CHALLENGES AND OPPORTUNITIES - SOUTHEAST

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Abstract

It is often easy, as an extension specialist, to remember all the bad cotton you are asked to look at and forget the good cotton you may have driven by enroute to visit problem areas. It was certainly that way in the Southeast in 2007. We had some very good cotton in some areas although most of the Southeast was very much in the grips of severe drought. To put the drought in perspective it is helpful to look at the HVI data from the classing offices.

In a dry year we normally expect to have a lot of high micronaire. That was certainly what I expected. I was very surprised to see the early HVI data not indicate a crop with extremely high micronaire. In a drought we tend to shed all the less mature bolls and harvest only the fully mature bottom crop which typically has higher micronaire. With little competition for carbohydrates from young bolls these bolls usually have plenty of resources to finish off the later half of boll development on the bottom crop. This results in high micronaire. This is especially true early in the harvest/classing season as the cotton most affected by the drought tends to be earlier and harvested first. In a "normal" dry year we tend to see high micronaire in the earliest harvested cotton and then see the micronaire go down as we move our pickers into the better cotton. The only explanation I can think of for the lack of high micronaire in the early cotton is that the drought was so severe in many areas that the later part of boll development (when micronaire is determined) was inhibited by the drought. Not only did we not see the early cotton have a lot of high micronaire values, we did not see micronaire go down as we moved into "better" cotton. In fact, the final micronaire average was higher than the early crop.

Table 1. Micronaire for 2007 cotton crop.

State	Micronaire October 4	Micronaire January 3
Alabama	**3.6**	**4.3**
Georgia	**4.6**	**4.7**
North Carolina	**4.4**	**4.7**
South Carolina	**4.0**	**4.5**

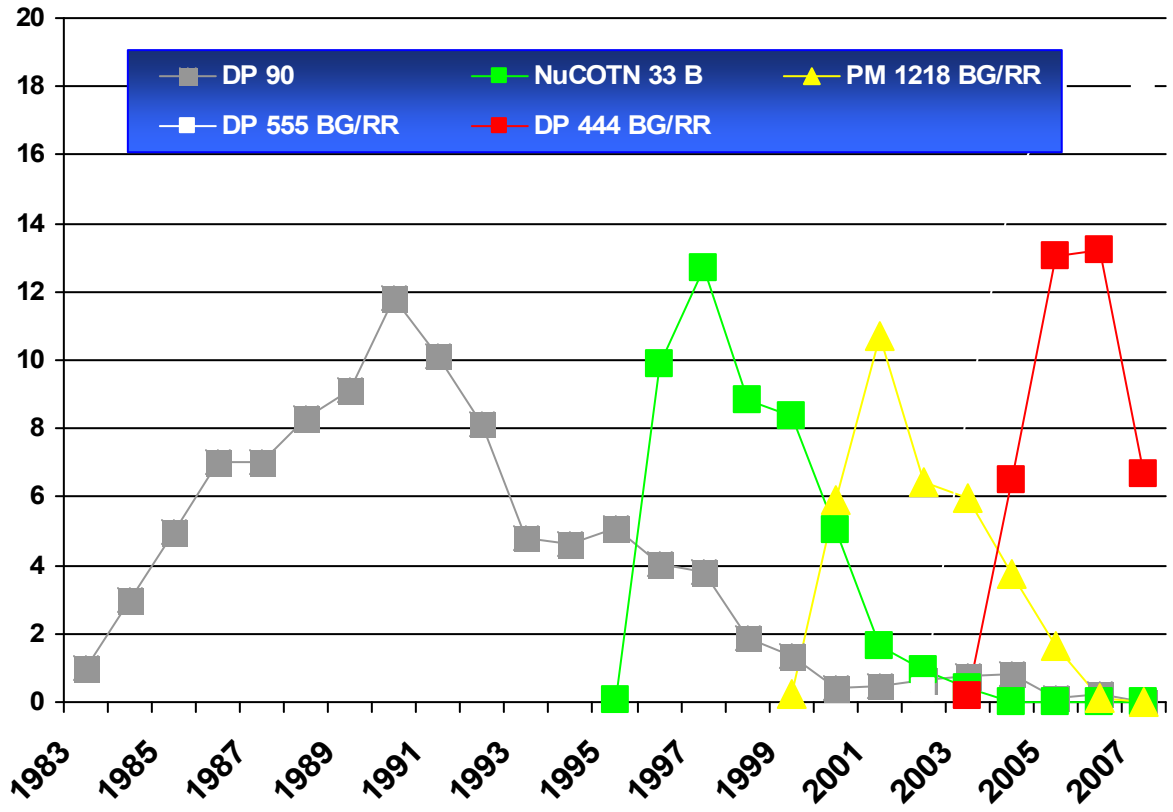
Source: Cotton Incorporated

I have never been through a year when corn came up so often in cotton discussions. Many of our growers got a reminder as to why they quit producing corn in the first place. Cotton is considered a "drought tolerant" crop. Many textbooks would discuss the role of cotton's taproot system as a major reason for its drought tolerance. Although cotton is a tap-rooted crop, it is not a particularly deep rooted crop in the Southeast. Acidic sub-soils and hard pans in the Southeast inhibit the ability of cotton taproots to grow deeply into the soil. The major characteristic that makes cotton drought tolerant compared to corn in the Southeast is the length of the fruiting period. The tassling period for corn is short and corn must have water during that time or the resulting yields will be low. Cotton on the

other hand produces fruit over a long period of time, essentially July and August in the Southeast. This makes the moisture situation of a certain week or two less critical as cotton can compensate during other parts of the bloom period. Unfortunately, the dry period for many growers lasted the entire 6 week - 2 month fruiting period for cotton in the Southeast.

The average life of a cotton variety has changed quite a bit since I started working with cotton in the mid-80's. We used to have a few varieties that we depended on and had a lot of experience with. Beginning in the mid- 90's that began to change with biotechnology and varieties with GMO traits. The chart below illustrates how much the life span of a variety has changed in recent years.

The change in life span of selected varieties commonly grown in the Southeast.



Source: Dr. Tom Kerby, Delta & Pine Land Company

The rapid turnover in varieties takes away that comfort zone of having varieties that are almost like a security blanket. You know them, the way they grow, their strengths and weaknesses. We may not find out the particular strength or weaknesses of varieties now until they are on their way out. What does this mean to a grower? I think it means we need to make sure we don't depend to heavily on one or two varieties for a bulk of our acreage. We should spread the risk by using multiple varieties. I think it also means that growers need to be looking at promising new varieties on small acreages as soon as possible.

The spread of Roundup resistant weeds is becoming a big problem for some southeastern producers. Growers need to recognize this is happening, and will probably eventually happen to them. Weed scientists will spend the winter telling growers some of the options growers have at their disposal to minimize or delay the effect of resistant weeds. There is always a tendency to think that something like this will not "happen to me". Let me assure you that the growers who have the problem did not think it would "happen to them". The immediate options for cotton at a growers disposal include using alternate chemistry and more than one mode of action. In fact, we really need three

modes of action in cotton. This can be accomplished by the addition of residual herbicides at planting and at layby and the use of other chemicals in over-the-top applications such as Dual Magnum, Envoke or Staple. The addition of residual chemistry is essential as resistance to ALS- inhibitors like Envoke and Staple is already know to occur. The residual options are fairly numerous and a grower needs to discuss them with someone familiar with their operation and soil types.