

## SOOTY STRIPE OF SORGHUM

Dept. of Plant Pathology  
*Visit our homepage at:*  
[www.plantpath.k-state.edu](http://www.plantpath.k-state.edu)

Sooty stripe, caused by the fungus *Ramulispora sorghi*, occurs on sorghum at all growth stages. Infection occurs on the oldest leaves first and most extensively.

Lesions are elliptical in shape, varying from 0.4 to 0.8 inches in diameter and from 2.0 to 5.5 inches in length. The lesion has a cream to tan-colored center with a reddish purple or tan margin. A very broad, yellow halo characteristically surrounds the lesion and separates it from symptoms caused by northern corn leaf blight. In some cases, the entire leaf may turn yellow.

As the season progresses, adjacent lesions may coalesce to form extensive necrotic areas, causing premature leaf death. Mature lesions become black or sooty (therefore the name sooty stripe), particularly on the underside of the leaf, where numerous small, superficial sclerotia appear that can be easily rubbed off.

### DISEASE CYCLE

Initial infections can occur when conidia blow in from infested fields. From then on, the disease survives from season to season on crop residues on or below the soil surface. Levels of sooty stripe in Kansas have been increasing steadily in recent years, paralleling the increase in use of reduced tillage methods. When conditions become favorable, the sclerotia germinate and produce abundant conidia. Wind and rain distribute the conidia and sclerotia to new foliage and to other plants. The infection process and optimum conditions for disease development and

distribution are not well understood, but moisture -- either as rain, dew, or high humidity -- seems necessary. The severest cases occur when infection occurs early in the year. Yield losses of 25% have occurred on susceptible hybrids with moderate levels of disease.

### CONTROL

Nearly all sorghum hybrids will sustain some foliar damage from sooty stripe; however, it is not known how reduced levels of the disease affect yields. The best method of reducing sooty stripe is rotation. The organism infects only *Sorghum* spp., so any other crop can be used. However, shattercane and Johnson grass need to be controlled since they are also susceptible. If rotation is not feasible, incorporation of debris into the soil, particularly following harvest, would help reduce the inoculum potential for the following year. Consider planting a fall cover crop where erosion is a concern. [D.J. Jardine]