



Carolina Cotton Notes

Cotton Leaf Spots

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Cotton Leaf Spots

Cotton leaf spots are common in North Carolina at this time. In many cases this is the result of hot temperatures and moisture stress. Even though potassium levels may be adequate in the soil, low soil moisture levels may limit the availability of this and other nutrients. Potassium is important in the disease resistance mechanisms of many plants, and deficiencies of this nutrient can enhance susceptibility to some fungi that are rarely a problem in this crop. The fungi *Stemphylium* and *Alternaria* typically cause leaf spots on cotton at cut-out, and this appears to be what is happening in most cases. Tissue that is senescing early becomes more susceptible to these organisms. Another pathogen is *Cercospora gossypina*

which typically has a red margin around the leaf spot. Yield loss, if any, due to these fungi are generally low, and data from fungicide trials on cotton are limited at this time. Currently the fungicides Headline and Topsin M are labeled for application on cotton. Either fungicide should be efficacious for these diseases, but we cannot provide an informed opinion as to whether fungicide sprays will improve cotton yield.

MAJOR CAUSES OF LEAF SPOTS ON COTTON

1. Potassium Deficiency – a result of dry hot conditions
2. Early Cut-Out
3. Spray damage (especially if leaf spot is more evident in the upper leaves)
4. Fungal leaf spots – *Cercospora*, *Alternaria*, or *Stemphylium*

Most, if not all the fields with leaf spot have also had symptoms of sun scald shown in the picture below. The symptoms of sun scald are rolling of the leaf and reddening of the undersides of the exposed leaf. Leaf spots are almost always found in fields where sun scald has occurred. You almost always find leaf spot in fields showing typical sun scald activity. Sun scald occurs when a rain or spray is followed by bright sunshine on a hot day. You can find more information on sun scald at:

<http://www.cotton.ncsu.edu/ccn/2007/august22.html>

We don't think this will cause any serious yield losses. The leaf spot is appearing in plots where foliar fungicides have been used. We have some plots out right now looking at alleviating these symptoms with fungicides or foliar K fertilizer. We have no reason to expect that this will result in any economic benefit at this time.



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