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# **Cotton Insights Newsletter**

A service provided by Windstar, Inc. affiliated gins.

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### **Crop Update**

The past two weeks have been "closer to normal" than the 3 week period from June 26 through July 15. That period of time was about 19% below normal with respect to cotton heat units. The past two weeks were much better in terms of heat unit accumulation. Cotton growth has gone "exponential" and in most of our agronomic trials, plant heights have increased substantially over the past 3 weeks. Recent spotty rainfall events have occurred that have provided some significant localized rainfall. Verticillium wilt symptomology is showing up in a lot of fields. There is more on that below.

The good news is that based on observations collected from our agronomic trials, nodes above white flower (NAWF) at first bloom has ranged from about 6.5 at sites where excess ponded rainfall was encountered to 8 to 10 in other fields. The bad news is that the first bloom dates were later than desired. These trials indicate that the early May planted irrigated fields took from 75 to 80 days from planting to reach first bloom. May 21 through May 25 planted fields reached first bloom in 62 to 67 days from planting. Many of our trial fields began blooming sometime last week. If the lateness of the crop is not considered, the yield potential of many fields is excellent.

Plant growth regulator questions continue to arise. Rates for extremely vigorous cotton have generally been fairly high. The planted variety is important, as well as field-specific issues such as nitrogen fertility, fruit retention, NAWF, localized determinations such as soil moisture in the upper profile, and irrigation capacity.

10-day weather forecasts for much of the region appear to indicate slightly below normal to normal temperatures with low precipitation chances. The significant leaf area that has been generated in many fields will likely result in high evapotranspiration needs for the crop. It's probably a good idea to get out ahead of this in fields with low irrigation capacity. Hopefully we will get additional thunderstorm activity that will help many fields.

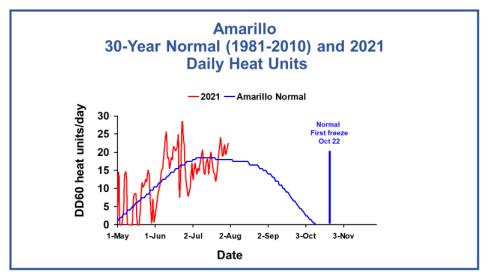
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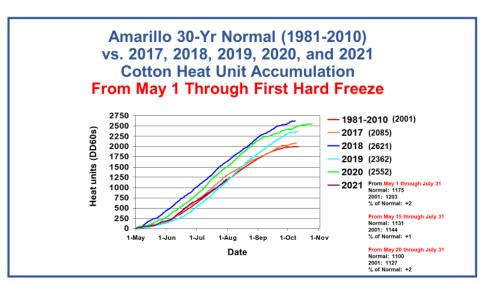
After mother nature provided ample rainfall in many areas and cooler conditions, we planted a bit later than desired, lost some early fruit, and now need to get back to more normal temperatures. Nitrogen and insects were covered in the July 2 newsletter, and PGRs were discussed in the June 24 issue. Many new varieties have high growth potential, and N fertilizer applications have been made by many producers. Therefore, with good rainfall, and lower than normal fruit retention (perhaps due to insect or 4-bract square abortion issues), many of these fields are going to need focused PGR management and a good fall.

#### Weather Update

Daily cotton heat units are running below normal and can be readily seen in the graphic below.



Based on the graphic below, it appears to me that if this weather pattern holds, we are in a year that still looks somewhat similar to 2017.



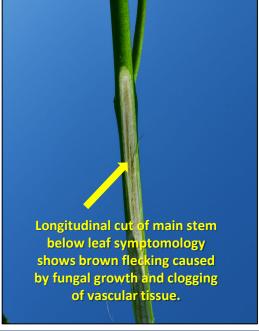
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#### Verticillium Wilt Observed

- We have found significant symptoms in our agronomic trials from Sunray to Edmonson in Texas. There is currently a presence of this disease in most of our trials.
- Verticillium wilt is caused by the fungus Verticillium dahlia. This disease is commonly
  found in fields that have previously produced cotton, as the fungus can lie dormant in the
  soil for some time. This disease overwinters as a microsclerotia reproductive body, and it
  then germinates and infects plants the next summer.
- As noted by the name, this is a wilt disease, which means the fungus essentially germinates in the soil and infects the plant via the root system. The disease then plugs the water conveying tissue (xylem) as the fungal hyphae grow up through the plant. This choking of the water supply in turn causes the plant to wilt.
- Lower leaves show the first symptoms which later move up the plant, impacting younger leaves. This disease causes severe wilting and can eventually prematurely defoliate the plant, which in turn reduces the photosynthetic capacity and fiber development.
- Production can be severely reduced under high disease pressure. Both boll weight and quality are negatively affected.
- Where good crop rotation is practiced the disease pressure can be significantly reduced.
- Cotton varieties vary greatly with respect to tolerance to the disease. If fields have significant disease pressure, variety selection is important, and currently it is the only economical method to manage this production challenge.
- For the 2020 report provided by Dr. Terry Wheeler, Research Plant Pathologist at the Texas A&M AgriLife Research and Extension Center at Lubbock, click on the link here: https://lubbock.tamu.edu/files/2020/12/Verticillium-wilt-variety-trials-2020.pdf





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## Verticillium Wilt Photographs



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