



The University of Georgia
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College of Agricultural and Environmental Sciences



Georgia Cotton

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Reasonable Approaches with Dryland Cotton in May 2007

The drought persists. There is no surface moisture for crop establishment and minimal subsoil moisture because of months of below-normal rainfall. As we approach the crop insurance planting deadline of May 31, growers are thinking about how to minimize risk and/or losses and still put the seed in the ground. Obviously we are dealing with less than optimal conditions, but should the weather change, plenty of time exists to make a crop. Last year reaffirmed the lesson that you don't give up on cotton. That said, successful stand establishment is an all-important step in a making a crop, and under current conditions, it represents a huge challenge.

Here are a few reasonable adjustments to our normal approach to planting cotton.

1. **FERTILITY.** Basic preplant fertilization can be delayed until after stand establishment. Upon successful crop emergence, basic N-P-K needs should be met promptly. If emergence doesn't come until sometime in June, total N rates can be reduced by 25 percent.

2. **SEED and TECHNOLOGY.** Growers long ago realized that reduced seeding rates are an easy means of shaving costs. We should aim for final plant populations of no less than 2 per ft, which means seeding rates should be at least slightly above that number. Technology fees represent a huge cost of planting. Unquestionably, the most popular variety is DP 555 BG/RR, which has superior yield potential in both irrigated and non-irrigated fields, but carries Bollgard and Roundy Ready (RR) tech fees. Eliminating technology costs by choosing conventional varieties is an option that almost doesn't exist. There are opportunities to purchase herbicide tolerance-only technology in RR and Liberty Link (LL) cultivars, the latter being cheaper than the former in terms of actual seed costs. These options preclude Bt cotton and saves upfront costs but creates significant uncertainties about insect management (and costs) further into the season. For non-Bt cotton, producers should consider how much non-Bt cotton they can effectively manage. Non-Bt cotton should be scouted twice weekly, and growers should be able to respond to scouting reports within 24 hours with timely sprays for tobacco budworms and corn earworms. Keep in mind that a couple of applications of non-pyrethroid insecticides are about equal in cost to Bt technology.

Cotton planted in dry soil can remain viable in the soil for several weeks. We have seen cotton “dusted in” come up to a good stand a month after planting ... when sufficient rain occurs.

3. AT-PLANT INSECT MANAGEMENT. Thrips are a consistent pest of cotton in Georgia, and thus far in 2007, thrips pressure has been heavy. Temik is the superior choice for thrips control but it represents a significant up-front investment. One cost-cutting option is to reduce the rate to the lowest labeled amount of 3.5 lb/A, which unfortunately minimizes suppression of nematodes. Other options include seed treatments such as Cruiser, Gaucho Grande, etc., or foliar-only control programs. These latter treatments may be adequate in some situations. Thrips populations typically are lower in late emerging cotton; in addition, rapidly growing seedlings are more tolerant to thrips feeding, supporting the idea that seed treatments or foliar sprays may provide acceptable control of thrips as we move to the latter part of May. Keep in mind that thrips injury is often less in conservation tillage systems with high residue.

The choice to use a foliar-only program rather than at-plant, preventative treatments is an economical alternative with certain risks. For such a program to succeed, an automatic application of a product such as acephate (Orthene, etc.) **MUST** be made in the first few days after emergence, with follow-up scouting and spraying as needed through the 5th leaf stage. In a late emerging crop, thrips damage -- and the resulting delay in maturity – **CANNOT** be tolerated, making timely intervention with foliar treatments extremely critical. Unfortunately, foliar treatments sometimes “flare” problems with spider mites or aphids.

4. PREEMERGENCE HERBICIDES. PRE herbicides such as Prowl, Staple, and/or Reflex are important tools in the war against weeds, including glyphosate-resistant pigweed, Florida pusley, annual grasses, etc. These and other residual at-plant treatments improve weed control programs in RR, LL, and conventional systems. However, PRE herbicides require rainfall (or irrigation) for activation, and in the absence of timely rain, these products will not perform. It is useless to apply PRE products in dry soil with persisting drought (i.e. no rainfall for 2 to 3 weeks thereafter). Research indicates that PRE treatments followed by 17 days without rain results in almost **ZERO** weed control. A better option is to leave off the PRE herbicide now and follow after stand establishment with early post combinations of residual treatments such as metolachlor (Dual, etc.) or Staple with glyphosate (Roundup, etc.) or Ignite.

There is no easy answer for management of glyphosate-resistant Palmer amaranth – residual herbicides are essential for effective control of these pests. Prior to crop emergence, burn down applications of paraquat (Gramoxone, etc.) provide an opportunity to eliminate seedling pigweed. For glyphosate-resistant pigweed in established cotton, the only postemergence options are Staple (assuming ALS-resistance is not present) or Ignite (on LL cotton) and both of these herbicides must be applied before pigweed exceed 2 or 3 inches. Cultivation remains a viable tool.

Your local County Extension Agent is a source of more information on these subjects.

Edited by: Steve M. Brown, Extension Agronomist-Cotton

Contributions by:
Steve M. Brown, Extension Agronomist-Cotton
Stanley Culpepper, Extension Weed Scientist
Glen Harris, Extension Agronomist-Soils and Fertilizers
Phillip Roberts, Extension Entomologist-Cotton

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