



# Cotton Comments

OSU Southwest Research and Extension Center  
Altus, OK



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## Crop Progress Overview

The month of May can be characterized as a very tough one for cotton production in southwestern Oklahoma. The cotton situation is currently difficult for many producers, especially around Altus. Both the Altus and Tipton Mesonet sites have provided intermittent service during the month. However, based on what data are available, the following can be noted. During May, temperatures for 6 days were at least 100 degrees. We had a 36 degree low on May 3<sup>rd</sup> followed by 102 degrees on May 7<sup>th</sup>. From the cotton heat unit perspective, we received about 395 heat units for the month. Of course the amount of heat unit accumulation is moot unless cotton has been planted. I'm just trying to indicate how the month compared to our "normal temperatures." Normal heat unit accumulation for the month of May is about 315 for Altus. We had 20 days with wind gusts up to 30 mph, 7 days with wind gusts over 40 mph, and 1 day with gusts over 50 mph. Most of these higher wind events coincided with high temperatures. We received about 1.3 inches of rainfall here at the Altus Center on May 19<sup>th</sup> and 20<sup>th</sup>. For all of May, we received a total of 1.67 inches of rainfall at Altus (Mesonet intermittent, but includes rain gauge at Center). Since January 1, we have received 2.41 inches. Normal

rainfall for the same period of time averages 11.18 inches. Therefore, at the Altus Center, we have obtained only 22% of normal rainfall from January 1. Other areas generally west of a line from Davidson to Snyder to Altus to Elk City have had a difficult May. Rainfall in other areas was such that cotton planted under center pivots received considerable amounts, and in some areas questions were generated concerning replanting. Even after badly needed rainfall, both dryland and irrigated fields in the drier western areas have experienced significant moisture loss in the upper profile and plantings are sometimes being lost due to severe environmental conditions.

The final planting date for insurance purposes for dryland cotton in all southwestern Oklahoma counties is June 20<sup>th</sup>. This means we still have some time left to get a dryland crop established. We currently have a large amount of dryland acreage still under drought pressure. Some areas were able to plant after the storms on the 19<sup>th</sup> and 20<sup>th</sup>. These fields are emerging now. Other areas are still waiting for adequate rainfall.

## **Making Replant Decisions**

Thunderstorms have wreaked havoc in some areas, and in some places the seed zone has dried because of adverse weather. Because of this it is important to inspect fields to determine the amount of damage or if inadequate stands occurred. Replanting decisions vary from field to field. Many times after violent thunderstorms it is important to get a handle on the root health of the plants, stem bruising, etc. A while back, we developed a publication concerning the difficult replant decision making process. Although a Texas publication, I believe the criteria for southwestern Oklahoma are similar.

[Click here to view Making Replant Decisions in Cotton-2007](#)

Typically we can expect lower yields when planting later than the optimum date. However, this can be offset somewhat by a warm and open fall. Based on available data from a multi-year date of planting study conducted at the Altus Center, yields begin to decline when planting occurs after May 25<sup>th</sup>. Much of the cotton in the Irrigation District around Altus was either dry planted, planted into marginal moisture (generally south of Altus). Unfortunately, the extreme conditions we experienced (high winds and temperatures), caused many of these fields to dry out in the seed zone leaving us with poor stands, even in the areas where we had decent moisture (north of Altus) and excellent planter adjustments

Seed companies have replant programs that provide seed replacement.

[Click here for a link to Plains Cotton Growers 2011 Seed Replant & Drought Relief Program](#)

For specific information, call your local seed company representative.

## **Weed Resistance to Glyphosate Issues**

Several states now have confirmed glyphosate resistant palmer amaranth. Dr. Bob Nichols with Cotton Incorporated worked with a team of weed scientists from across the U.S. and assembled an excellent publication concerning weed resistance in cotton.

[Click here to view Managing Herbicide Resistance in Cotton Cropping Systems](#)

The best way to prevent this from occurring in our area is to use multiple herbicides with varying modes of action. This includes NOT relying solely on glyphosate as your only weed control option. It is recommended that producers try to incorporate at least two additional modes of action besides glyphosate.

