



# Cotton Comments

OSU Southwest Oklahoma Research and Extension Center  
Altus, OK



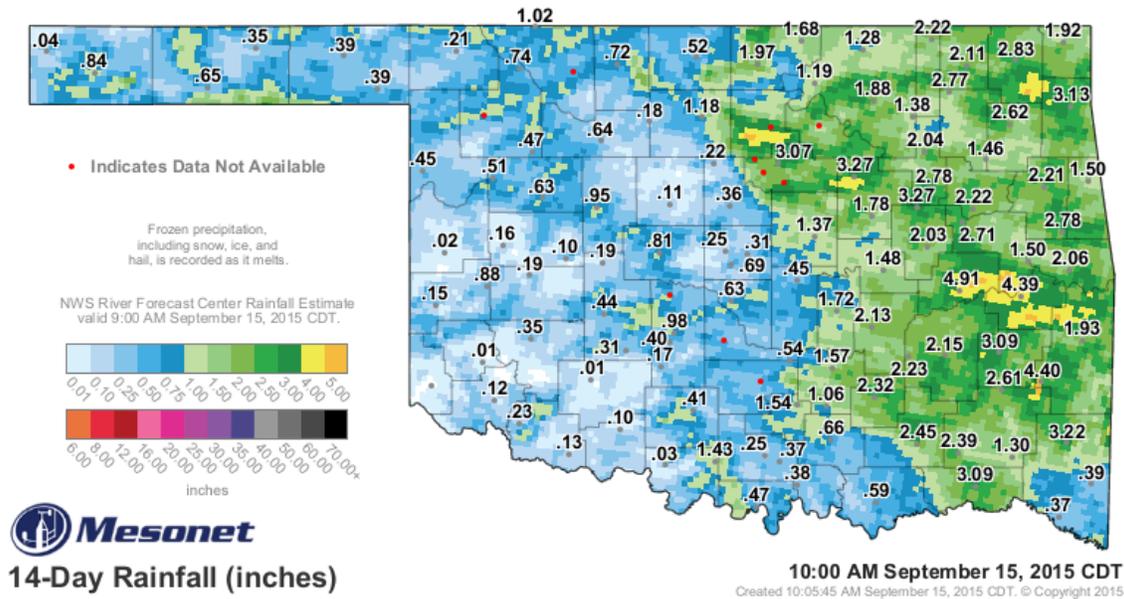
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## Crop Update

The September USDA-NASS Crop Report noted a 2015 US upland cotton crop of nearly 13 million bales, about 300,000 bales higher than the August report. NASS also estimated plantings at 8.4 million upland acres, with harvested area at an estimated 8.0 million acres. This would indicate an abandonment of about 400,000 acres across the US, with most of this occurring in Texas. The national yield per harvested acre was estimated to be 777 lbs/acre. Oklahoma's plantings were 210,000 acres, with harvested acres estimated at 195,000. Harvested acreage in 2014 was 210,000 from 240,000 planted. State average yield was estimated at 702 lbs/acre. NASS is projecting 285,000 bales of production for the state. If we can realize this, it will be up about 16,000 bales compared to the 269,000 bales reported for the 2014 crop. So, overall it appears we are on track to have a better season in 2015 than we have seen in the past few years.

The Oklahoma cotton crop, although late has made good progress in the past several weeks. A significant amount of irrigated cotton was on time with respect to cutout during the last half of August. Even though the crop pretty much reached cutout on time, the loss of about 2 weeks of blooming due to late planting, will likely impact yields. Irrigation in most areas was adequate to meet crop demands. Since rainfall became scarce in many areas during July, the possible "home run" dryland crop struggled with short moisture conditions in August. September temperatures have been good for fiber maturity, however, the continued scant precipitation ramped up moisture stress in many fields. As far as yield prospects are concerned, we will perhaps see somewhat lower yields than average from many irrigated fields – again due to the late crop. The dryland crop should be fair to good, but will likely not produce what it could have if provided sufficient rainfall in August and September. Thus far, September rainfall provided temporary relief in some areas, but overall, much of western Oklahoma is still struggling with lack of moisture (see 14-Day Rainfall Mesonet graphic below).



