

# Plant Disease in Kansas

## Special points of interest:

- *Stripe rust and wheat streak mosaic virus are of significance to wheat health concerns and loss in production bushels.*
- *Tobacco mosaic virus, the 2014 highlighted disease in Kansas greenhouse production reappears from a Iowa source.*

## Wheat disease pressure making an impact

Over the past three weeks significant disease levels have been observed in the spring wheat crop.

Most notable was the discovery of stripe rust throughout the state. Observations by KDA and KSU extension staff found stripe rust first in extreme south central Kansas near Anthony and southeast communities of Coffeyville and Parsons. Within the next few days, stripe rust was observed up into central Kansas near Abilene and a week later into north central fields and as far west as the Colby area in the northwest.

Wheat was at boot to flowering in the majority of the fields.

Stripe rust has had recent epidemics in the state where substantial losses were seen in susceptible acres without fungicide foliar protection. The rust disease is favored by cool temperatures and high humidity's. It is believed the rust for the most part blew in from Oklahoma but some lower leaf infection may have been from overwintering.

Other significant diseases observed were wheat streak mosaic in fields of central and particularly south central Kansas. Again the Anthony area in Har-

per and Barber counties had several observations of virus levels greater than 50%.

Other diseases showing some build up were tan spot, *Septoria* complex and bacterial blight (*Xanthomonas* spp.) These foliar diseases could be of significance with recent rainfall across much of the state as conditions have been favorable for disease infection. The same could also be said for head scab although the disease has not been observed.

Diseases that seem to be lacking in presence include barley yellow dwarf and leaf rust. There is still time for leaf rust though to develop levels for concern.

## Diseases of landscapes and retail plants

Recent rains have been ideal for cedar rust complex in many areas of the state and the bright orange jelly like fruiting structures are common to many cedars. The spores from these fruiting structures will infect members of the *Malus* family including apple, quince, pear, hawthorn, and crabapple. Fruits can be infected and fruit trees can have smaller fruit because of leaf loss.

In some of the rose plantings, rose rosette disease can be ob-

served as a witches broom mass of stems and leaves. Other diseases of rose have included downy mildew on plants shipped in from Oklahoma sources and native black spot infection of leaves.

In production facilities, damping off and viruses have been of regulatory concern. Tomato spotted wilt, *Impatiens* necrotic spot virus, Tobacco Mosaic Virus, and *Pythium* and *Thielavopsis* root rots/damping off have been responsible for dumping

of plants from rejection notices (KDA staff).

The Tobacco Mosaic Virus was a huge problem last year causing several hundred thousand of dollars of loss. This was the first report in 2015 for Kansas and reported on coneflower and horseradish from Iowa greenhouse sourced plants brought into Kansas. In Iowa, greenhouses are not regulated and in Kansas, diseases often are sourced to plants from Iowa.

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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.

*Plant Disease in Kansas* addresses disease situations in field crops, trees and shrubs of native ecosystems and landscapes, and plants or plant products in the forestry and horticultural trades. The Kansas Department of Agriculture works cooperatively with Kansas State University and Extension programs, Kansas Forest Service, United States Department of Agriculture, and various commodity groups.

Cedar Apple Rust: Cedar Rust jelly fruiting structures and subsequent rust pustules on leaves of *Malus* species that appear in late May into June