Page 18 of the Roundup Power Max label (in the section for Roundup Ready Flex cotton) provides a list of herbicide products that can be tank mixed and applied post emergence over-the-top (OT), and a list that can be tank mixed and applied using post-directed or hooded sprayers in

Roundup Ready Flex cotton varieties. Page 18 also provides the maximum application rates for Roundup Ready Flex cotton. The addition of Staple LX herbicide at 1.3-1.7 oz/acre to the first OT application of glyphosate may enhance control of several annual weed species and also provide some residual control. Improved control of some morningglory species and Palmer amaranth is stated. Rainfall or sprinkler irrigation (0.5 to 1") after application is required for residual control. For more information contact your DuPont representative. Also note replant or crop rotation restrictions associated with the use of Staple LX. Many producers may opt to wait for larger crop/weed size to spray glyphosate for the first time. Caution should be taken here to not allow the larger weed size to cause yield losses from early season competition.

### **Ignite 280 SL Herbicide on Liberty Link Cotton**

Liberty Link cotton varieties have excellent full-season tolerance (both crop size and rate) to the labeled herbicide, but applications must cease at 70 days prior to harvest to comply with the designated pre-harvest interval (PHI).

Although this herbicide works well against many problem weeds including morningglory, It should be noted that there are two critical issues surrounding this system. One issue is weed size. Typically, most weeds should be targeted at very small size (see label for 80 plus

specific broadleaf species and about 30 grass species and size restrictions). An additional 25 plus species can be either controlled or suppressed with the 29 oz/acre rate or by two sequential applications (see label for specifics).

The other critical issue is thorough spray coverage. Since this is a contact herbicide, it is critical that outstanding spray coverage be obtained. The label states that "uniform, thorough spray coverage is important to achieve consistent weed control. Select nozzles and pressure that deliver MEDIUM spray droplets as indicated in the nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572." Bayer CropScience personnel suggest using flat fan nozzles, or Turbo-TeeJet types (if 60 psi pressure is used). It is NOT recommended to use air induction, raindrop nozzles, or flood-jet tips. **A minimum total spray volume of 15 gallons/acre is required.** For dense weed/crop canopies, a spray volume of 20 to 40 gallons/acre is required for thorough coverage. Also, ground speeds should not exceed 10 mph. Ammonium sulfate at 17 lb/100 gallons of spray mix is also recommended.

The label also states that "For cotton tolerant to Ignite 280 SL herbicide, Syngenta's Dual Magnum or DuPont's Staple herbicide may be tank-mixed with Ignite 280 SL herbicide and applied over-the-top post-emergence to enhance weed control and/or provide residual control."

Ignite 280 SL has a federal label which allows higher rates for each application, as well as higher total in-season application rates for the glufosinate active ingredient. If producers opt to use a 29 ounce/acre first application, then two additional sequential applications may be made at the 29 ounce/acre rate (for a total of 87 ounces/acre per season). The Ignite 280 SL label will allow producers to apply up to 43 oz/acre in a single first application, however this reduces the seasonally allowed total to 72 oz/acre (or only ONE more sequential 29 ounce/acre application, with noted rotational restrictions. Depending upon circumstances, it may be a good idea to use the 43 ounce/acre rate the first time to ensure a good kill of sizeable weeds, especially if these weeds are drought stressed. Always read and follow label directions.

### **Roundup or Ignite / Insecticide Tank Mixes**

Some questions have been asked concerning the use of glyphosate or Ignite/insecticide tank mixes. Generally Orthene (acephate), dimethoate, and Bidrin have been the tank-mix partners mentioned for thrips control. No problems with cotton phytotoxicity or product efficacy have been noted.

### **Spray or Nurse Tank Cleanout Concerns**

This time of year, I perennially begin to get phone calls and make field inspections concerning hormone-

type herbicide damage on cotton. Typical phenoxy herbicide symptomology includes “strapping of leaves.” Based on field research conducted by Dr. Wayne Keeling at the Texas AgriLife Research and Extension Center at Lubbock, the severity of yield decrease is related to the actual dose and the crop stage. Severe damage incurred when the crop begins to fruit is more likely to reduce yield than when the crop is younger with less severe damage. Doses of sufficient level to continue “strapping” of newer leaves for weeks after application will probably significantly negatively impact yield.

