



Cotton Comments

OSU Southwest Oklahoma Research and Extension Center
Altus, OK



August 9, 2012

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Crop Situation Update

If it's any consolation, by August 8, 2011, we had encountered 74 days of 100 degrees or greater high temperatures at Altus. For 2012 through August 8, we have had "only" 46 (1 in April, 9 in May, 11 in June, 18 in July, and 7 in August). Out of the last three weeks, maximum temperatures have been 100 degrees or greater for 19 of those days. Generally, low humidities and high maximum wind gusts have also been noted. This situation, when coupled with the lack of substantial timely rainfall in most cotton producing areas, has resulted in severely reduced yield potential on standing acres. Irrigated fields with adequate water (few) are still progressing nicely. However, groundwater-based irrigation capacity has declined significantly according to several area producers. Because of the lack of mid-season rainfall, many irrigated acres will produce disappointing yields. Most dryland cotton in the state has been stressed for many days. Season long cotton heat unit accumulation for a May 1st planting date through August 8th at Altus totals 2233, which is about 24% above normal (1807). These factors all combine to result in a difficult situation for Oklahoma cotton in 2012. Based on this week's results from IPM Extension Assistant Jerry Goodson's surveys, of 25 locations monitored (see Table 1), 14 have "bloomed out the top" (hit nodes above white flower or NAWF= 0) and reached the point of termination of insect scouting. Three sites were "still in the game" with NAWF near 5. Only fields with high irrigation capacities, timely water applications, and efficient delivery systems are still producing potentially harvestable yield at this time (see photo below).



Harmon County Subsurface Drip Irrigated RACE Trial near Hollis.

This is very disappointing because our typical effective blooming period (last day that a bloom can produce an open boll with reasonably mature fiber), does not close for 10-20 more days (location dependent). Most dryland locations (which would include the Jackson County “irrigated” sites which did not receive an allocation of water in 2012) which began flowering at 6-7 NAWF, had “bloomed out the top” by August 9th. This all points to extremely early maturity in this year’s crop. If we assume we need about 850 heat units past “cutout” to possibly target harvest aid applications, and based on “normal” temperatures from this point forward, we could be seeing cotton mature enough for termination by the middle of September. If temperatures continue to be above “normal” then this could be pushed even earlier. Anticipated yield will become an important factor in producers’ economic decisions pertaining to harvest aid applications. Even though some boll set has occurred, these bolls will be extremely small which will limit yield potential. In many highly stressed fields, premature boll opening is now occurring (see photo below). It is very likely that a large number of these locations will be released for insurance after the boll count adjustment method becomes effective in mid-September. Watch for harvest aid management updates in future newsletters.



Premature boll opening due to moisture stress.

Table 1. IPM Field Surveys - Week ending August 10, 2012

Location	Plant stage	Insects	Comments
Beckham Irrigated RACE - Gamble	1.75 NAWF	No Pests detected Few Beneficials	Plant growth poor
Caddo Irrigated RACE - Holsted		Terminated	
Caddo Irrigated CAP – Holsted		Terminated	
Caddo Irrigated Twinlink (Station)	5.25 NAWF	No Pests detected Few Beneficials	Plant growth good
Custer Irrigated RACE - Schantz	1.75 NAWF	No Pests detected Few Beneficials	Plant growth good
Grady Dryland (Station, Weed Test)	2.25 NAWF	Grasshoppers Few Beneficials	Plant growth poor
Caddo Irrigated OVT (Station)	5.00 NAWF	No Pests detected Few Beneficials	Plant growth good
Greer Dryland CRSP - Graumann		Terminated	
Greer Irrigated CRSP - Thornbrough	2.25 NAWF	Grasshoppers Few Beneficials	Plant growth Poor
Harmon Irrigated RACE - Cox	4.75 NAWF	Whiteflies, Fleahoppers Great Beneficial Population	Plant growth excellent
Harmon Dryland RACE - Cummins	5.25	No Pests detected Few Beneficials	Plant growth poor
Harmon Irrigated CAP - Horton	1.25 NAWF	No Pests detected Few Beneficials	Plant growth average
Jackson Conventional (Station)		Terminated	
Jackson Irrigated CRSP - Felty		Terminated	
Jackson OVT (Station)		Terminated	
Jackson Irrigated RACE - Winsett		Terminated	
Jackson Irrigated CAP - Winsett		Terminated	
Jackson Dryland CRSP - Winsett		Terminated	
Jackson Weed Test (Station)	1.25 NAWF	No Pests detected Few Beneficials	Plant growth poor
Jackson Irrigated WOSC Tests		Terminated	
Tillman Dryland RACE - Fischer	1.5 NAWF	No Pests detected Few Beneficials	Plant growth poor
Tillman Irrigated CRSP - McCullough		Terminated	
Tillman Dryland No Till (Station)		Terminated	
Tillman Dryland OVT (Station)		Terminated	
Washita Dryland RACE - Davis		Terminated	

