

Northwest Panhandle Crop Notes

May 2023

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Dallam, Hartley, Moore, and Sherman Counties

Spring Continues a Bit Longer

To me, it seemed like this spring season went by fast and no doubt, we all remember those one- and two-day wind events as the drought continued. And big wind events were happening weekly. As the drought continued since last fall, through winter and into spring, I found myself frequently thinking, “let it rain, let it rain.” It has become routine to check the weekly, posted updates of a statewide, drought monitor map online https://twdb.texas.gov/newsmedia/drought/doc/weekly_drought_report. The most recent map is included below. Each one gives a quick overview of the extent to which drought has gradually expanded and likewise, to update should there be a reduction in areas impacted by levels of drought across the Texas Panhandle. Thank goodness we can say that the later condition has been developing during the month of May. This equates to a slower accumulation of heat units in May but the additional moisture will be highly beneficial to the growth of recently-planted crops.

Water Weekly

For the week of 05/29/23

Water conditions

Recent precipitation continues to have a positive impact on the drought monitor map. The latest map, for conditions as of May 23, shows the eighth consecutive weekly decrease in the area of the state impacted by drought. Drought area has reached its smallest extent since November 2021.

Drought conditions

- ◆ 42% now
- ◆ 49% a week ago
- ◆ 58% three months ago
- ◆ 79% a year ago

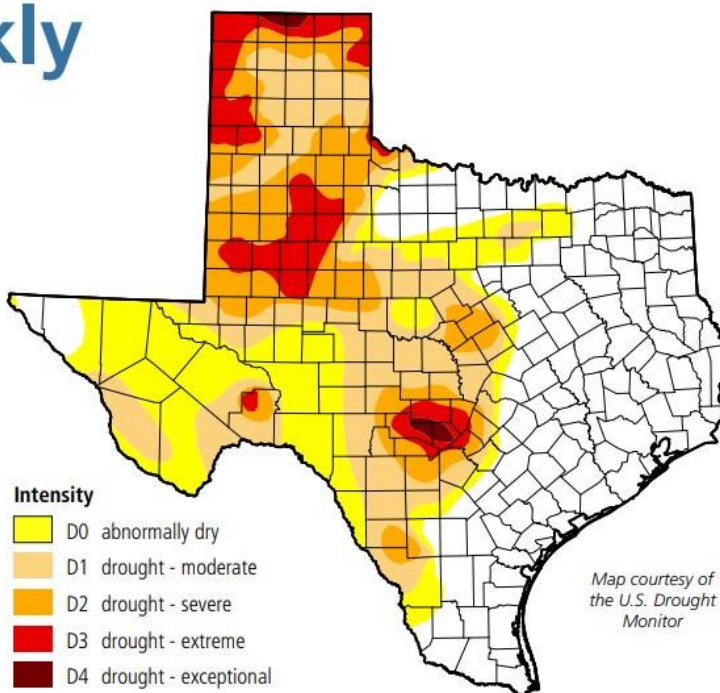


Plate 1. Late May update, reduction in severity of drought conditions continues across Texas Panhandle.

April came around with a trend for warmer high and low temperatures but still not an abundance of accumulated heat units. It was not unusual getting to the end of a week and experiencing overcast, cool conditions. Earlier notes I made include mention of a pleasant change in the last week of April with scattered rain showers happening. About that time, a weather update from Better Harvest indicated that one inch or better fell over much of the northwest Texas Panhandle.

No doubt everyone in our region appreciated the moisture received. The rain was timely, coming just ahead of or shortly after planting efforts had begun on a new round of warm-season crops. These rainfall events were also a timely bonus for cool-season, small grain crops.



Plate 2. Headed wheat at soft dough stage, May 2023, Moore County.

Though warmer, sunny days materialized in May, there have also been cool, overcast, rainy days. And my, we have been glad for these new developments even when it delayed planting. The weekly, soaking rain shower events help tremendously in irrigated and non-irrigated fields. These rain events are also a timely bonus for cool-season, small grain crops that have recently progressed from flag leaf to grain fill stage.

