August 19, 2016 - Volume XXIV - Number 11

Crop Management Newsletter

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

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

Current Conditions

Again, it is very quiet in the fields from an insect standpoint with many fields past the point of concern.

We are seeing the "great adjustment" - my term - in cotton (same article from last year).

I have not seen any open bolls yet - won't be long.

Be careful when plant mapping your fields at this point.

The Great Adjustment

We are seeing fruit (squares and small bolls) being shed by the cotton plants. This shedding is part of cotton's natural survival process. Cotton always over commits it's fruit load. If you were to estimate yields in mid- to late July, you would be buying boats and planes and maybe even a train, because you would estimate 7, 8, 9 or even over 10 bales per acre. However, we never achieve those type yields because we can not or due not supply the resources necessary to support such a yield. Water being the most limiting factor.

Cotton boll shedding is a concern due to the thought process that if shedding were decreased, then production would increase. On the other hand, boll shedding is an important natural process which the plant adjusts its fruit load to match the resources it has available thus allowing for the highest quality and most mature bolls to make it to harvest.

Of all the several hundred sheds that I check when walking fields, I did not find a single one that was worm damaged.

Open Boll

Boll development is divided into three overlapping phases: the enlargement phase, the filling phase and the maturation phase.

Bolls grow rapidly after fertilization with the most rapid growth occurring between days 7 to 18 and full size reached between days 20 to 25. Along with obtaining maximum boll size during this period, maximum seed size and maximum fiber length are established.

The maturation period from white flower to open boll is influenced strongly by temperature. Approximately 800-850 HU's are required for full maturity which might take as few as 40 days or as many as 70 days.

Based on historical records for our area, August 6 is the date in which there is an 85% chance to accumulate enough HU to mature a white flower and August 12 is the date in which there is a 50% chance to accumulate enough HU to mature a white flower.

Boll opening is under the control of hormones. Ethylene is responsible for triggering the process of boll opening and is the active ingredient in compounds such as Prep.

Boll range is size from under 3 grams (0.0066 pounds) to over 6 grams (0.013 pounds). The seeds account for about 60% of the mature bolls weight - the remainder is lint. This translates into about 200 to 400 full-sized bolls to produce a pound of lint, or 100,000 to 200,000 full-sized bolls to produce a bale of cotton. I use 160,000 full-sized bolls when estimating yields.

Late Season Plant Mapping

IF you are plant mapping your fields, you need to be careful not to give yourself false hope. Let me explain: when taking NAWF we find plants with a first position white flower and record the total number of nodes above that white flower. We observe that measure each week and follow it as it reaches the point of cutout (NAWF=5). We can continue to record the NAWF for a couple more weeks and watch the measure drop to around NAWF=2. It is at this point we really need to be careful.

There will be a set of plants that are physiologically younger and if you were to record the NAWF from these plants you would come up with an increase in the NAWF - providing that false hope.

I would recommend that after reaching NAWF=3 or less to discontinue that measure and be prepared to record the NACB (nodes above cracked boll).

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

All-Star Sponsorship Level

Dawson County Commissioners Court
Lamesa Cotton Growers

Major Sponsorship Level

West Gaines Seed

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

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

Tommy Doederlein
Extension Agent - IPM
(806)872-3444 (office)
(806)759-7030 (cell)
t-doederlein@tamu.edu