Producers should be aware, especially in light of the “tank and hose cleaning ability” of some of the newer herbicides, that phenoxy residue in sprayers can be a real problem. My suggestion for our growers is that tanks, hoses, and sprayers which are used for applying phenoxy type herbicides be dedicated SOLELY to that purpose. If producers are unable to purchase separate tanks, hoses and/or sprayers, then it is imperative that several issues be addressed. Do not leave herbicides in tanks for an extended period of time. Chemical induction tanks installed on nurse tanks can also get contaminated and cause problems. It is best to use “chemical resistant” hoses. Replace hoses when changing out tanks. The last thing a cotton field needs is for a phenoxy material (even at low concentrations) to get “pulled from the tank or hoses” and get sprayed on cotton – especially those fields with high yield potential (i.e.

subsurface drip or high capacity pivots). If multiple herbicides are used in the sprayer, then I suggest that producers purchase various tank cleaning agents from their dealers and follow the directions, including cleaner concentration, religiously. If a tank/sprayer is to be used on cotton, I suggest that the tank be flushed out with clean water and the appropriate tank cleaner be mixed at the appropriate concentration. The producer should then spray the cleaning solution through the booms and nozzles. Leave the booms in a horizontal position and let the cleaning solution sit in the tank at least overnight. This might help reduce some anxiety over phenoxy damage later. ***It doesn't take very many lost bales of production to pay for an additional tank and hoses or sprayer.***

For an excellent University of Missouri publication on cleaning sprayers, go to this link:

[Click here for U of M guide for cleaning a sprayer](#)

This publication has good information concerning herbicides, recommended cleaning solutions and sensitive crops.

### **Crop Insurance Issues**

Because of the ongoing drought situation in many places, producers should be checking with their insurance provider representatives concerning their planting plans and insurance program compliance requirements. This is not a “Cool

Hand Luke” year (“*What we have here is a failure to communicate*”). All southwestern Oklahoma counties have a June 20 final planting date for insurance purposes for non-irrigated (dryland) production. Don't forget the final planting date for insuring irrigated production in Jackson, Tillman, Harmon, and Greer counties is June 10. For irrigated cotton in Caddo, Kiowa, Comanche, and Cotton counties the date is June 20. For a complete listing of final planting dates for Oklahoma cotton producing counties and an example timeline for crop adjustment for non-emerged dryland cotton in a county with a June 20<sup>th</sup> final planting date, go to the [NTOKcotton.org](http://NTOKcotton.org) website. Producers can still plant during the 7-day late planting period (LPP) with a corresponding reduction of 1% per day in their percentage coverage. Non-irrigated crops that do not receive rainfall and do not emerge can be eligible for adjustment 8 days after the LPP ends. This 8 day time is called the deferred appraisal period.

If rainfall occurs during the deferred appraisal period, it is my understanding that procedures may vary somewhat depending upon the circumstances. This is going to be contingent upon availability of crop insurance adjusters and the demand for their time, especially when factoring in the large potential dryland cotton disaster brewing across the Red River in Texas. There could be so much insurance adjuster demand that it may take several days to arrive at a specific farm. If the company rule is to defer adjustment for a few extra days

following a rainfall event that occurs at the end of the deferred appraisal period, then that is what they will do. The bottom line is that each field will be judged based on its status on the day that it is observed by the insurance adjuster. From the crop insurance perspective, for a county with a June 20 final planting date, June 27 would be the end of late planting period. July 5 would then be the end of the 8-day deferred appraisal period. Therefore, the first day eligible for release by insurance adjusters would be July 6. Poor stands on non-irrigated and irrigated land may mean a “stand count adjustment” procedure that I don’t believe many will like.

[Click here for a one-page summary of the June 20 final planting date non-emergence crop insurance timeline.](#)

## Editors

Randy Boman and Shane Osborne

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## Contributing Author

Randy Boman

Newsletter in maintained by Jerry Goodson  
Extension Assistant.

If you like to added to be added to the direct mailing please email me at

[jerry.goodson@okstate.edu](mailto:jerry.goodson@okstate.edu)

Randy Boman  
Research Director and Cotton Extension Program Leader  
16721 US Hwy. 283  
Altus, Oklahoma  
(580) 482-2120 office  
(580) 482-0208 fax  
(580) 481-4050 mobile  
[randy.boman@okstate.edu](mailto:randy.boman@okstate.edu)

[www.osu.altus.ok.us](http://www.osu.altus.ok.us)

[www.ntokcotton.org](http://www.ntokcotton.org)

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