Now is prime time to study the data generated from soil moisture sensors installed in grower fields. My speculation is that the added moisture from rainfall is or soon will be detectable to lower depths in the soil profile. Stored soil profile moisture offers measurable relief from drought conditions in currently-maturing, irrigated or dryland small grain fields. Another thought to consider is that a few overcast, rainy, cooler days help to curb those higher rates of pan evaporation or water loss from the soil surface that occurs with a lot of sun and when temperatures climb to the upper-70s and lower 80s by mid-afternoon. Cooler conditions can lessen the drawdown on soil moisture reserves needed later in the growing season.

One advantage of utilizing modern, soil probes to monitor soil moisture is that most of these probes are connected through an intelligent, wireless system which also measure and report soil temperatures at different soil depths. Keeping an eye on soil temperatures ahead of planting helps with knowing the best time and place to get underway with planters. Additional trips to the field to check soil temperature at planting depth can be saved if growers already have online access to that information. Likewise, tracking soil temperatures after planting gives additional

insight on what might be expected about the rate of seedling root growth as well as the ability for young roots to acquire nutrients and water needed for growth above the soil surface.



Plate 3. Two brands of installed soil moisture sensors that provide data from multiple soil depths, 2022.

Worth Mentioning

The Pipeline Ag Safety Alliance declared April as its National Safe Digging Month. They were reminding folks about the importance of contacting 811 before digging, installing fence posts, cleaning ditches, and more. Be sure to get clear indication from the folks that check and know before digging by letting them flag locations of buried petroleum and electrical lines across fields and fence lines.

DeDe Jones recently indicated that she had received a lot of calls about the going rate for farm cash leases as well as current land values. One reliable, favorite source of DeDe's and entity tracking leases and land values is The American Society of Rural Appraisers. Their land value publication has recently been updated and can be accessed at <https://www.txasfmra.com/rural-land-trands> . For general information on crop livestock insurance, commodity markets, government programs and ag news check out <https://proudtofarm.com>, a one-stop shop for all things related to farming and ranching.

Dr. Ken Obasa and I spent one day this week touring across Moore and Hartley counties to scout for late disease in wheat primarily but also triticale and any other small grain crops we can observe. Where the situation along edges of fields merits (irrigated or dryland), we stop to collect a whole-plant sample that can be taken back to the laboratory for further analysis and verification of symptoms. Location coordinates of field observations and stops are logged along the tour route in case there is a need to return to a particular site at a future date. We plan to spend another day scouting fields across Dallam and Hartley counties. If you have a field or two

of small grain that is headed out, showing disease symptoms at field edges and you would like for us to look at it, please get in touch.

We are fast approaching a new season of adult moth trapping near corn fields (Bt and non-Bt). As soon as the weather permits, traps will be set up and effort will be made to collect weekly moth counts in Moore and Sherman counties. This information helps growers, consultants, and others to keep abreast of moth flights, egg lay potential and likelihood of reaching economic thresholds of worm pressure from four, tracked species. These include the Western Bean Cutworm, Southwestern Corn Borer, Corn Ear Worm, and Fall Army Worm. Plan is to install and monitor 16 bucket traps, four at each of two locations in Moore County and at two locations in Sherman County as was done in 2022 (plates 4 & 5). Collected data is updated to a table format and distributed more immediately to folks via a Remind text. If you're interested in being added to the list of recipients, let me know.



Plates 4 & 5. Adult moth trapping sites for corn at two locations in Sherman County, 2022.

