



Current Crop and Insect Situation:

Aphids continue to build across the area. Beneficial insects are still the best control measure at this time. Bollworm damage is still light in fields that are being monitored. Due to the lateness of this year crop growth regulators seem to be essential. If you have any questions please call:

J.C. Banks 580 482-2120 or
Shane Osborne 580-482-2633

The following is an excerpt from “Talking Cotton” by J.C. Banks.

J.C.’s weekly update of the Oklahoma cotton season can be found at <http://ntokcotton.org/>.

With warmer weather, cotton has been rapidly growing and all mid-May planted cotton should be producing some blooms. Mepiquat based growth regulator applications have been applied to unstressed cotton. Areas in the field that have been severely waterlogged should be coming out of the stress at this time. Many low areas that have been extremely wet are continuing to show chlorosis and stunting due to excessive water. These areas might benefit from a cultivation of the middles, but be careful not to cultivate close to the plants. Cotton that has been too wet will have a shallow root system due to a lack of oxygen deeper in the soil. The only root system these plants have is shallow, if they are stressed at this time. Cultivation close to the plants has the potential to destroy much of

this shallow root system. The plant will continue to place emphasis on root growth until it starts being pulled down due to fruit load, so we should have a week or two to get a good root system going.

According to Jerry Goodson, we have been having some aphids show up in some fields. In these fields, Jerry also has been observing a build up of beneficial insects so hopefully the beneficials will be taking care of the aphid population. Spraying for aphids at this time will also decrease the beneficial insect populations, and could possibly set the cotton up for some more sprayings later in the season. Earlier damage to the squares by fleahoppers will delay the crop somewhat, and in these areas, an application of growth regulator may be needed to keep the plant from developing too much vegetative growth. Remember, the primary goal of a plant growth regulator is to help in fruit retention which should make the crop earlier and more easily harvested due to more compact plants.

State of Oklahoma Cotton.



Prebloom cotton with a few blooms.

Beneficial Insects

Ladybird or ladybug beetles are the most common beneficial insects. There are many species that can inhabit cotton, but three species most commonly are: seven-spotted C7 lady beetle, convergent lady beetle, and pink spotted lady beetle. Ladybug larvae are capable of mangling or destroying 20 to 40 aphids a day. At maturity the larvae enter the pupal stage. The pupal attached to stems or leaves and do not move. In about a week adults emerge and the cycle begins again. There are several generations a year.

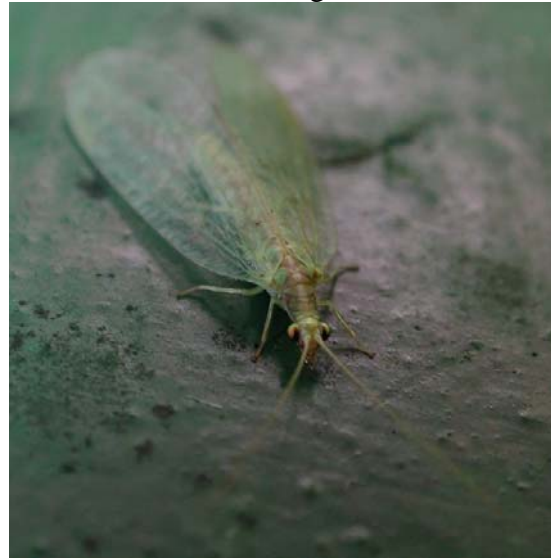


All three species adults and larvae prefer aphids to other insects, but will feed on eggs and caterpillars of moths occurring in cotton.



All three ladybug adults love to feed on pollen and nectar and become quite abundant while cotton is blooming. Ladybugs eggs are easily recognized by their football shape, yellow to orange color and laid on end in a bowling ball pin configuration. Eggs hatch in 4 to 10 days and larvae feed for 2 to 4 weeks.

Green Lacewing Adult



Lacewings are widely known by most people. There are several species of green lacewings commonly found in cotton patches. The brown lacewing is also present, but not near as common normally as green lacewings.

The adult stage is a pale green insect with large, clear, highly veined wings that are held over the body when at rest. Adult green lacewings primarily feed on nectar and other fluids, but some species also consume a few small insects.

Green lacewings lay a distinctive stalked egg. Lacewing larvae emerge in three to seven days. These larvae, sometimes called aphid lions, are voracious predators capable of feeding on insect eggs, small caterpillars, and beetles as well as aphids and other insects. Lacewing larvae are alligator-shaped, light brown with long sickle-shaped mandibles projecting from the head. These mandibles act like straws to suck up its prey's internal juices.

