

July 17, 2015 - Volume XXIII - Number 9

# Crop Management Newsletter

News about Crop Management for producers in Dawson and Lynn Counties.

Thanks to the sponsors and the gins who support the Dawson/Lynn IPM Program  
(found on page 2)

## Current Conditions

A lot has happened this week:

- Cotton fleahoppers broke loose in southern Dawson County and Martin County,
- I have seen my first blooms of the year and
- we had confirmation of Sugarcane Aphid in Lynn County (not included in this newsletter).

### What does our crop look like?

Well, at this point in time I will not separate the dryland from the irrigated. I saw my first flower of the year this week and over the next week to two weeks we should really start seeing the fields bloom. With August 25 being our last "effective bloom date," that gives us from 4 to 6 weeks to set blooms. Now, let me explain "effective bloom date." That is the last date where we can virtually mature a bloom to full maturity for harvest. After the "effective bloom date," we still mature blooms that make it to harvest and some make full maturity, however, the percentage of those blooms making it to full maturity and harvest decreases.

The average plant structure:

- Plant Height - 9.4 inches (range 4 to 15)
- Total nodes per plant - 11.8 (range 8.5 to 16.1)
- First fruiting node - node 8  
(100% of plants are fruiting)
- Percent square retention - 96.3%  
(range 73.5 to 100)
- Percent boll retention - 100%  
(only 1 field started blooming)
- NAWF - 10

### Cotton Fleahopper

See July 13 newsletter (#8) for discussion of Cotton Fleahopper. Below is a table listing the Suggested Insecticides for Cotton Fleahopper Control.

### IPM Program

**Should you make an insecticide application to a field being scouted by the IPM Scouting Program, PLEASE give me a call.**

### Understanding Plant Growth Regulators (PGRs) and their use in Cotton

(Adapted from Blayne Reed, IPM Agent - Hale, Swisher and Floyd Counties)

First off, PGRs do not increase lint yield in and of themselves. As the name suggest they are a **growth regulator** and do not increase the number of fruiting

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sites or the speed in which fruiting sites are added to the plant - that is genetics and environmental respectively.

PGRs are synthetic plant hormones, period. Gibberellins are the most utilized or targeted plant hormone in most PGRs. Naturally occurring gibberellins regulate vegetative growth and promote cell division and expansion. With synthetic applications of PGRs, gibberellins are reduced in the plant for a time, which prevents the newly developed and developing cells from elongating to their full potential during periods of rapid growth when water and nutrients are abundant. In essence, PGRs can prevent cotton, a true tree by nature, from rapidly growing and competing to become the tallest tree in the forest and become 'rank.' PGR use allows for a more uniform and compact plant that is more desirable come harvest time. Now this shorter and managed plant has the potential of being more efficient in retaining and maturing it's fruit, especially if heat or other stresses occur later in the growing season, compared to a 'rank' plant.

Cotton plants will always be quite selfish. Cotton will sacrifice its fruit to save its self every time it is stressed because it is a tree that thinks it has years of fruit production a head, not the few months we force it to have.

PGRs, with over 30 years of research trials and use on High Plains cotton, have proven that when applied at the right time, rate, and condition, keep developing cells (primarily at the growing point of the forming stalk or terminal) from elongating to their full potential. Once the synthetic hormone (PGR) runs out, new cell development is not affected. To affect these newly developing cells, additional PGR treatments would be required.

If PGRs are applied to already stressed cotton plants, it can be disastrous. The right time to apply PGRs to cotton (if needed) is when growing conditions are good for young cotton or cotton with plenty of vegetative growth potential and has ample available soil moisture and fertility. Remember, PGRs cannot shrink a plant that is already taller than desired. Never apply PGRs to cotton currently or potentially nearing any kind of stress or to cotton nearing cutout.

Special THANKS to those who support  
Agriculture and the Lynn/Dawson IPM  
Program

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Premium Sponsorship Level



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Many Thanks to the Gins who participate and support the Lynn/Dawson IPM Program

**Adcock Gin  
Farmers Association Coop - O'Donnell  
Flower Grove Coop  
King - Mesa Gin  
Tinsley Gin  
United Gin Corporation  
Woolam Gin**

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Suggested Insecticides for Cotton Fleahopper Control

Insecticide	Formulated Rate per Acre
Address® 75S	4 - 5.33 oz.
Address® 90S	3.34 - 4 oz.
Orthene® 90S	3.34 - 4 oz.
Orthene® 97	3.10 - 3.71 oz.
Intruder 70 WP	0.6 - 1.1 oz.
Lorsban® 4E	6 - 16 oz.
Bidrin® 8E	0.8 - 3.2 oz.
Dimethoate® 2.67E	5.3 - 10.5 oz.
Dimethoate® 4E	4 - 8 oz.
Dimethoate® 5E	3.2 - 6.4 oz.
Provado® 1.6F	3.75 oz.
Trimax 4F	1.5 oz.
Steward® 1.25SC	9.2 - 11.3 oz
Lannate® 2.4LV	6 - 12 oz.
Methyl Parathion 4E	3.2 oz
Vydate® 2L	1 pt.
Vydate® 3.77C-LV	8.5 oz.
Centric 40WG	1.25 - 2.5 oz.

	Heat Units Totals								
	Tahoka			O'Donnell			Lamesa		
	May 23	June 1	June 10	May 23	June 1	June 10	May 23	June 1	June 10
May 23-31 (actual)*	71.5			77			79		
June 1-30 (actual)*	492	492		500.5	500.5		506	506	
June 10-30 (actual)*			353			357			363
July 1-12 (actual)*	208	208	208	207	207	207	221.5	221.5	221.5
July 13-16 (actual)*	83.5	83.5	83.5	85.5	85.5	85.5	86.5	86.5	86.5
Total	915	783.5	644.5	870	793	649.5	893	814	671
HU needed in to obtain 2200	1285	1416.5	1555.5	1330	1407	1550.5	1307	1386	1529

\* Based on the Texas Tech Mesonet temperatures for each location.

^ Based on the daily average temperatures for the month from the Weather Channel.

The following tables give the rainfall, high and low temperatures and heat units by date for July 13 - 16.

#### Tahoka

Date	Rainfall	High	Low	Heat Units
7/13/2015	0	97	66	21.5
7/14/2015	0	91	71	21
7/15/2015	0	92	65	18.5
7/16/2015	0	95	70	22.5
Total	0			83.5

#### O'Donnell

Date	Rainfall	High	Low	Heat Units
7/13/2015	0	94	66	23
7/14/2015	0	93	66	19.5
7/15/2015	0	93	67	20
7/16/2015	0	96	70	23
Total	0			85.5

#### Lamesa

Date	Rainfall	High	Low	Heat Units
7/13/2015	0	97	66	21.5
7/14/2015	0	97	65	21
7/15/2015	0	97	64	20.5
7/16/2015	0	97*	70	23.5
Total	0			86.5

\* Actual temperature was 100 - I max-out my HU calculations at 97 degrees.