Reflection on Cotton Planting

In my travels around the northwest Panhandle the later part of April, I couldn't help noticing that there were few planters operating in fields. However, the pace of planting activity seemed to rapidly increase during the first week of May and that level of activity held steady through the middle of the month. I heard that a lot of acres pegged for cotton were planted during this time. It is fortunate that growers were able plant when that narrow window of time permitted. Beyond that, you will recall what took place weekly for the next couple of weeks. Yes, this region received rain showers once a week leaving little time for drying conditions in fields in between. Soon we find ourselves reaching the 31st of May which happens to be the last day by which cotton should be planted in the northwest Panhandle. My recent reminder about this came while looking over details found on the Plains Cotton Growers website <https://www.plainscotton.org/events/>. Last plant dates for growing areas across the central and southern High Plains come a bit later and are also posted in an easy-to-read, map format.

Looking back to early May, average 10-day soil temperatures in the upper six inches had changed little compared with mid to late April temperatures. Reported soil temperatures represent data collected at the North Plains Groundwater Conservation District's Water Conservation Center and shared in David Reinart's Ag Weather Report. The 10-day average soil

temperature near Etter was 49- and 51-degrees Fahrenheit (F) at two and six inches of soil depth, respectively on April 17th. Skipping ahead two weeks to May 1st, the 10-day average soil temperature at two- and six-inches was 46- and 49-degrees F. One week later (May 8th), the 10-day average soil temperature at two- and six-inches was 51- and 52-degrees F. By May 15, the 10-day average soil temperature at two- and six-inches was 57- and 58-degrees F. Thus, soil temperatures were generally cool but gradually improved during the first half of May from the standpoint of planting cotton. With limited time to plant and onset of additional rainfall at the beginning of the season, there has been little opportunity to wait for ideal conditions. Planting conditions experienced like the recent ones emphasize the importance of planting seed that shows a strong record of cold germination and early seedling vigor. For ready access to research proven guidelines and comments written by cotton specialists, click on the links below.

<http://cotton.tamu.edu/General%20Production/scs-2005-17%20Soil%20Temp.pdf>

<https://agriflife.org/texasrowcrops/2016/05/06/considerations-for-cotton-planting-and-early-season-growth/>

<https://www.plainscotton.org/wp-content/uploads/2023/05/2023-TX-Panhandle-Planting-Conditions-Forecast-050823.pdf>

Replicated Agronomic Cotton Evaluation (RACE) Trial

We appreciate Mr. Bill Graff agreeing to cooperate and coordinate with us on the implementation of a RACE trial at his farm in Hartley County this season. Field is located about three miles north of Hartley just off FM 809 on the north side where it bends to the east before continuing north. This new trial consists of nine varieties representing mixed herbicide technologies, planted on May 11th at 65,000 seeds per acre (see plate 6).



Plate 6. 24-row planter used to establish 8-row plots in RACE trial, Hartley County, May 2023.

The second image below was taken on May 24th, almost two weeks after planting (plate 7). At that point in time, many cotton seedlings had emerged, and others were still emerging. The situation looked promising in the way of getting an adequate stand. My plan includes collecting mapping notes on one or more varieties at this site starting at pinhead square and continuing through flowering. Collected data will contribute to a database started in 2022 that can be used to refine a target development curve for cotton grown in the northern Texas Panhandle.

