

In addition to the anthracnose fungus, other fungi are likely to be associated with stalk rotting and lodging.



Figure 2. Multiple lesions of anthracnose in leaves

Important sources of inoculum (spores) to initiate the leaf phase of anthracnose include susceptible crops or weeds or crop refuse from those susceptible plants. The anthracnose fungus also causes disease in grass species such as Johnsongrass, Sudangrass, sorghum-Sudan hybrids, broomcorn, corn, rye, sugarcane, and other grasses. Thus, inoculum for a sorghum crop may originate from these other plant species or their residues associated with the soil, particularly if the crop refuse is near the soil surface. However, in some studies, anthracnose was less severe in no-till plantings compared to conventionally tilled plantings.

Seed transmission of the anthracnose fungus has been demonstrated. However, this source of inoculum is not likely to be as important as that from the field unless the inoculum associated with the seed is a new or different pathogenic race for sorghum or the planting site is initially void of inoculum.

Isolates of the anthracnose fungus from one grass species may or may not infect another grass species. Within those isolates that infect sorghum, pathogenic races of this fungus exist. Thus, varieties that are resistant to the isolates in one location may be more susceptible in other isolates in another situation. For example, in Florida, some varieties have been highly resistant to anthracnose (Fig. 3.) in some tests but in tests conducted in later years, those same varieties were more susceptible. Presumably shifts in pathogenic races occurred. Interestingly, in Florida,

forage sorghum types tend to be more resistant to anthracnose than grain sorghum types.

Frequent rains or irrigation during the summer months in north Florida, when night temperatures are warm, provide optimum conditions for infection, symptom development and disease spread. Leaves of susceptible varieties with numerous lesions turn brown prematurely and significant yield losses result (Fig. 3).

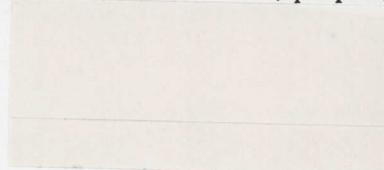


Figure 3. Resistant (left) and susceptible (right) varieties to anthracnose

Control of anthracnose includes: 1) crop rotation 2) use of resistant varieties; 3) suppression of grass weeds and volunteer sorghum in and around the field; 4) burial of old sorghum debris by plowing (the need for this is conjecturable); 5) plantings in mid April to early May usually have less damage from anthracnose than later plantings in Florida, and 6) avoidance of field operations when leaves are wet.

**ZONATE LEAF SPOT**

Zonate leaf spot is caused by the fungus *Gloeocercospora sorghi*. It has not been a major problem in Florida but in variety evaluation tests, some varieties were clearly more susceptible to zonate leaf spot than other varieties. Young lesions or small lesions may appear similar to those caused by the anthracnose fungus. However, large lesions are distinctive with their circular alternating bands of white or tan with bands of reds, purples, or browns (Fig. 4).



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