



The University of Georgia  
**Cooperative Extension**  
 College of Agricultural and Environmental Sciences



# Georgia Cotton

August 8, 2008

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**Cotton & Peanut Research Tour, September 10, Tifton:** Mark your calendars for the UGA Cotton and Peanut Research Tour scheduled for September 10, 2008. The tour will begin at 9:00 a.m. and conclude at 4:00 p.m. A detailed schedule will be forthcoming. Lunch will be included for those who register by August 29. To confirm your attendance, contact Debbie Rutland, Department of Entomology at (229) 386-3424.

**Southeast Research and Education Center 2008 Field Day and Grand Re-opening, August 20, Midville:** The annual Midville Field Day will be held on August 20, 2008. Registration will begin at 9:00 a.m. with field plot tours followed by a catered lunch. Also this year a Grand Re-opening ceremony will follow lunch. Dean Angle plans to be on hand for this event.

**Terminating Insecticide Applications (*Roberts*):** The decision to terminate insect controls can be challenging in some fields but a few basic considerations will assist in that decision. When evaluating a field a grower must first identify the last boll population which will significantly contribute to yield. Once the last boll population is determined, boll development or approximate boll age should be estimated. Depending on the insect pest, bolls are “relatively safe” (never immune) from attack at varying stages of boll development.

The table below lists approximate boll age in days which bolls should be protected for selected insect pests. During early fall when temperatures moderate, plant development slows down due to cool temperatures and subsequent boll age values will increase. It is assumed that the field is relatively insect pest free when the decision to terminate insecticide application for a pest is made.

<b>Insect Pest(s)</b>	<b>Approx. Boll Age (days)</b>
Plant Bugs	15
Corn Earworm Tobacco Budworm	20 bolls fully sized
Stink Bugs	25
Fall Armyworm	bolls near maturity
Foliage Feeders soybean looper beet armyworm southern armyworm	bolls mature
Sucking Insects whiteflies aphids	harvest (potential honeydew accumulation on lint)

**Leaf spots found on cotton across the state (*Kemerait and Jason Brock*):** Beginning during the final week of July and continuing into August, we have received many questions about spots appearing on the cotton leaves and occasionally on the bolls as well. Typically the spots are described as being of variable size and often with a dark purple margin. In some instances, the spots have been described as composed of concentric rings like a target, and some agents and consultants have attributed light defoliation to the leaf spots. The concerns expressed by agents and consultants alike are that a) the severity of the spots will increase and severe defoliation could follow, and b) spots on bolls could lead to increased boll rot, especially in the lower canopy.



Jason Brock and I have examined spots on cotton leaf samples submitted from across Georgia during the past week and the exercise can be quite frustrating. Leaf spots are caused by any number of fungal pathogens and a bacterial leaf spot can be common in some fields. We have not found bacterial leaf spot thus far in 2008, but we have found leaf spots caused by *Stemphylium* and likely *Ascochyta*, *Alternaria*, and *Cercospora*.

Stemphylium leaf spot, the most common spot observed this season is *putatively* the result of insufficient nutrients in the plant, especially potassium, which leads to increased susceptibility to this fungal pathogen. (Note: “putatively” is a word often used in molecular plant pathology and means “is believed to be” or “is accepted as” and I do not get the chance to use it very often...) The disease is identified by the presence of numerous spores in the leaf spots that look like tiny handgrenades similar to those used by American forces in World War II. Stemphylium leaf spot is most commonly found in non-irrigated fields during the hottest and driest time of the season and when the crop is developing a significant fruit load, but is often found to some degree in irrigated fields as well. The stress on the crop and inadequate water uptake deprives the crop of adequate nutrients and potassium and leads to increase susceptibility to Stemphylium leaf spot.

Management of Stemphylium leaf spot is very difficult for many reasons, especially since the underlying cause is linked to nutrition and weather. Once the disease appears in a field, it can progress very quickly in severe cases and substantial defoliation can occur. It is not known at this time if application of a fungicide such as Headline can slow the development of this disease.

Other leaf spots found this year caused by fungal pathogens mentioned above have generally been considered of very minor importance in the past and not something that the grower needs to be overly concerned about. Although any leaf spots in the field can be worrisome, especially when they develop rapidly, chances are they will not affect the crop unless weather conditions change drastically. Cooler and wetter weather that affects an area later in the season for some period of time could easily flair serious outbreaks of Ascochyta wet weather blight and it is possible, though unlikely, that this could affect the cotton crop.

Cotton growers now have the opportunity to manage foliar diseases with the fungicide pyraclostrobin (Headline). Typically, Headline is applied at 6 fl oz/A approximately two weeks after first bloom or before disease becomes widespread in a field. Results from trials at the University of Georgia demonstrate that this fungicide can indeed reduce severity of diseases such as Ascochyta blight and areolate mildew; however the link between disease control and increased yield is less obvious.

Finally, there is concern that spots that spread from the foliage to the bracts and bolls could eventually develop into boll rot. For the most part, the spots on the bolls appear to be superficial and hopefully will not progress to boll rot. We have studies underway to try and determine the potential link between the spots and future boll rot.

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