



# Blacklands IPM Update



## GENERAL:

Cool and wet weather remains in the forecast for the next 10 days. This rainy spell has delayed harvest, caused disease concerns in corn, and slowed down cotton growth and development. There were some wheat harvest operations going on Thursday, but I have not heard how the test weight and grain quality has held up on these fields. Wheat producers are concerned with reduced test weights and sprouting in the head after the recent rains. Cotton growth has been slow for the last 10 to 14 days as the cloudy skies, cooler temperatures, and excessive soil moisture has been unfavorable for cotton growth. Corn in the area is starting to pollinate in some fields, with other still a week or two out from tasseling, and the recent cool and wet weather has been a cause of concern for some corn producers with northern corn leaf blight.

## WHEAT:

Wheat harvest has been delayed, but late this week there has been a few fields harvested in the area. I have not heard how the grain quality of these fields have held up with the cool rainy weather over the last 14 days. These recent rains have brought concerns of lower test weights, and pre-harvest sprouting. Texas weight of grain crops especially wheat and other small grains can be reduced by repeated wetting and drying of the grain. To understand how this happens when wheat is at physiological maturity the grain is about 37% moisture and the kernels are too soft for harvest operations. Rainfall and/or heavy dews between physiological maturity and harvest causes the kernels to swell, and as they redry they do not return to their original size and shape. This swelling of the kernels causes the grain to not pack in to the given volume as well which is why our test weight drops. This reduction in test weight can lead to an increase in the number of bushels produced on the field, but the weight of the bushel will be lower.

Pre-harvest sprouting is a phenomenon where kernels sprout in the head before the field can be harvested, and with the recent rains is something some area producers are concerned about. Pre-harvest sprouting is caused by prolonged periods of rain and/or high humidity before the crop can be harvested. Environment conditions during grain fill, mainly temperature can increase the susceptibility of the crop to pre-harvest sprouting. When the grain is produced during cool temperatures it typically has a higher level of dormancy, and are more resistant to pre-harvest sprouting, while high temperatures during grain maturation tends to increase the possibility of pre-harvest sprouting. The temperatures we experienced during grain maturation were cool, and most fields should have so decent dormancy. The risk of seeing pre-harvest sprouting is increased by repeated wetting and drying cycle. Additionally, there also appears to be varying degrees of susceptibility between varieties. As of now I have checked a handful of fields throughout the county and have not found any signs of pre-harvest sprouting, but talking to a local grain elevator that had some wheat brought in said they had seen a low amount of pre-harvest sprouting in wheat. Digging through the internet, the last time we had conditions favored for pre-harvest sprouting was in 2015, and I found an article written by Clark Neely. This article can be found on the Texas Row Crop Newsletter Blog and can be found at <https://agrilife.org/texasrowcrops/2015/06/02/pre-harvest-sprouting-threatening-2015-texas-wheat-crop/>.

## CORN:

The area corn crop is growing nicely, but much like our wheat and cotton crops it too could use a break from the rain. Corn in the area ranges from currently pollinating to about 10-14 days from tassel emergence. I have picked up some fall armyworm feeding in some non-Bt corn, and have seen an increase in corn earworm moth activity over the last 7 to 10 days. Northern corn leaf blight (NCLB) remains and concern for some area corn producers as more rain and cool temperatures remain in the weather forecast for the next 10 days. For those that are still on the fence about spraying or not spraying for NCLB, there are three factors that will decide if your field(s) are at risk for needing a fungicide application. These factors include 1) degree of susceptibility of the hybrid to NCLB, 2) how long has corn been grown on the field as corn on corn cropping practices increases susceptibility, and 3) is there any corn residue on the soil surface. The continuation of rain changed in the forecast and daily high temperatures not predicted to exceed 80°F for the next 10 days, is creating an environment favorable for disease development. Tom Isakeit and myself put together a Blog post covering NCLB for the Texas Row Crop Newsletter, which included a decision aid (**Table 1**), and can be found at <https://agrillife.org/texasrowcrops/2021/05/21/northern-corn-leaf-blight/>. Additionally, there is more information on NCLB in previous newsletters that can be found on the Hill County AgriLife Extension Service webpage at <https://hill.agrillife.org/newsletters/ipm-newsletter/>.

**Table 1.** Northern corn leaf blight decision aid to determine if fungicide application is warranted in Central Texas.

1) Is the hybrid susceptible to NCLB? E.g. on a scale of 1-10, where 10 is very susceptible, it ranks 8 or higher.

*YES—Go to 2*

*No—No need to spray*

2) Was the previous crop corn, and is there residue?

*YES—Go to 3*

*NO—No need to spray*

3) Are there lesions on at least 50% of plants

*YES—Go to 4*

*NO—Don't spray be keep checking field*

4) Is corn approaching or at tasseling?

