

SORGHUM DOWNY MILDEW ON CORN – SYMPTOMS

Sorghum downy mildew (SDM) is caused by a soilborne fungus, *Peronosclerospora sorghi*. The disease is most common in the Upper Gulf Coast counties of Texas, but has occurred in other sorghum production areas. Recent outbreaks have been associated with strains of the fungus resistant to the seed treatment fungicide, Apron.

While sorghum is the most important host for SDM, the fungus can also infect johnsongrass and corn.

Infected corn plants are pale yellow or have light-colored streaking or mottling on the leaves (Fig. 1). The tip of the leaf looks normal, while the base of the leaf shows symptoms. Associated with the abnormal leaf coloration is a white, fuzzy growth of the fungus on the underside of leaves (Fig. 2). These symptoms indicate systemic infection by the fungus. Such plants will not yield, unless the hybrid is tolerant to this disease.



Fig. 1. Sorghum downy mildew in a young corn plant: systemic symptom.



Fig. 2. Underside of leaf showing production of spores (conidia) by the fungus.

Infected plants are usually stunted and have paler coloration than healthy plants (Fig. 4).

The white, fuzzy growth on systemically-infected plants indicate the production of short-lived spores, known as conidia. Conidia are produced in cool, humid or wet weather. They become airborne and infect leaves of other plants, causing a local lesion phase of SDM. Local lesions are brown and somewhat rectangular and are most readily seen on sorghum (Fig. 5). Local lesions do not affect yield.



Fig. 4. Comparison of sorghum downy mildew infected plant (center) with healthy plants.



Fig. 5. Local lesions on a sorghum leaf.

Systemic symptoms are the result of infection of the seed as it is germinating. Corn planted into soils with temperatures lower than 68°F usually escapes infection. Thus, systemic infection can be more prevalent with late-planted corn.

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