Arkansas Cotton Update

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Special Interest Articles: - Cotton Status - Insect Situation - Cotton Verification - Contacts

Newsletter Archive: http://www.aragriculture.org/News/cotton/default.htm

Cotton Status, (Tom Barber - Cotton Specialist)

Cotton across the state is beginning to square as temperatures were 8 to 10 degrees above normal last week, reaching up to 98 degrees Fahrenheit in some areas. The good news is that even though it has been hot, cotton has grown well because nighttime temperatures have remained in the low 70's for the most part. The USDA Agricultural Statistics Service reports that 4% of our cotton crop was squaring on Monday the 9th, compared to 20% last year and a five year average of 19%. Condition reports indicate that 61% of Arkansas cotton is good to excellent, 33% fair and 6% poor. Many cotton growers were blessed with 0.25 to 1.5 inches of rain this past weekend that delayed irrigation for at least another week. However in many places, we are still dry and irrigation via pivot or furrow needs to be at the top of the list. Many producers are trying to get the first shot of nitrogen on before laying the pipe and most of this should be finished up by the end of the week. Older cotton 8 – 10 nodes across the state will most likely need water by the next week if no more rain is received. There looks to be a decent chance of rain again Friday night into Saturday. This would be an excellent time to put out some metolachlor (Dual Magnum, others) over the top, if we do indeed get the rain this weekend. This would especially be a good idea in fields where pigweeds and grasses are a major problem.

Plant Growth Regulators

Several questions have come in this week concerning growth regulator (pix) applications on 8 to 10 node cotton. Growth regulation will be extremely important this year because the crop is so late. With the stresses from dry conditions, high winds, hail, and thrips damage this cotton is still recovering. I would be extremely cautious in making growth regulator applications right now. Previous data from many years shows that applications made at the pin-head square stage are more likely to stunt the cotton and may result in premature cutout. Moisture supply, high nitrogen availability and heat generally result in vigorous growth conditions early season. What does all this mean? Applications need to be made on a field by field basis. On cotton that is 8 to 10 nodes, take a look at the internodes, the fourth internode down from the terminal will give you a good indication of development, vigor and horsepower. If the 4th internode is 3 fingers long, then the cotton will most likely need an application of a plant growth regulator. Monitoring fruit retention is going to be very important this season. 80% or higher square retention is optimal going into bloom. If fruit retention decreases, growth regulator applications will be necessary. Variety, history of vigorous growth and the current moisture and crop condition are

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the major factors in helping to select the proper growth regulator program, or if it is needed at all.

In Arkansas the mid-maturing to early maturing varieties (DP 445 BG/RR, DP 444 BG/RR, ST 4554 B2RF) are much more popular. These varieties seem to respond better to one growth regulator application than DP 555 BGRR. In fields that have caught rains and have a history of rank growth, early lower rate applications may be warranted. Early applications should not exceed 10 ounces of mepiquat chloride product such as Mepex or Pentia or 2 ounces of Stance. Mepiquat products at 8 ounces or Stance at 2 ounces is the most common recommendation for 9 – 10 node cotton.

Insect Situation (Scott Akin – Extension Entomologist)

Thrips. Most cotton is pretty much safe from thrips at this point. Had some cotton near Kelso earlier this week that was hit pretty good, although planted fairly late, and likely had no seed treatment or Temik. If by chance you have cotton that is still under 4 – 5 leaf stage and sustaining injury, you may have to consider a foliar insecticide application. U of A threshold for "larger cotton" is an average of 2 – 5 thrips per plant and damage that may cause delayed growth or stunting (UA MP-144). That said; make sure to stay away from acephate (e.g., Orthene®) or a pyrethroid this early in the season, as these chemistries are notorious for flaring mites and aphids. With the recent heavy rainfall SE Arkansas received (heavy rains can knock back thrips numbers), coupled with the hot weather that is conducive for fast cotton growth, any remaining late-planted cotton should catch up in no time and may not need a foliar treatment for thrips after all.

Plant bugs. Getting some calls on plant bugs in soybean. This is not at all unusual, as high numbers can sometimes be found in beans. However, economic injury in soybean is not likely. One of the county agents reported finding these pests in wild hosts, as we found similar results Wednesday near Tillar (see coreopsis in photo)— we found a few adults in our samples. Most of you know to keep an eye on cotton close to senescing wild flowers such as this (same goes for cotton close to corn), as they will move over to your crop and affect square retention in a heartbeat. Several of the consultants and agents I talked to in SE Arkansas have already treated for plant bugs in a percentage of their cotton, some that has just recently started to square. Although pessimistic, I am hoping for an easier year for plant bugs compared to last season. Several areas received double-digit sprays for this pest alone in '07, and I am hoping for a reprieve this year. I want to remind

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decision-makers that Bidrin®, while among the best standards for plant bug control, can no longer be used between first square and first bloom according to the new label.

Cotton Verification Program (Frank Groves – Area Cotton Agronomist)

The band of rain that passed through the state Monday provided some short-term help in the moisture deficit. Generally speaking, field received 0.5 to 0.75 of an inch of rainfall. So how much time does that buy me and do I have to string pipe yet? The simple answers are a few days and yes (Fig 1).

The Irrigation Scheduling Program (http://www.aragriculture.org/computer_programs/irrigation_scheduling/default.asp) utilizes University of Arkansas weather station data http://www.aragriculture.org/weather/default.asp to assists in irrigation timing. For example, the Lincoln County (Jeff Keeter) field was planted into optimal soil moisture on May 6. Plants emerged on May 14 and have received no rainfall since. The field is at the 6-leaf stage and although a square can be found on the occasional plant, the field has not begun squaring. Based upon a 2-inch-soil moisture deficit, the field would have called for irrigation on June 16. After entering the 0.8 inch rainfall, the irrigation date moved back to June 22. Location, fruiting, temperature, soil deficit at planting and rainfall events all factor into the program. Therefore, each field would be different and should be analyzed separately.

Figure 1. Poly pipe roller with a chain dragging soil onto the pipe for improved efficiency.

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Across the program, plants range from the 3-leaf stage through the 7-leaf stage of growth. The older plants have received the recommended rate of nitrogen and are in the early stages of fruit development. The lack of rainfall has made weed control relatively simple to this point. Repeated applications of glyphosate have controlled the moderate infestations of morningglory. Smaller seeded annuals, such as pigweed and grass have not posed much threat. About half of the fields received a tankmixture of glyphosate and metolachlor in an effort to deter glyphosate resistance. Metolachlor is an oil-based product and caused necrotic spots to appear on treated leaves (Fig 2). However, the damage has not hurt the plant and new growth will not show the symptomology. Insect pressure has been light. Most fields are between the thrips and plant bug window, and aphid pressure is the lightest in recent memory.

Figure 2. Typical metolachlor symptomology (7 days after application)

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