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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)

Well, I thought I was back last time - maybe this time it's a for sure thing and all computer issues are fixed. If you know of anybody who is not receiving the newsletter, all I need is an e-mail address and they can start getting it - for free!

I'm seeing a few scattered aphids in fields but not of any concern at this point. Keep an eye on any colonies you may find, as the cooler and cloudy conditions we experienced and looks like we will experience again this weekend favors aphid development. Aphids tend to have a clump distribution pattern where spot applications can minimize the cost. The recommended threshold is 50 aphids/leaf.

The Great Adjustment

You might recognize the following since I've used it before. It's something that happens every year.

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 (not this year in most cases), 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.

The cotton plants primary function is to produce seed, fiber is secondary. So when resources are limited the plant is going to protect and develop those bolls which will/can produce seed for the survival of the species. So, the plant aborts the "smaller" bolls and squares.

Of all the several hundred sheds that I check when walking fields, there was only one this week which was insect (worm) damaged.

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The Texas A&M University System, U.S. Department of Agriculture and the County Commissioners Courts of Texas cooperating.

Cutout

We are seeing many fields reach the cutout stage of development.

Cutout is the final stage of cotton plant growth prior to boll opening and characterized by predominance of more mature fruit, general absence of squares and blooms through shedding and cessation of new terminal growth. Cutout is also the last effective flowering date for blooms to develop into **bolts with adequate size and fiber properties**.

There are two types of cutout, physiological and seasonal. Physiological cutout occurs when there are less than 5 nodes-above-white-flower (NAWF). When NAWF reaches 5, fruiting growth will overpower vegetative growth and the plant is going to go ahead and mature what it can on the plant. A field can hang around 5 NAWF for several weeks provided the necessary resources are available.

Seasonal cutout is a calendar date in which based on historical records, there is a chance for accumulating enough heat units (between 800 - 850 HU) to mature a white flower. For our area, August 6 is the date in which there is an 85% chance to accumulate enough HU's to mature a white flower and August 12 is the date in which there is a 50% chance to accumulate enough HU's to mature a white flower. It is these dates that most individuals have a hard time accepting. Based on two years of bloom tag work I conducted, it was concluded that between August 20 and 25 was the last date in which a white flower contributed significantly to yield and quality. It is not being said that you can not produce lint from white blooms that occur after these dates. What is being said is that after these dates, any white blooms are not of the best quality and that to attempt to mature them out completely you are risking the yield and quality of the bolts that are already fully mature.

Once cutout (physiological or seasonal) is achieved, HU's are then calculated for each day and accumulated. Once 450 HU's past cutout have been accumulated, the bolts that will contribute to the final yield are relatively safe from insect damage. Once 850 HU's past cutout have been accumulated for the last set of white blooms, that field can be scheduled for harvest aid applications. The 850 HU is used because

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that is the number of HU needed to produce a "normal" mature boll.

I know that with a young crop we need these late season blooms to make but we also need to be realistic on what we can achieve and base our management decisions on these factors.

Now these rules need to be used with some common sense. The last of the fields to start blooming will need as much season as possible to produce as much as they can. In these fields, we will disregard the seasonal cutout date and HU accumulation and let the end of the season take over; using a killing freeze to terminate the crop.