



## Current Crop and Insect Situation:

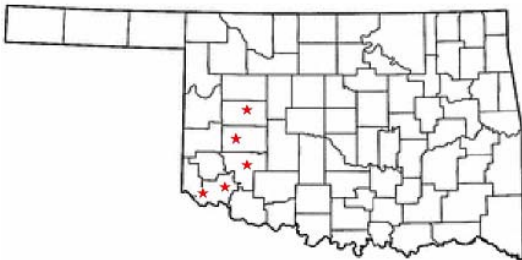
The weather is finally cooperating and cotton planting has resumed across the state. Early planted cotton has emerged, so weekly scouting of these fields needs to commence especially where seed was not treated or an infurrow insecticide was not used.

### State of Oklahoma cotton.



Planters are rolling.

## OSU Extension Cotton Variety Trial Locations



Established as of May 22, 2007.  
For more information please contact your local county office.

## Early Season Pest



Thrips generally are not considered a serious pest of cotton, except in years when favorable growing conditions permit early planting. Heavy thrips infestations will occur if plants have emerged before wheat or other small grains mature. Mature thrips often move into stands of succulent cotton seedlings, causing curled and misshapen leaves. Thrips infestations vary from field to field and from year to year and should be dealt with accordingly.

Thrips are small, approximately one-sixteenth inch in length. The color varies according to species. It may be similar to the color of wheat straw, yellow, lack, or light brown.



The adults have two pairs of long, narrow, fringed wings which enable them to fly from one crop to another. The life cycle contains four stages: egg, larva, pupa, and adult. Larvae and adults will over winter in debris and trash near the field. In the spring, the adult females lay eggs by inserting them into the plant tissue. The creamy white eggs hatch into small larvae which begin to feed on the plant. After a short time, they burrow into the soil and transform into a non-feeding stage called the pupae. They emerge as adults and continue to feed on the plant. Thrips damage cotton by injecting their stylets into the plant epidermis. Ruptured cells release plant fluids which are sucked up by the insects. Injury first appears as dark brown spots which assume a silvery appearance several days later. Feeding occurs on the lower side of the leaf and may injure the terminal bud so that new leaves fail to develop and growth is retarded. Leaves will be crinkled and cupped. Economically damaging infestations occur when plants average 3 thrips per plant.

Weekly scouting is the only way to monitor the treatment's performance. Expect damaging populations of thrips to materialize first in fields where no at-planting insecticide was used. Windy conditions will impact your ability to accurately assess thrips numbers. In-field detection becomes nearly impossible as the wind picks up. Take a composite sample pulling at least 30 plants across the field placing them in a plastic bag or bucket. Waiting to examine plants until you return to your vehicle will take a little longer, but will be a lot more accurate.

Besides looking on the undersides of cotyledons and true leaves be sure to examine the terminal bud. Both adult and larvae feed and lounge around here and are easily overlooked unless you carefully inspect this region. Also don't forget to count and record the numbers of dislodged thrips running around on the inside of the baggie.

Crop demographics play a large role in thrips pressure. Wheat is widely known as an early season habitat for thrips. However, alfalfa is another thrips nursery that can produce large numbers. With each cutting thrips leave in search of food. Cotton fields in close proximity to alfalfa meadows may experience huge influx of thrips overnight that might even rival the exodus from adjacent wheat fields.

Finding adult thrips in protected fields is normal and is expected as long as the thrips migration continues. Remember that thrips blown in may not feed immediately and feeding is required for the insect to pick up a lethal dose of the systemic insecticide.

It is easy to spot when the insecticide performance begins to fade by keeping track of the plant's physical condition related to thrips numbers. As protection fizzles visual leaf damage should increase along with a rise in thrips numbers.

Quick action will prevent maturity delays associated with infestations that reach or exceed three thrips per plant. Over-the-top sprays are popular in fields planted to Roundy Ready varieties. This strategy of tank mixing an insecticide with Roundup is cost effective.

## 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.

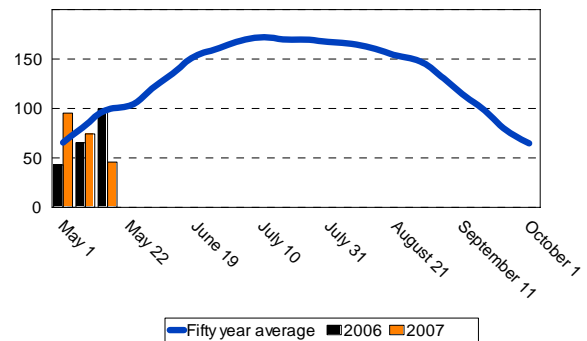
## Cotton Growth Timetable

<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

### Altus

Growing Degree Days (GDD)

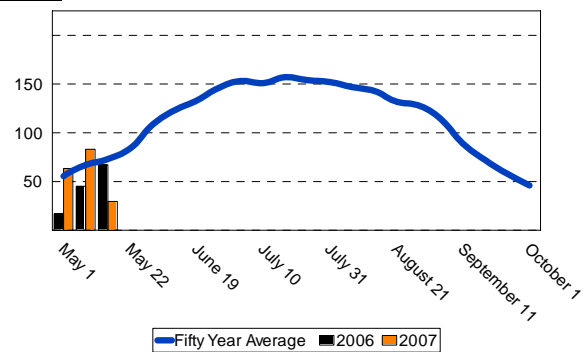
<u>Week of</u>	<u>50 year</u>	<u>2006</u>	<u>2007</u>
May 1	65.5	43.1	95.3
May 8	82.9	65.3	74.2
May 15	98.6	99.7	45.8
<b>Total</b>	<b>247.0</b>	<b>208.1</b>	<b>215.3</b>



### Blackwell

Growing Degree Days (GDD)

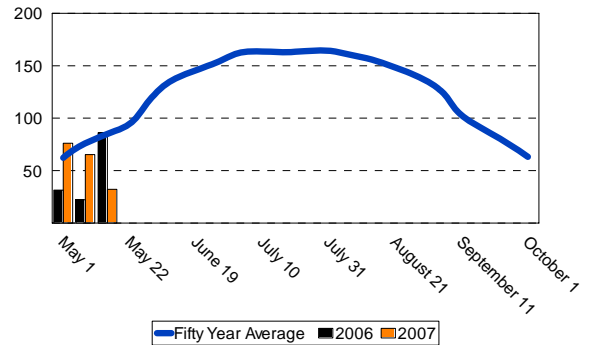
<u>Week of</u>	<u>50 year</u>	<u>2006</u>	<u>2007</u>
May 1	55.6	16.8	63.4
May 8	67.5	45.2	83.1
May 15	73.2	67.1	29.6
<b>Total</b>	<b>196.3</b>	<b>129.1</b>	<b>176.1</b>



## 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
<b>Total</b>	<b>223.4</b>	<b>140.0</b>	<b>173.9</b>



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