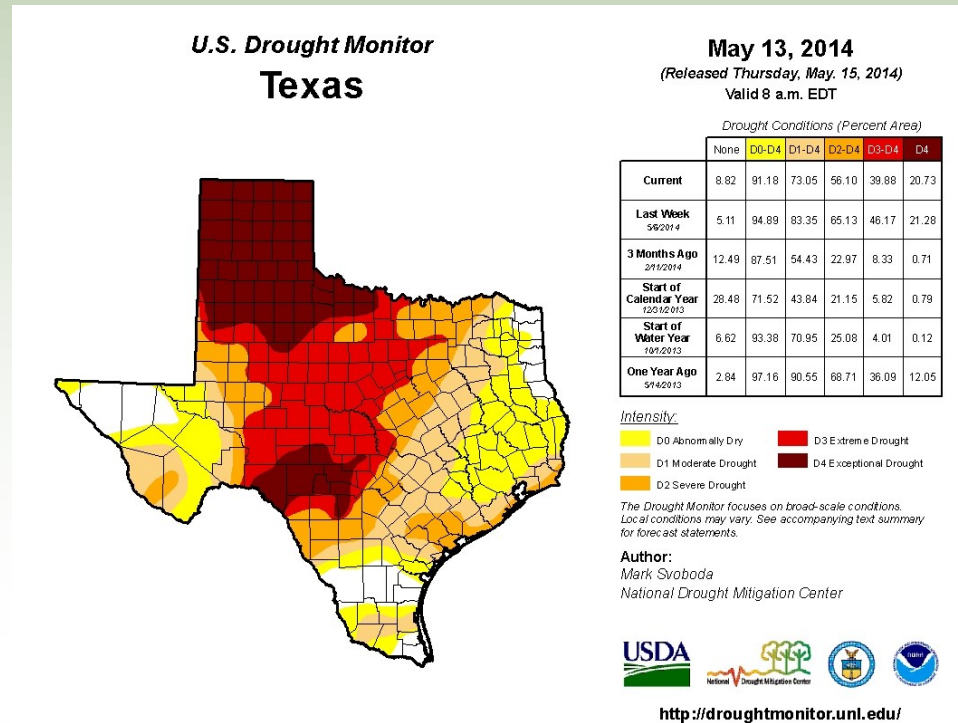


General Status

Whether it has been hot, dry winds, cold, dry winds, or an otherwise 'normal' windy day, there has been an unending stream of intense, moisture sucking winds afflicting the area. Our seedbeds show the results, as do our energy bills.



Earlier this week winter tried to make a surprise and unwelcome return to the region. Temperatures plummeted to a recorded 33°F in Tulia and 36°F in Hale Center on the morning of May 14. Producers who had freshly planted cotton, sorghum, corn, or transplanted vegetables braced for the worst throughout the night.

As we make post cold front rounds this week, I find no major frost damage to our emerged crops. I feel all corn, sorghum, and even most of those tender tomatoes have survived with only the typical wind and sand blasted damage. The growing points and roots of these crops look healthy to me. The main area for concern will be over seedling cotton.

Cotton Plantings and Our Potential for Chilling Injury

I would estimate that in an area from Plainview north through Swisher County over 50% of the irrigated cotton had already been planted. Several of our participating growers were just a few fields away from finishing planting for the season just before the surprisingly cold 'cold front' was predicted to be as harsh as it really was. This area was traditionally once the northern most area of cotton production in the State of Texas and producers are very conscientious of a short growing season and tend to get cotton started as early as possible. The area from Plainview south through Hale County was much more conservative about planting cotton before through early May. Slowed due to a less than ideal seedbed, cool spring, harsh conditions, lack of enthusiasm in a tough environment, and even some weed control issues, cotton planting is just now getting started in our southern area.

Of the fields that were planted in early May, many were planted into drier than ideal conditions, with any pre-irrigation moisture resting well below the seedbed. These dry seeds are as safe from any chilling injury as though they were still in the barn.

Any field where the seed had swollen (the first stage of germination where the seed becomes hydrated), root extended, or began pushing are at risk for chilling injury. Soil temperatures below 50°F (or air temperatures if emerged above the soil surface) have proven to cause serious chilling injury to seedling cotton. Our air temperatures certainly dipped far below this level but I do not think our soil temperatures did. On May 13 I took a 6" soil temperature reading west of Kress in tilled and pre-irrigated ground of 59°F at 10:15 am. Today, May 15, I took another soil temperature reading north of Edmonson in no-tilled heavily irrigated ground of 54°F.

While not below the critical 50°F level these temperatures are far from ideal. Any cotton seedlings that had enough moisture to have started the germination process were at risk of some level of chilling injury at these temperatures. This is a very sensitive stage for cotton seedlings and cold temperatures can adversely affect plant hormones which control several plant functions such as cell division, differentiation, and reproduction at the root tips and the growing point. Any major malformation at this time will hinder plant health and yield for the entire season. I recommend monitoring pre-emerging seedlings for any sign of injury, particularly to the roots. One key clue to identifying chilling injury may be a shortened or clubbed tap root that is often described as "crow footing" as lateral roots attempt to compensate for the loss of root system represented by the killing of the root's growing point.

I have not found any early indicators of chilling injury to the at risk fields I have checked, but it might be a few days early to assess any damage today. With a few days growth in the predicted warming trend might be helpful in identifying malformations and injury

Wireworms

The lower soil temperatures will delay cotton seedling emergence, which in turn extends the potential for wireworm damage. Wireworms do not like cotton and it is not a preferred host. They will however attack cotton after germination and before emergence as a survival method, often as a last resort to save off starvation. When we review the literature we find a list of circumstances where wireworms could be a problem for seedling cotton.

- Following a grain, forage, or hay crop.
- In a dry season following a wet year.
- In a field with a heavy cover crop or heavy spring weed pressure.

The damage from wireworms can be two fold. First, is the direct damage from their feeding. If the feeding occurs on the cotyledons only the damage is usually minimal. It takes an experienced eye to even spot this type of damage. If the feeding occurs along the tap root it could be substantial causing developmental delays for that plant taking weeks to recover from, and if heavy enough, eventually fatal. If the feeding occurs at the apical meristem (growing point found between the two cotyledons) or the curve just below the cotyledons, it is almost always fatal for that plant. There is a substantial amount of secondary damage that is normally associated with wireworm feeding on the taproot of cotton seedlings. The wounds caused by the feeding open gapping wounds allowing seedling diseases to impact young plants at a level I would estimate to be near ten-fold.



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1090 Agri-Plex Re-
port. 1090 AM
KVOP - Plainview.***

***"IPM Wednesdays" from
12:30-2PM on The
Fox Talk 950 Ag
Show. Fox Talk 950
AM - Lubbock.***

To sample a cotton field for wireworm damage, the same methods for evaluating chilling injury can be employed. Several seedlings should be dug up or scratched and evaluated for feeding damage and injury. Thus far, I have not noted any major wireworm damage in our germinated seedling cotton and our seed treatments seem to be holding them at bay for now.

Cattle

It is not often we need to cover any cattle issues for the Plains Pest Management Association. There appears to be an unusually high lice population attacking our regional herds this spring. This combined with the extremely dry conditions and the cattle seem to feel very 'itchy.' This is causing quite a bit of patching of hair loss and overall irritation, and potentially a lessening of gain per day and could mare the hide. The pour on and spray on treatments still seem to be working well when applied.

Please call or come by with any questions,

Blayne Reed