Brown Lacewing Adult



Brown lacewing adults are smaller, brown and hairy. Unlike the green lacewing the brown lacewing does not lay eggs on stalks rather eggs are laid on the undersides of leaves. Larvae are reddish brown with two to four white spots in the middle of their body. Unlike the green lacewing larvae, brown lacewing larvae have a characteristic side to side head-wagging behavior.

Adults lay several hundred eggs. Eggs hatch 3 to 7 days. Larvae feed for 2 weeks then pupate and adults emerge in about 2 weeks. Several generations occur during the growing season.

Green Lacewing Egg



Green Lacewing Larvae

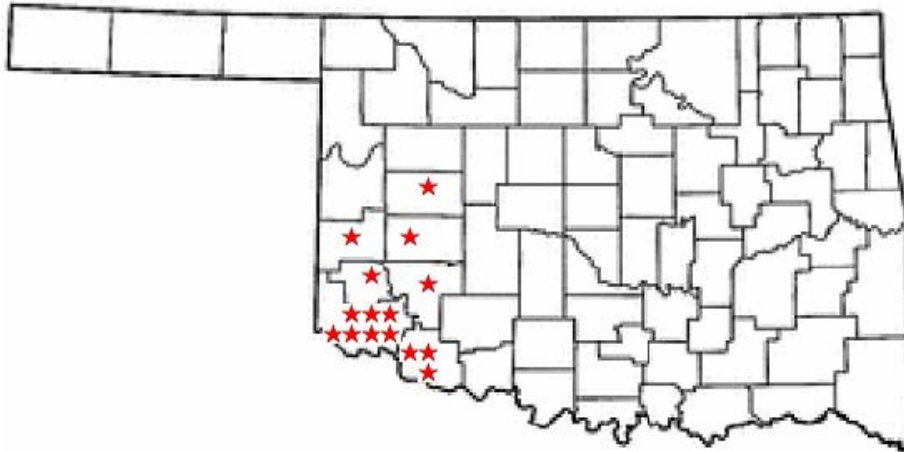


NABID OR DAMSEL BUG:

Also known as nabids, damsel bugs are slender, winged insects, brownish in color and 3/8-inch to 1/2-inch long. Long thin legs and antennae are characteristic, as is a pronounced beak for feeding and enlarged front legs for grasping prey. They pack a mean and painful bite that will get your attention. In cotton fields, adults and nymphs feed on many soft-bodied insects, including aphids, spider mites, leafhoppers, insect eggs and small caterpillars. Nymphs resemble adults, except they are smaller and have no wings. Damsel bugs overwinter as adults in protected places and appear in the field in April. Adults begin laying eggs soon after emergence. Eggs are deposited in soft plant tissues. Eggs hatch into nymphs, which feed on small insects or eggs. There are numerous, overlapping generations during the season.



Extension Cotton Variety Trial Locations



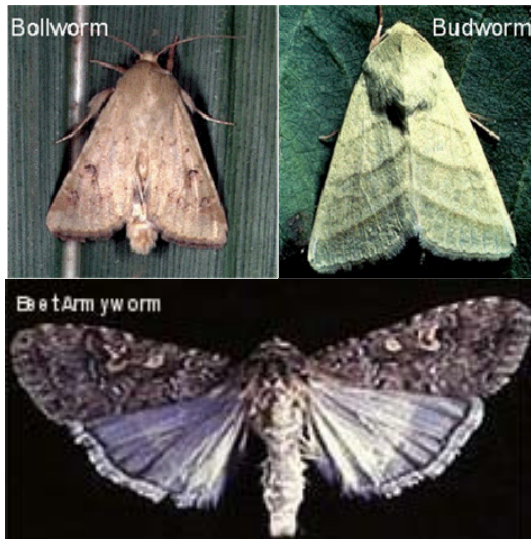
The week ending July 13

Location	Growth stage	Insects
Beckham	Prebloom	1% Bollworm damage
Custer	Prebloom	4% Bollworm damage
Greer	Prebloom	1% Bollworm damage
Jackson	Prebloom	1% Bollworm damage
Jackson	Prebloom	1% Bollworm damage
Jackson	Prebloom	1% Bollworm damage Light Aphids
Jackson	Prebloom	1% Bollworm damage Light Aphids
Jackson	Prebloom	1% Bollworm damage Light Aphids
Jackson	Prebloom	1% Bollworm damage
Harmon	Prebloom	1% Bollworm damage
Kiowa	Terminated	
Tillman	Prebloom	1% Bollworm damage
Tillman	Prebloom	1% Bollworm damage
Tillman	Prebloom	1% Bollworm damage
Washita	Prebloom	1% Bollworm damage

MOTH TRAPS:

Week of	Bollworm			
	Altus	Hollis	Manchester ¹	Tipton
June 9	34	23	12	115
June 16	22	18	0	89
June 23	54	12	30	68
June 30	84	16	2	117
July 7	119	64	8	124
July 14	49	21	2	91
	Budworm			
	Altus	Hollis	Manchester	Tipton
June 9	3	0	0	16
June 16	6	4	0	14
June 23	8	0	0	8
June 30	0	1	0	6
July 7	11	2	0	9
July 14	6	4	0	11
	Beet Armyworm			
	Altus	Hollis	Manchester	Tipton
June 9	7	9	1	11
June 16	10	10	2	17
June 23	8	6	2	7
June 30	0	2	1	4
July 7	18	9	2	5
July 14	0	0	0	4

¹Traps established and maintained by Scott Price.