*YES—Go to 5*

*NO—Don't spray but check forecast for wet weather*

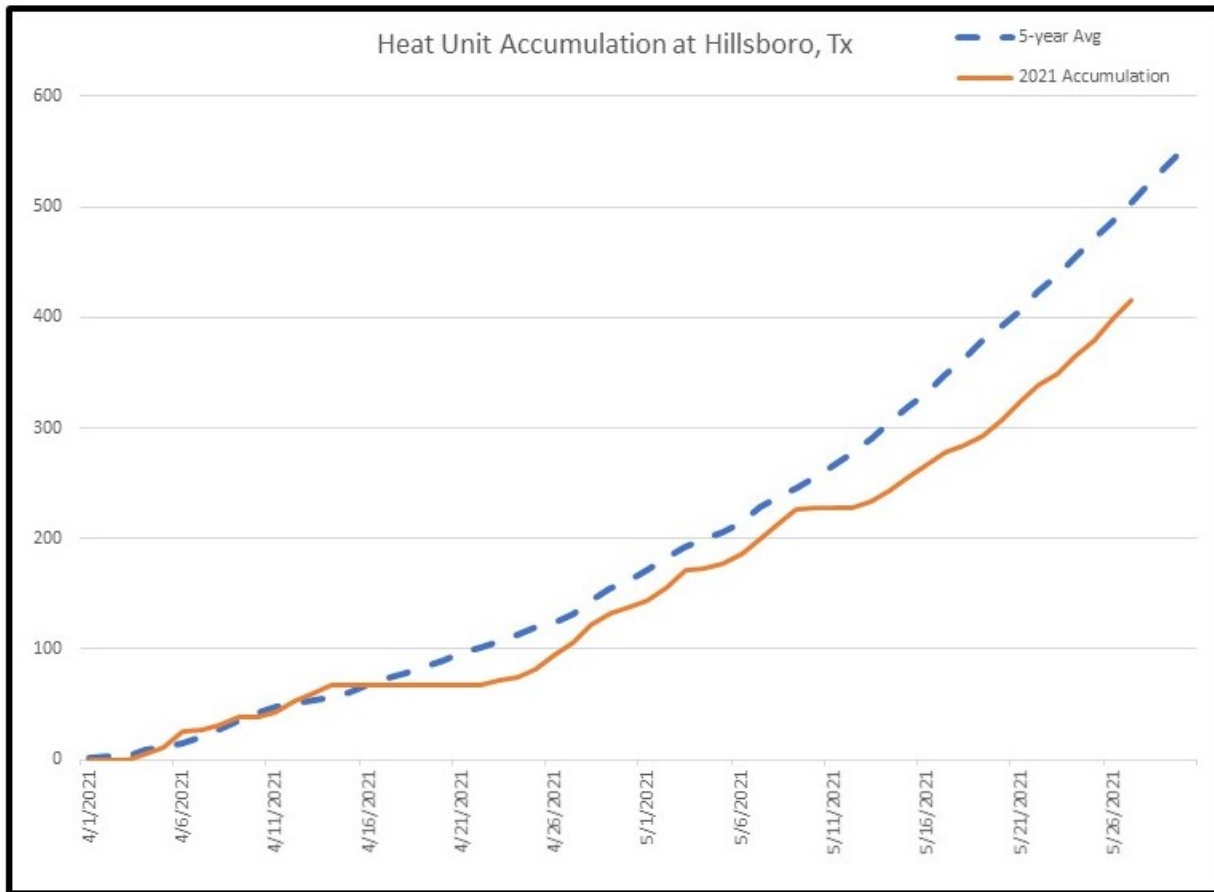
5) Is there rain in forecast?

*YES—A preventative fungicide application would be warranted between VT and R1 (flowering)*

*NO—Don't spray yet, but once crop is past R1, there would be no benefit from fungicide application*

## COTTON:

Cotton in the area is still growing slowly, and there are three explanations, 1) our cooler temperatures have led to almost 90 GDD60s less than the 5-year average GDD60s accumulation (**Figure 1**), 2) the prolonged period of rain has led to excessive soil moisture which is not conducive for cotton growth, and 3) prolonged cloudy days has reduced the photosynthetic rate of plants slowing down energy production by the plant. Area cotton ranges from 3 true leaves to 7 true leaves with some fields starting to set squares. There are still a lot of thrips out in the area, and cotton that has not yet started setting squares is still susceptible to thrips damage. Fleahoppers are in the environment, with most of them being found in roadside ditches, but I have found a few fleahoppers in some fields. It is important to protect cotton from avoidable square loss like from fleahopper damage, for the first three weeks of squaring. The economic threshold for fleahoppers in cotton in the Texas Blacklands is 10-15 fleahoppers per 100 plants.



**Figure 1.** GDD60s accumulated from April 1, 2021 through May 27, 2021 (Solid line) at Hillsboro, TX compared to the 5 year average (Dashed line).

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