Temperatures have been good to excellent for cotton maturity in September, with cotton DD60 heat units for the month thus far at about 21 percent above normal at Altus. Forecasts for the remainder of the month and first few days of October appear to be fairly maturity-friendly also. Bolls in many severely drought stressed dryland fields began “cooking open” over the past several days, and have begun opening in some irrigated fields. We are nearing the time for judgment calls to be made with respect to overall crop maturity and harvest aid applications in earlier maturing cotton.

### Heat Units Past Cutout

Since many irrigated fields were planted somewhat later than normal they may encounter maturity challenges. The BOLLMAN component of the COTMAN program assumes that 850 heat units past bloom are required to obtain a reasonably mature boll. Based on nodes above white flower tracking by Jerry Goodson, IPM Extension Assistant, several irrigated fields encountered NAWF=5 around August 15-18. This date is somewhat earlier than the COTMAN cutout date of August 20 for the Altus area. For the Altus vicinity, bolls set after August 20 have less than 50% probability of obtaining 850 DD60 heat units required to make a reasonably mature boll. This is based on the period of record (1948-2007) submitted to the University of Arkansas COTMAN team.

The table below provides the actual 2015 DD60 heat unit accumulation from August 15, 20, 25 and September 1 through September 14 for several Mesonet locations in the southwestern corner of the state. This year, Altus heat unit accumulation past various bloom dates is running above normal due to higher than normal temperatures. The Altus long-term average or “normal for 1981-2010” for the same bloom dates through

the remainder of the season is also listed. In order to achieve adequate maturity of late set bolls at some locations, an above normal – extremely warm finish to September and October may be required. **For Altus, the 30-year normal (1981-2010) DD60 accumulation ends (goes to zero) on October 22.**

DD60 heat unit accumulation for various bloom dates				
Location	Bloom Aug 15 To Sep 14	Bloom Aug 20 To Sep 14	Bloom Aug 25 To Sep 14	Bloom Sep 1 To Sep 14
Altus 2015	631	527	445	296
Tipton 2015	675	563	473	315
Hollis 2015	622	521	443	294
Erick 2015	556	469	405	273
Fort Cobb 2015	594	502	421	280
Altus LTA* from bloom date to Sep 14	614	500	390	245
Altus LTA* from Sep 15 to Oct 22 (date heat units go to zero)	269	269	269	269
Altus 2015 from bloom date to Sep 14 plus Altus LTA* from Sep 15 to Oct 22 (date heat units go to zero)	900	796	714	565
Altus LTA* from bloom date to Oct 22 (date heat units go to zero)	883	769	659	514

\* Altus long term average as indicated by the 30-year normal (1981-2010) DD60 accumulation.

## Mesonet Irrigation Planner Water Use Results

The table below presents accumulated heat units and cotton crop evapotranspiration (ET) for the Mesonet sites listed. These data are based on a June 1st planting date, since many fields were planted around that time in 2015. Above normal temperatures and sometimes high winds have been encountered over the past few days. Forecasts indicate temperatures will moderate and become closer to normal next week. For June 1 planted cotton, crop water use over the past 3 days has averaged about 0.3 to 0.4 inches/day in southwest Oklahoma. In the Altus vicinity, June 1 planted cotton averaged 0.34 inches/day over the past 3 days. As the crop progresses further into the boll opening stage, this daily water demand will decrease.

For June 1 planting date through September 14					
Location (elevation)	DD60 accumulation from June 1	Past 3-day accumulated ET	Past 7-day accumulated ET	Past 14-day accumulated ET	From planting accumulated ET
	heat units	----- inches -----			
Altus (1365 ft)	2327	1.03	2.06	4.21	20.82
Tipton (1270 ft)	2388	1.21	2.25	4.86	22.75
Hollis (1631 ft)	2233	1.08	2.06	4.19	19.80
Erick (1978 ft)	1994	1.03	1.91	4.21	18.78
Ft. Cobb (1384 ft)	2176	1.03	1.98	4.29	19.99

## **Yield Estimation**

This is the time of year when we typically get a lot of phone calls related to cotton yield estimation.