RACE – Replicated Agronomic Cotton Evaluation Trial (Oklahoma Cooperative Extension)

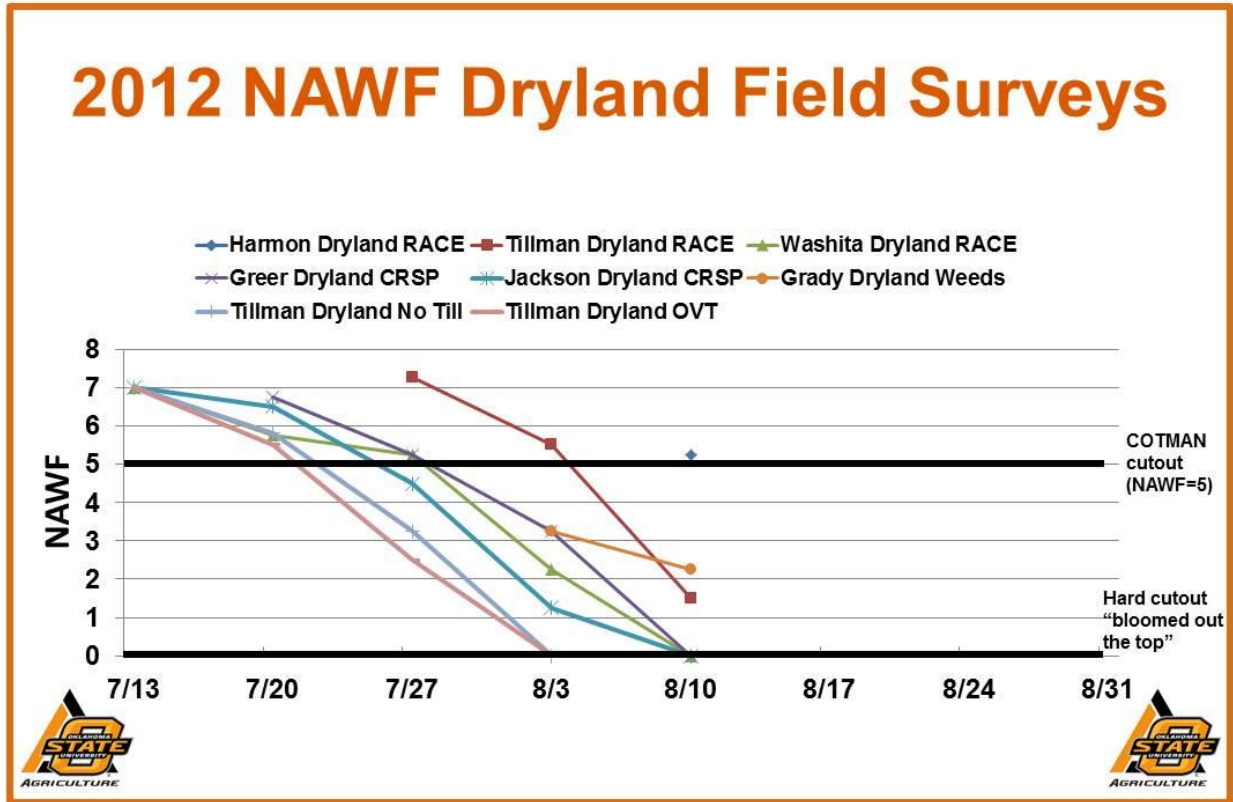
CRSP – County Replicated Small Plot Trial (Oklahoma Cooperative Extension)

CAP – Cotton Agronomic Plot (Bayer CropScience)

OVT – Official Variety Trial (Oklahoma Agricultural Experiment Station, Altus, Tipton, Fort Cobb)

WOSC – Western Oklahoma State College

Most dryland fields that reached first bloom in mid- to late-July crashed very rapidly based on the weather conditions. One late planted (behind wheat) dryland field in Harmon County actually began blooming at around 5 NAWF this week, which indicates very poor yield potential.



