

Shopper's Guide Article December 18, 2018

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2018 Kansas Crop Disease Summary

Here is a summary of the most prevalent diseases in corn, soybeans, and grain sorghum in Kansas during the 2018 growing season.

Corn Diseases

Early- to mid-season drought followed by heavy rainfall in August and early September led to an interesting complex of problems for the 2018 Kansas corn crop. In many parts of the eastern half of the state, drought was so severe that fields failed to set ears. For those that did, *Aspergillus* ear rot infection was common, with incidence levels ranging from zero to over 80% in one Miami County field. Many aflatoxin tests were above the 20-ppm level considered safe for human consumption, but well below the maximum usage rate of 300 ppm. A Kansas State University veterinarian indicated there was some aflatoxicosis reported in Kansas livestock. Late-season rains allowed for the development of *Fusarium* ear rot, which produces the mycotoxin, fumonisin. While levels were generally below those considered safe for cattle, veterinarians reported some fumonisin-related deaths in horses and hogs.

Gray leaf spot levels in 2018 were generally below treatable levels at tasseling, when fungicide decisions needed to be made, but increased rapidly in late-season when cloudy weather with frequent heavy rains occurred. Overall, losses were near the long-term average.

Eight new counties were added to the list of counties confirmed to have bacterial leaf streak, bringing the state's total to 46. A few cases of Goss's bacterial blight and *Diplodia* ear rot were also reported from western Kansas. On a positive note, southern rust incidence and severity were significantly less than in the past two years.

Stalk rot losses were above-average in 2018. *Fusarium* stalk rot was by far the predominant disease found in grower fields, but charcoal rot and anthracnose stalk rot were all reported in various reporting districts, especially in the eastern half of the state where weather patterns were most favorable for stalk rot development.

Soybean diseases

The mid-season drought made conditions favorable for charcoal rot, but late-season rains allowed the avoidance of that problem but created several more. Heavy August rains caused the development of late-season *Phytophthora* root rot problems, which resulted in premature death in many fields. This premature death likely reduced yields by 10 percent or more in affected fields.

The late-season rains also brought on sudden death syndrome symptoms, but because of the lateness and the adoption of ILeVO seed treatment, losses were below long-term averages. Frogeye leaf spot developed in September and later-planted fields of susceptible varieties that were not treated with a fungicide likely suffered yield losses.

The most serious problem in the 2018 Kansas soybean crop developed late in the year. August and October rains allowed the development of several late-season stem and pod diseases, including pod and stem blight, purple seed stain, and anthracnose. Because these diseases reduce seed quality, many loads of soybeans were docked heavily at elevators or simply refused.

Sorghum Diseases

The 2018 Kansas sorghum crop was healthier than any in recent memory. Sooty stripe levels were high in a few south-central Kansas fields, but generally less than in the past two years.

Late-season rains caused an increase in head molds, but overall, incidence was relatively low. Like corn, the most significant sorghum disease in 2018 was *Fusarium* stalk rot. Reports of late-season lodging were few, however.