[For a copy of Estimating Cotton Yield Using Boll Counting, click here.](#)

This publication considers several factors such as row spacing, boll size, and two estimated lint percentage levels (35% and 38% picked lint percentages of the SEED COTTON). When looking at several years of boll sizes from drought stressed dryland sites, the 35% picked lint percentage (Table 1), and 2-3 g per boll size are probably appropriate to use. In lower yielding irrigated cotton, the 38% chart (Table 2) and 3-4 g per boll size are probably acceptable. For higher yielding irrigated cotton, the 38% chart (Table 2) and 4-5 g per boll size are likely best. In my opinion, because of boll size, seed set, and other factors, yield estimation should be approached with trepidation, especially in drought years.

## **Crop Maturity Determination**

As we move further toward crop maturity and harvest aid applications, growers are encouraged to assess their fields, and keep an eye on the forecasts. Good temperatures are needed to maximize ethephon based boll opener product effectiveness. Also, when one considers forecasters' discussions of the El Nino situation, producers need to be aware that early harvesting could be very important in 2015. Many field weathering studies have indicated the overall value of early harvesting. Delayed harvesting can result in increased leaf contamination, higher bark incidence, shorter staple, reduced fiber uniformity and negative impacts on fiber strength, just to name few.

Crop maturity determination is critical for a successful harvest-aid program. Premature crop termination has been shown to reduce lint yield, seed quality, micronaire, and fiber strength. Harvest-aid chemicals cannot increase the rate of fiber development. Only additional good growing weather including open skies and adequate heat units combined with functional leaves can mature cotton bolls.

[For a handout that helps explain the rate of crop maturity for the Altus vicinity, click here.](#)

## **Quick Reference Decision Aid Tables**

Many fields are moving rapidly toward sufficient maturity to allow harvest aid application soon. The question remains what to use to bring down this cotton. I've always said that there is more than one way to get cotton harvest ready. What works this year may not work next year. It is very important to learn the strengths and weaknesses of the

various products. Use rates, timing, weather, crop condition, etc. are all important for a successful harvest aid program.

A decision aid-table is provided for three projected lint yield levels (less than 500 lb/acre, 500+ lb/acre, and 1000+ lb/acre) and four scenarios (dry with temperatures less than 80 degrees 0-3 days after treatment; dry with temperatures greater than 80 degrees 0-3 days after treatment; and wet with temperatures less than 75 degrees 0-3 days after treatment; and late maturing). **Make sure to read the footnotes at the end of the publication, as they contain important information.** Some products may be more difficult to obtain in the marketplace than others, but these tables are a worthwhile general guide because so many are available.

[Click here for the 2015 Cotton Harvest Aid Decision Table](#)

### **Cotton Incorporated Harvesting Publications**

Several publications have been generated by Cotton Incorporated in cooperation with a team of harvest engineers and agronomists. These include stripper harvesting, picker harvesting and seed cotton storage (module building). There is a huge amount of relevant information in these publications and they should not be overlooked.

Click for:

[Stripper Harvesting](#)

[The Spindle-Type Cotton Harvester](#)

[Seed Cotton Handling and Storage](#)

Also, more information concerning cotton harvesting and economics of the two harvester types can be found on the Cotton Incorporated Website at:

[Click here for Cotton Inc - Cotton Harvest Cost Comparison Program/Decision Aid](#)

### **Lint Contamination – Continued Focus on Prevention**

Two of the most important selling points of U.S. cotton in the export market include high quality fiber with minimal fiber contamination. The industry has worked hard over the past several decades to assure mills that we can provide them with fiber to meet their demands. Recently, I received a flyer from the National Cotton Council which discusses the importance of keeping this issue on the “front burner” with several segments of the industry. The ultimate goal is “contamination free” cotton. The paragraph below provides some of the discussion provided in the flyer:

*Keeping cotton “contamination free” remains a high priority goal for the U.S. cotton industry. The National Cotton Council (NCC) is reaching out to growers, ginners and warehousemen with the message about the critical importance of keeping U.S. cotton clean and pure. Please note that additional contamination prevention materials can be found on the NCC Quality Preservation web page.*

For more information, click here: <http://www.cotton.org/tech/quality/index.cfm>

[To download a copy of the flyer, click here.](#)

**RB**

### **Insect Update**

Insect management for the 2015 crop is terminated due to the maturity of the crop. Overall it has been a very light year with no major problems.