Mesonet Irrigation Planner Update

The Mesonet provides useful irrigation requirement information and can be used to fine tune irrigation management. For more information concerning this, please refer to the July 6th issue of Cotton Comments.

For the last 10 days for Altus and a May 15 planting date, total cotton ET has been 4.24 inches, with the last rainfall event on August 8th. Recent daily ET has been about 0.35 inch/day, with some days as high as 0.47 inch/day.

Last Irrigation Date	Evapotranspiration (inch)	Accumulated Evapotranspiration (inch)	Rainfall (inch)	Accumulated Rainfall (inch)	Water Balance (inch)
8/8/2012	0.35	0.35	0.23	0.23	-0.12
8/7/2012	0.27	0.62	0.00	0.23	-0.39
8/6/2012	0.35	0.96	0.00	0.23	-0.73
8/5/2012	0.45	1.41	0.00	0.23	-1.18
8/4/2012	0.47	1.88	0.00	0.23	-1.65
8/3/2012	0.47	2.35	0.00	0.23	-2.12
8/2/2012	0.44	2.79	0.00	0.23	-2.56
8/1/2012	0.37	3.16	0.00	0.23	-2.93
7/31/2012	0.36	3.52	0.00	0.23	-3.29
7/30/2012	0.37	3.89	0.00	0.23	-3.66

For the last 10 days for Tipton and a May 15 planting date, total cotton ET has been 4.34 inches, with the last rainfall event on August 8th. Recent daily ET has been about 0.35 inch/day, with some days as high as 0.59 inch/day.

Last Irrigation Date	Evapotranspiration (inch)	Accumulated Evapotranspiration (inch)	Rainfall (inch)	Accumulated Rainfall (inch)	Water Balance (inch)
8/8/2012	0.35	0.35	0.05	0.05	-0.30
8/7/2012	0.31	0.66	0.00	0.05	-0.61
8/6/2012	0.38	1.04	0.00	0.05	-0.99
8/5/2012	0.41	1.46	0.00	0.05	-1.41
8/4/2012	0.54	1.99	0.00	0.05	-1.94
8/3/2012	0.59	2.58	0.00	0.05	-2.53
8/2/2012	0.53	3.11	0.00	0.05	-3.06
8/1/2012	0.43	3.54	0.00	0.05	-3.49
7/31/2012	0.39	3.93	0.00	0.05	-3.88
7/30/2012	0.42	4.34	0.00	0.05	-4.29

For the last 10 days for Hollis and a May 15 planting date, total cotton ET has been 3.80 inches, with the last rainfall event on August 8th. Recent daily ET has been about 0.35 inch/day, with some days as high as 0.48 inch/day.

Last Irrigation Date	Evapotranspiration (inch)	Accumulated Evapotranspiration (inch)	Rainfall (inch)	Accumulated Rainfall (inch)	Water Balance (inch)
8/8/2012	0.30	0.30	0.08	0.08	-0.22
8/7/2012	0.31	0.62	0.30	0.38	-0.24
8/6/2012	0.36	0.98	0.00	0.38	-0.60
8/5/2012	0.41	1.39	0.00	0.38	-1.01
8/4/2012	0.48	1.87	0.00	0.38	-1.49
8/3/2012	0.45	2.32	0.00	0.38	-1.94
8/2/2012	0.43	2.74	0.00	0.38	-2.36
8/1/2012	0.34	3.09	0.00	0.38	-2.71
7/31/2012	0.35	3.44	0.00	0.38	-3.06
7/30/2012	0.36	3.80	0.00	0.38	-3.42

For the last 10 days for Fort Cobb and a May 15 planting date, total cotton ET has been 3.55 inches, with the last rainfall events on August 7th and 8th. Recent daily ET has been about 0.35 inch/day, with some days as high as 0.47 inch/day.

