

Update on Cotton Leaf Blight Situation in South Carolina

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Growers in many areas of South Carolina have been reporting very high levels of leaf spots on their cotton. In almost every growing season, we observe low levels of *Ascochyta* Leaf spot or trace levels of Bacterial Blight on cotton in South Carolina. However, this year's leaf blight symptoms have been severe in some cases. During surveys last week, we saw cotton fields that ranged from 5 to 30% of the leaf area affected all the way to fields under extreme stress where defoliation was occurring. These leaf spots appear to be the worst in the St. Matthews to Santee region, the Bamberg/Barnwell County area, and in the Dorchester/Colleton County area.

Examination of the affected leaves has determined that *Stemphylium solani* is the primary cause of these lesions. Other fungi such as *Alternaria macrospora*, *Ascochyta gossypii* (also known as *Phoma*) and *Phomopsis* may also be present, but *Stemphylium solani* seems to be the most common cause. High levels of Stemphylium Leaf Spot are also being reported this year from Georgia. Previously these high levels of damage from Stemphylium Leaf Spot on cotton have only been reported from Brazil. Symptoms of Stemphylium Leaf Spot include small circular lesions up to 0.75 inches in diameter. The center of the lesion will be white to light brown and often falls out creating a "shot hole" effect.

Stemphylium is a fungus that is common in most areas. Its host range includes tomatoes and potatoes. Stemphylium overwinters on crop debris that remains on the soil surface. Discing or plowing under debris will help limit disease in the following year. This fungus spreads from leaf to leaf on infected plants as rainwater or irrigation water splashes from leaf to leaf. Unfortunately there appears to be nothing we can do to limit the spread or severity of any of the leaf spots. There are no fungicides labeled for use on cotton after emergence. Applications of nutrients to relieve stresses will also not be effective.

As a general rule all of the cotton leaf spots are more severe on stressed plants. Even our irrigated cotton has been stressed this year. High temperatures, low moisture levels, and the high demand of the developing boll load have placed a tremendous amount of stress on the cotton crop in South Carolina. Leaf spot symptoms appear to be variable from field to field, but are consistently worse in fields under moisture stress or nutrient stress. Questions regarding varietal differences in susceptibility to leaf spot have arisen, but most commercially available varieties have been shown to be susceptible to this particular leaf spot. Ratings taken by Dr. John Mueller from a replicated variety trial in the Fort Motte – Lonestar area of South Carolina this week revealed all varieties planted in this year's "official variety trials" were susceptible to the leaf spot, with ratings

ranging from 1.25 to 3.25 on a scale of 0 to 5 (0 = no leaf spot; 5 = > 75% of leaves affected).