In non-cotton pest news: Fall armyworm should be a major concern for early planted wheat. All emerged wheat fields need to be scouted and placed on a weekly schedule until nighttime temperatures reach below freezing. If any questions arise please contact your local county extension office.



Photos courtesy of University of Georgia.

Fall armyworm moth, egg mass and larvae

**JG**

## Upcoming Meetings

**September 17 10:00 a.m.** Americot/NexGen Field Day, Agrisearch Farm, 4 miles west of Edmonson, TX. For more information contact Jerry Montgomery at 806-577-8011.

**September 22 8:30 a.m.** OSU Extension - Cotton Incorporated Enhanced Variety Trial and irrigation updates from Dr. Saleh Taghvaeian and Dr. Scott Frazier. Directions: From Hydro go 1 mile north to E 1000 Rd then turn east and go 2 miles to 2500 intersection. Pivot is on the northwest side of intersection.

**September 22 10:00 a.m.** The Carnegie Co-op Gin will sponsor an industry show and lunch at the Merlin Schantz Farm Headquarters. Over 15 companies will be present to discuss products and services with interested producers. The event will be held 3 miles north of Hydro on Hwy 58, 1 mile west, then 0.3 miles south on County Road 2470. For more information contact Jeannie Hileman at the Carnegie Co-op Gin at 580-330-0398.

**September 23** – Jackson County Cotton Tour, irrigated RACE trial near Duke (Drew Darby Farm) and no-till dryland RACE near Olustee (Clint Abernathy Farm). For more information contact Gary Strickland, Jackson County Extension Educator at 580-482-0823.

**September 24** – Caddo Research Station Tour, peanut and cotton research and industry updates. Hull blasting begins at 4:00 p.m., research tour starts at 5:30 p.m., dinner served after field tour.

Peanut Hull Blasting – Maturity Assessment

Peanut Breeding and Variety Performance, Kelly Chamberlin and  
Rebecca Bennet, USDA/ARS

Peanut Disease Management, John Damicone, OSU

Peanut Weed Management, Todd Baughman, OSU

Cotton Agronomy, Variety Performance, and Enlist Cotton, Randy Boman and  
Shane Osborne, OSU

**September 29** – Tillman County Cotton Tour, irrigated RACE trial (Mark Nichols Farm) near Tipton and no-till dryland RACE trial near Hollister (Roger Fischer Farm). Contact Aaron Henson, Tillman County Extension Educator at 580-335-2514 for more information.

**September 30** – Washita/Beckham Counties Cotton Tour, dryland RACE (Danny Davis Farm) near Elk City and irrigated RACE and irrigated PhytoGen Innovation Demonstration (Jack Damron Farm) near Delhi. Contact Glenn Detweiler, Washita County Extension Educator at 580-832-3356 or Greg Hartman, Beckham County Extension Educator at 580-928-2139 for more information.

**September 30** – Bayer CropScience West Texas Field Day, location in the Lubbock area to be determined. Registration begins at 9:30 a.m. For further information contact Doug Cossey, your local Bayer CropScience representative.

**October 1** – Harmon County Cotton Tour, Cotton Incorporated Enhanced Variety Trial (Tony Cox Farm) near Hollis and Bayer CAP Trial (Kelly Horton Farm) near Hollis. For more information contact Charity Penington, Harmon County Extension Educator at 580-688-3584. [See attached flyer for location information.](#)

**October 8** – Deltapine Field Day, Noon, Steve Chapman Farm near Lorenzo. For more information contact Eric Best at 806-790-4646.

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