Photos courtesy of Texas A&M

GROWING DEGREE DAY:

A Growing Degree Day (GDD) is defined as 24 hours of time in which the temperature is one degree above the lower temperature threshold (60°F - 100°F). By using this range and the high and low temperatures for each day of the growing season, the amount of heat available to the cotton, measured in day degrees, can be calculated. The heat unit data is collected from *Mesonet weather network* weekly.

Cotton Growth Timetable

<u>Stage of Growth</u>	<u>GDD</u>	<u>Days</u>
Emergence	50 - 60	3 - 4
Pinhead Square	425 - 500	25 - 45
First Bloom	725 - 825	41 - 67
Open Boll	1575 - 1925	102 - 127
Defoliation	2150 - 2300	120 - 140

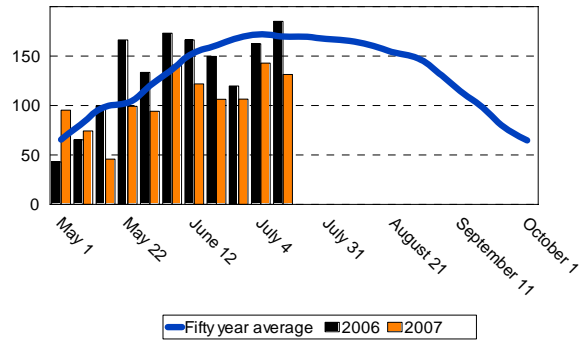
FOR FURTHER INFORMATION CONTACT:

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Altus

Growing Degree Days (GDD)

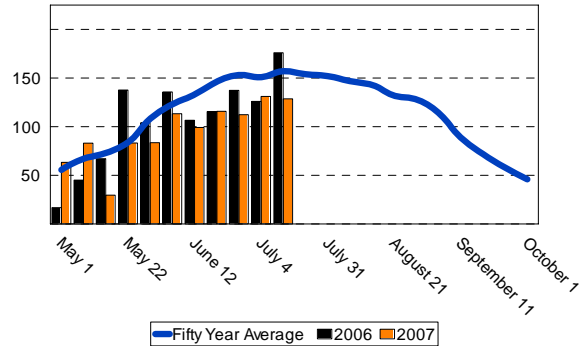
<u>Week of</u>	<u>50 year</u>	<u>2006</u>	<u>2007</u>
May 1	65.5	43.1	95.3
May 8	82.9	65.3	74.2
May 15	98.6	99.7	45.8
May 22	102.9	166.3	99.2
May 29	120.0	133.4	94.2
June 5	134.4	173.1	140.7
June 12	153.4	166.4	121.9
June 19	160.7	149.7	106.3
June 26	168.4	119.7	117.4
July 4	171.9	162.4	142.8
July 11	169.7	185.1	131.3
Total	1,428.4	1,464.2	1,169.1



Blackwell

Growing Degree Days (GDD)

<u>Week of</u>	<u>50 year</u>	<u>2006</u>	<u>2007</u>
May 1	55.6	16.8	63.4
May 8	67.5	45.2	83.1
May 15	73.2	67.1	29.6
May 22	84.6	137.8	83.3
May 29	108.8	104.1	83.6
June 5	123.4	135.7	113.4
June 12	133.6	106.7	99.3
June 19	146.4	115.6	115.9
June 26	153.4	137.4	112.4
July 4	151.2	126.1	131.1
July 11	157.1	176.1	128.6
Total	1,254.8	1,168.6	1,043.7



Hobart

Growing Degree Days (GDD)

<u>Week of</u>	<u>50 year</u>	<u>2006</u>	<u>2007</u>
May 1	62.3	31.4	76.2
May 8	76.2	22.4	65.4
May 15	84.9	86.2	32.3
May 22	94.7	164.2	86.4
May 29	119.8	115.3	76.7
June 5	136.9	171.7	122.3
June 12	145.9	142.9	112.7
June 19	153.6	131.6	110.4
June 26	162.4	153.7	117.2
July 4	163.5	148.1	133.4
July 11	162.9	184.9	128.4
Total	1,363.1	1,352.4	1,061.40