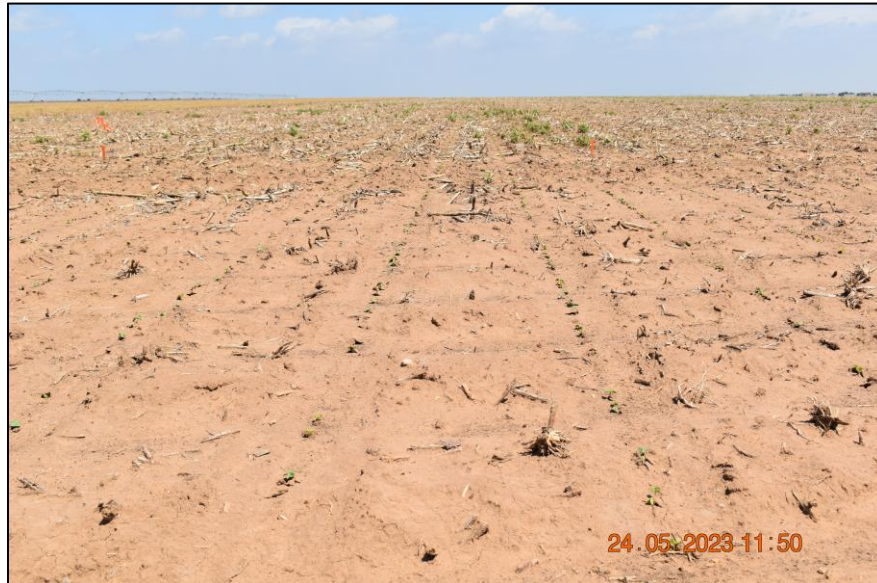


Plate 7. Seedling cotton emergence in RACE trial plots located in Hartley County, May 2023.

Irrigated Corn Response to Tillage

Previous research has identified management practices that promote greater stability of nutrient cycling, increase the infiltration of water, improve water holding capacity of soils, reduce the detrimental effects of erosion, and ultimately improve crop yields over time. These management practices should also promote the sustainability of corn production in the northwest Texas Panhandle.

We are now underway with the second year of a long-term study that seeks to focus on tillage comparisons for irrigated corn production. The main objective of this continuing study is to compare in-season agronomics, production outcomes, and economic aspects of three tillage treatments supporting pivot irrigated, continuous corn production. This integrated cropping system includes beef cattle grazing and consuming a portion of corn residue from the previous season during the winter months (plate 8). Three tillage treatments were established in late April which included conventional versus strip-tillage (plate 9) and no-till. The field and study area were planted on May 9th to Pioneer corn hybrid 1370Q. The row spacing is 30 inches and dimension of individual plots is 48 rows across and 150 feet long. Rows of all plots continue to be oriented in a north-south direction.



Plate 8. Remaining field residue and manure from beef cattle grazing field study site during the winter off season. March 2023, Dallam County.



Plate 9. Adjacent strip-till (left side) and conventional-till (right side) treatments in a pivot-irrigated field in Dallam County, May 2023.

Tillage is a management tool and represents varying degrees of soil disturbance as seen above that can affect changes in soil physical, chemical, and biological properties over time. Available soil moisture is a management variable affected by changes in soil properties, directly affects plant growth and may change based on differences in tillage used. David Parker, Ph.D., Associate Professor at WTAMU and Extension Water Engineering Specialist, acquired funding that has been integral to the purchase and proper installation of AquaSpy soil moisture sensors, soil, plant tissue and irrigation water analyses among other key aspects of the project. We plan to continue monitoring soil moisture in six of 12 plots with AquaSpy sensors this season like was done in 2022 (plate 10). We greatly appreciate the efforts of Eric Burton and Assistants with Better Harvest to install, connect and provide expertise on utilizing data generated by soil moisture sensors at this study location in Dallam County and other locations.



Plate 10. Installed soil moisture sensors within tillage plots of pivot-irrigated field planted to corn in Dallam County, May 2022.

I will aim to keep you posted going forward this second year about the data being collected in this tillage study as well as updates on crop growth and development. My hope is that we continue to receive timely rains as the season passes. We do not want to see any more of that D2 and D3 drought designation showing up on U.S. Drought Monitor maps like we did last year. Any supplemental rainfall that comes during June through September will be welcome considering weekly increases in crop water use by growing corn.

This wraps up today's blog. I trust that everyone has received sufficient rain as May ended and the first day of June appeared. Glad I can say another slow, soaking rain event happened most of today so that will surely help deeper infiltration of water into the soil profile where it is best stored. Thanks again for your support and interest whether you are a grower, consultant, representing ag industry, university, or government. Special thanks to sponsors of our meetings and programs, Grower Cooperators, County Commissioners and Judges.