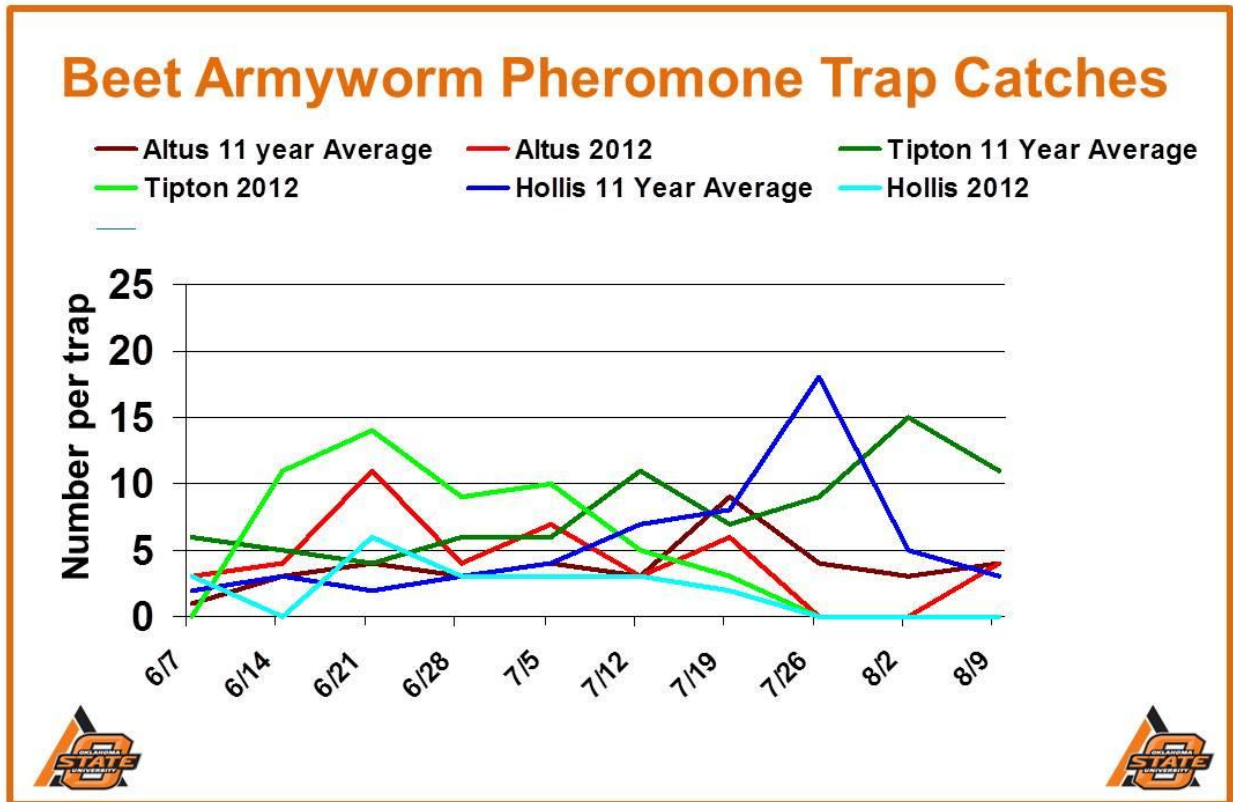
Last Irrigation Date	Evapotranspiration (inch)	Accumulated Evapotranspiration (inch)	Rainfall (inch)	Accumulated Rainfall (inch)	Water Balance (inch)
8/8/2012	0.32	0.32	0.05	0.05	-0.27
8/7/2012	0.34	0.65	0.63	0.68	0.03
8/6/2012	0.24	0.89	0.00	0.68	-0.21
8/5/2012	0.34	1.24	0.00	0.68	-0.56
8/4/2012	0.44	1.68	0.00	0.68	-1.00
8/3/2012	0.47	2.16	0.00	0.68	-1.48
8/2/2012	0.40	2.56	0.00	0.68	-1.88
8/1/2012	0.32	2.88	0.00	0.68	-2.20
7/31/2012	0.33	3.21	0.00	0.68	-2.53
7/30/2012	0.34	3.55	0.00	0.68	-2.87

Insect Update

After conversations with various consultants and conducting field surveys in seven counties this week, the insect outlook is as follows: Light infestations of pests continue. A few fields are being treated in Caddo County for stink bugs. Whiteflies and cotton fleahoppers were observed in Harmon and Tillman counties but are not at control levels. The weather and beneficial populations are doing an excellent job of holding pests in check. If you have any questions, please contact Extension personnel.

