



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



Georgia Cotton

May 30, 2003

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Crop Situation. (*Brown*) The 2003 Georgia crop has gotten off to a reasonably good start. By May 27, official statistics indicated that 75 percent of the crop had been planted, similar to our long term average of 79 percent. Unusually heavy rains created planting delays in east and north Georgia. As much as 10 percent of the acreage will be planted behind wheat and wheat harvest has also been delayed. The next few days should wrap up most of the planting. Grower reports of intended plantings to the Boll Weevil Eradication Program total 1,458,731 acres.

Generally speaking, stands have been good; herbicide efficacy on weeds has been good to excellent; and seedling vigor has been acceptable. In many fields thrips and wind/sand have ragged young plants and we're seeing a lot of speckling and spotting on lower leaves which we think are inconsequential, but all things considered, we have as good a start on our cotton as we've had in several seasons.

Early Observations on DP 555 BG/RR. (*Brown*) The new transgenic variety DP 555 BG/RR has garnered significant attention in Georgia. Exactly what percent of our acres are planted to it remains hidden in sales figures and inventories. We've heard a wide range of comments regarding stands and vigor, and while some growers have experienced difficulty in getting plants up and going, we have avoided wholesale frustrations. It has performed moderately well given the fact that it is an ultra-small seeded cultivar with nominal vigor. Because of its size, it appears to be sensitive to planting depth – put it in the ground too deep and you'll often be disappointed. In the early stages of growth, it is nothing to shout about. The real test will come at harvest.

Early planted fields are squaring. We have a lot to learn about how to manage its growth with mepiquat chloride (Pix and similar products) – 2003 will be a season in which we see it under all sorts of conditions. Even though DP 555 BG/RR does not appear to be

very vigorous prior to bloom, it should routinely be treated with mepiquat chloride during the first or second week of squaring if good growing conditions persist and especially under irrigation. Rates probably should be 6 to 8 oz/A for the early applications, with a follow-up applications of 8 to 16 oz/A a couple of weeks later. Hopefully, we can control growth with normal seasonal rates but with earlier applications. Treatments should be automatic with irrigation, but calling the shots will be more challenging under dryland conditions.

Another Question Concerning Mepiquat Chloride on DP555 BG/RR. (*Jost*) Again we do not know for certain what percentage of the cotton acres are planted to the “triple nickle”, but we can be sure there is a bunch out there. As mentioned above the issue with mepiquat chloride on DP555 BG/RR is starting early. So how early can we start?

Generally, an application made once the cotton starts squaring is considered “early”. This is the ideal time to begin applications on DP555 BG/RR. However, with the possibly vast acreage of DP555 BG/RR that is out there it may be difficult to get over all of it in a timely fashion at this growth stage. Due to this, the question has been asked whether low rates can be safely applied with the last over-the-top glyphosate application (4-leaf cotton).

Seldom is there a significant yield advantage or disadvantage observed with mepiquat chloride applications. If a yield or detrimental growth reduction is noted, it is generally with dryland production. These reductions are almost always associated with early applications made to dryland cotton that subsequently undergoes severe drought stress. For this reason 4-leaf applications should probably not be made on dryland DP555 BG/RR. A low rate of 4 to 6 oz/A on irrigated cotton would probably be safe to apply, but the benefits are questionable at best. There is no data on DP555 BG/RR to suggest if enough mepiquat chloride will be present in the plant to help get a handle on mid-season growth. The question remains though if this application will allow a producer to “buy” some time to make the squaring application of mepiquat chloride a little later. We still have much to learn with DP555 BG/RR.

Early Season Disease Situation for 2003 (*Kemerait*) Cotton diseases observed thus far in 2003 include sore shin, caused by *Rhizoctonia solani*, and wet weather blight, caused by *Ascochyta gossypii*. Both of these diseases tend to be more severe where rainfall has been abundant early in the season.

Sore shin will occur in Georgia every season, regardless of weather. However, we will see more of it in wetter years and in fields with poor rotation. In 2003, heavy rains in the northwest corner of the state and in isolated areas of east Georgia are likely to lead to more severe stand losses. Sore shin, unlike seedling disease caused by *Pythium*, is less dependent on soil temperature. Thus sore shin can occur even when soil temperatures are relatively warm. Management of sore shin involves good crop rotation, careful choice of planting date, and the use of fungicides when the risk for severe stand loss is high.

Wet weather blight has been identified earlier this year in Tift County and is of current concern in Dooly County. Wet weather blight is identified by numerous circular leaf spots, typically whitish in color, on the young leaves. Small pepper-grain sized structures may be visible in the spots. Generally, as weather conditions become drier, the plants

will out grow the disease and no treatment is necessary. In severe cases (very unusual) plants may need to be treated with a fungicide.

Rounding Up Nematodes in 2003 (*Kemerait*) Our nematode survey in 2002 was an outstanding success and provided important information for cotton growers across the state. A number of agents have expressed interest in repeating the survey in 2003. Collecting additional survey information is critical for continued management of nematodes. Therefore, any agents who wish to participate in this survey in 2003 should contact Dr. Bob Kemerait (RDC, Tifton) for further information on fields in their county for sampling.

INSECT UPDATES (*Roberts*) For updates on current insect conditions check the Cotton Insect Hotline (1/800-851-2847). The Cotton Pest Management Newsletter is posted on the [UGA Cotton Web Page](#).

Glyphosate plus Staple Injury Issues (*Culpepper*) University of Georgia Extension has received many calls regarding recent cotton injury from Staple plus glyphosate applications. Most of these injurious applications were made during the week of May 19. Unfortunately, we are not sure exactly what environmental conditions have led to these injury issues. Although we do not completely understand what has happened, we do have data to support the following statements:

- 1) Plants wet with dew are certain to be injured much more severely than dry plants.
- 2) Applications made under conditions of high humidity will increase the likelihood for injury.
- 3) The addition of some adjuvants will increase injury from this mixture. Only add a nonionic surfactant when using glyphosate products requiring the addition of a surfactant. At this time, avoid the addition of all other adjuvants.
- 4) Injury from applications to cotton in saturated soils is greater than non-saturated soils.
- 5) Cotton damaged by thrips is more sensitive to glyphosate plus Staple combinations.
- 6) Several trials are being conducted in GA and NC this year to further evaluate the impact of these injury issues on cotton maturity and yield. Studies are being conducted under dryland and irrigated conditions.

An example of how crucial the environmental conditions are when applying glyphosate plus Staple can be explained with recent applications in University trials. Applications made to 4-leaf Roundup Ready cotton on the morning of May 23 (this application purposely disregarded the statements above) caused 30 to 35% necrosis/chlorosis to cotton with leaf drop occurring. The same treatment applied to the same cotton on the afternoon of May 24 caused less than 5% cotton chlorosis.

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