought blast injury on the leaves. Laboratory tests are often needed to verify the presence of the bacteria that causes the disease. KDA staff found county records in Butler, Jefferson, Pottawatomie, Wabaunsee, Coffey, Atchison, and Leavenworth. Other diseases observed in corn were common maize rust, common smut,

northern leaf blight, wheat streak mosaic virus, *Physoderma* brown spot, crazy top, and charcoal rot.

In soybeans, diseases have been impacted by the heat with foliar disease at a minimum. Sudden death syndrome and soybean cyst nematode were noted during inspections of breeding nurseries along with low levels of viruses. Last week, charcoal rot was observed in Cherokee County.



Figure 1 and 2: Goss's wilt leaf stage on corn leaves (Nuseed) and positive reaction to the bacterial causal agent (pink bands on test strip) J. Appel.

Fig. 3: Maple damage from wind



Wind storm causes significant tree damage where disease present

In late July, a straight line wind storm with over 60 mph winds struck Manhattan and nearby communities. The most common tree affected was maples where large branches were torn off. The question is why maples?

Maples are a softwood tree as opposed to such hardwoods as oaks. In the high winds, the

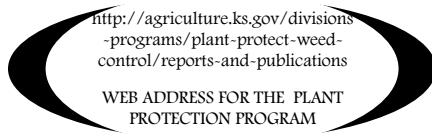
softwood branches with attached leaves were whipped violently from high winds causing slight tears that then turned into bigger tears. The weight of the branches was then too much for the soft wood to support and large branches broke off. Something else was noticed though, black heart rot cankers were at many of the breaks. Apparently, fungi and bacteria

had cankered main trunks well before the storm and were associated with the majority of breaks (J. Appel). It appeared that the pathogens entered into the trunk by blighting smaller branches (red arrow) and moving into the trunk. The disease was not walled off by the tree thus predisposing maples to wind damage.

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INVASIVE SPECIES

Plant Protection and Weed Control Program

Plant Protection and Weed Control staff work to ensure the health of the state's native and cultivated plants by excluding or controlling destructive pests, diseases and weeds. Staff examine and analyze pest conditions in crop fields, rangelands, greenhouses and nurseries. Action taken to control potential infestations of new pests, whether they are insects, plants diseases or weeds, is beneficial to the economy and the environment.

Our Mission is to:

- Exclude or control harmful insects, plant diseases, and weeds;
- Ensure Kansas plants and plant products entering commerce are free from quarantine pests;
- Provide customers with inspection and certification services.

The Plant Disease Survey in Kansas has been conducted since 1976. The survey addresses disease situations in field crops, native ecosystems, and horticultural trade. The Kansas Department of Agriculture works cooperatively with Kansas State University and Extension programs, United States Department of Agriculture, and various commodity groups.

Diseases seen in nurseries, landscapes, and native stands

Over the past six weeks, a number of diseases have been observed affecting the various trees and shrubs that make up our surroundings here in Kansas.

In nurseries where KDA staff provide inspections and control advise to nurseryman, an important disease has been *Phytophthora* root rot. During hot summer months irrigation systems seem to almost run non-stop and plants often become water saturated or set in standing water. The fungus plant killer known as *Phytophthora* can affect many species of plants primarily shrubs in nurseries. Junipers, yews, rhododendrons,

boxwoods, dogwoods, and viburnum are some of the plants observed with root rot this season. Other diseases of importance encountered by staff were rust diseases of hawthorn in SC Kansas, *Diplodea* tip blight of pines in C and SW, and rose rosette of various roses including "Knock out" in eastern Kansas.

Dothistroma needle blight was reported as low in Austrian pine plantings along with fire blight of Rosaceae plants. In deciduous trees in the nursery, foliar diseases have been powdery mildews, *Septoria* leaf spot of redbud and dogwoods and black spot of elm. Gall diseases have

been eastern gall rust of A. pines and crown gall.

In landscapes and native stands, pine wilt, wetwood or bleeding canker of Siberian elm and walnut, and Dutch Elm disease of American elm are currently active.

Fig. 4: *Phytophthora* root rot of yews in an eastern Kansas nursery