Moth Activity

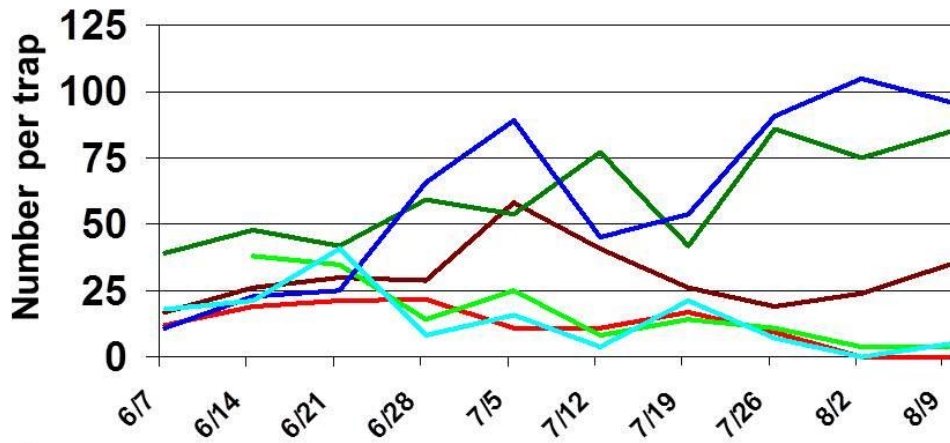
All moth traps are below the 11 year average. No activity was observed in surveyed fields.



Beet armyworm moth

Cotton Bollworm Pheromone Trap Catches

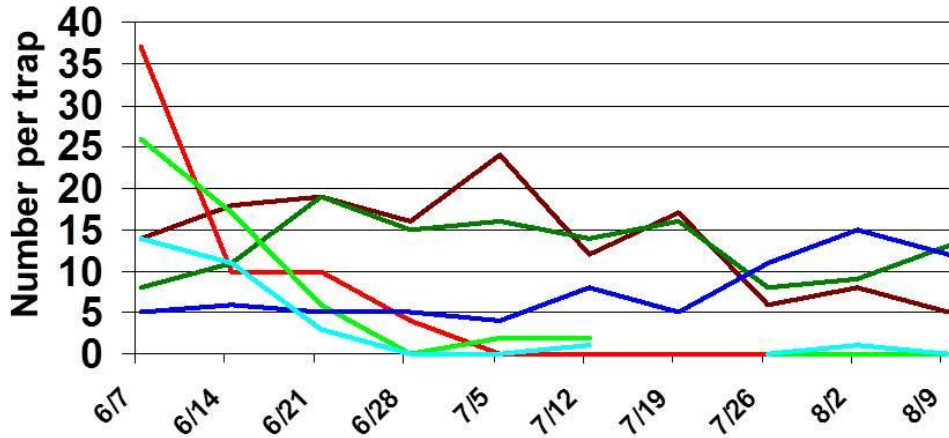
— Altus 11 year Average — Altus 2012 — Tipton 11 Year Average
— Tipton 2012 — Hollis 11 Year Average — Hollis 2012



Cotton bollworm moth

Cotton Budworm Pheromone Trap Catches

— Altus 11 year Average — Altus 2012 — Tipton 11 Year Average
— Tipton 2012 — Hollis 11 Year Average — Hollis 2012



Tobacco budworm moth

Upcoming Meeting

Tillman County Symposium – 8:45 a.m., August 23rd, Orr/Gray Gish Event Center, Frederick.

Note Concerning the osucotton.com Website

The osucotton.com web site has been discontinued due to duplication with other websites. For information on the Southwest Oklahoma Research and Extension Center please go to:

<http://www.oaes.okstate.edu/field-and-research-service-unit/southwest-research-and-extension-center-1/southwest-research-and-extension-center>

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