

FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
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Wheat Agronomy

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Wheat Agronomy

General Wheat Conditions

A significant amount of wheat was terminated as hay to make room for increased cotton plantings. Some producers were not able to terminate wheat as cover crop when they wanted to due to wet weather and, with cotton prices where they are, decided to terminate wheat stands in later stages of growth. Overall, I estimate that wheat is about two weeks and more later than a typical year, even more in some cases (especially if planted Thanksgiving or later). This later wheat maturation will mean that irrigation will extend further into late May and early June. For producers looking to shift water to cotton and peanuts in our southwest counties, this will cut short wheat water needs.

Planting Cotton after Wheat Harvest

In an occasional year this might be achieved south of Lubbock without cotton planting going past the first few days of June. But not in 2010. But some producers have asked about this, and in fact others just decided to terminate decent stands of wheat for grain to go to cotton (low wheat prices, cotton prospects are high).

Can Harvest Aids or Growth Regulators Hasten Wheat Grain Maturity?

In short, probably not. We are well past the time when anything related to growth regulators might have had an effect on the current wheat crop. A few inquiries have been received about using harvest aids for wheat, but we are doubtful that a producer would gain but a few days at best, especially since in 2010 with the late wheat we are already pushing maturation

and drydown into the hotter days of June, which means dry down will occur faster. Most harvest aids are in fact labeled herbicides like Roundup, Clarity (dicamba), Ally, and 2,4-D, and they may actually provide more benefit in tackling weed problems in the field rather than terminating the crop. In fact, crop termination is probably not the way to regard these chemicals as they all stipulate no application until hard dough stage with seed moisture at 30% or less. If you have a seed block, then we'd advise the grower to forego the late-season over-the-top treatments to minimize any potential effect on seed quality.

For a list of labeled harvest aids in wheat, consult p. 14 of Extension's "[Weed Control Recommendations in Wheat](#)" B-6139 (June 2008).

Recent Disease Observations & Comments for Wheat

Wheat Streak Mosaic/High Plains Virus/
Triticum Mosaic Viruses (transmitted by wheat curl mite)

Extension agronomist Brent Bean and Extension plant pathologist Ron French, Amarillo, note that the apparent incidence, at least so far, of wheat streak mosaic (or High Plains virus or Triticum Mosaic, which mimic it) has been low. These diseases would likely have been vectored a long time ago hence (and it is the wheat curl mite that transmits it) hence you would not expect to see these mites now. Dr. French notes that with the wheat curl mite transmitted viruses, he has seen more cases from when the crop was planted in mid August to early October, depending on where in the High Plains. The later planting minimizes the wheat curl mite's survival in colder weather. Ron's test lab is reporting samples of wheat testing positive for these wheat curl mite transmitted viruses but not as much as in 2009 or 2008. Most positive samples have been from the Plainview area but the Amarillo lab is starting to get some positive tests from the Panhandle, too.

Barley Yellow Dwarf Virus, BYDV (transmitted by aphids)

Drs. French and Bean have noted that 2010 has been more of a Barley Yellow Dwarf Virus year (and its subgroup Cereal Yellow) not only in the High Plains but also in Central Texas and College Station area. A [few comments and pictures of BYDV](#) come from the Univ. of Nebraska. Field reports that suggest BYDV is present, however, note that the aphids now are largely absent from the field. The effect on the crop from BYDV can vary depending on the strain, time of infection, incidence of the virus (how many plants infected), and stress factors that could promote viral replication and virulence/aggressiveness.

Irrigation Timing and Late Season Irrigation for Wheat

Recent wheat evapotranspiration rates have ranged from about 0.2" per day to nearly 0.5" per day (hot, windy, temps. approaching 90 F). The good crops on dryland that are going to grain will be rapidly reducing available soil moisture in the top 3' of soil with warmer conditions. Producers who are interested in tracking daily wheat evapotranspiration may visit <http://txhighplainset.tamu.edu/statemap.jsp> for a map of Texas AgriLife weather stations in the South Plains (Lamesa, Lubbock, Halfway, Earth, Farwell, Dimmitt and many other weather stations closer to Amarillo) then proceed as follows: A) for the previous day's PET for wheat, click on your desired location, then click 'Daily Fax'; or B) select 'Weather Data' at the above URL then 'Daily' then select location/information/dates (for information go to the bottom of the menu and choose the wheat PET information).

Extension provides a publication titled, "[Late Season Wheat Irrigation for the Texas South Plains](#)". The text from this document is as follows regarding the possible termination of irrigation on wheat in terms of physiological growth (and factors like yield potential, N applied, and plant health may influence the decision).

What stage is the crop in terms of heading? Pre-bloom or post-bloom? If the crop is past flowering then the window for beneficial additional watering is not that long as grain fill can occur as quickly as 30 days in a high stress environment. Benefit from irrigation is questionable when kernels are past watery ripe, especially if there is still some decent soil moisture. When kernels are milky ripe, then chances that economic yield responses may be achieved due to irrigation are greatly reduced (even if soil is about dried out). Once kernels are mealy ripe (just before soft dough) then the crop is starting to dry down, and irrigation would have little effect.

More recently I revised my comments slightly to potentially extend the irrigation for what effectively amounts to about one additional week: Irrigation scheduling becomes most critical between Feekes 8.0 growth stage (flag leaf visible, or ~10 days before bloom) to Feekes 11.1 (late milk stage in kernel). At kernel milk stage if soil moisture is high then additional irrigation may not be needed. Don't hesitate to irrigate one last time if you can—final yield and fulfilling test weight potential is your benefit. If a producer intends to double crop after wheat then this makes applying that final irrigation a little easier. In addition, if a wheat crop appears to have a significant number of late tillers with larger heads then extended irrigation is more likely beneficial when conditions are dry.

Some producers in the Southwest counties where irrigation moves from wheat to peanuts and/or cotton will find it more difficult this year, since wheat is late, to keep the irrigation on wheat as long as would otherwise be ideal.

Estimating Yield Potential in Wheat

See the [Extension guidelines for a basic procedure to estimate wheat grain yield potential](#). CT

Horticulture and Vegetables

Texas High Tunnel Conference and Tour

Dr. Russ Wallace, Extension Horticulture Specialist at Lubbock, is pleased to announce the first High Tunnel Conference and Tour at the Lubbock Research and Extension Center on **July 29, 2010**. There are several high tunnels on the east side of the Lubbock Center. High tunnels are plastic-covered, framed structures similar to greenhouses, but are not heated, have no electrical components, and vegetable and fruit crops are grown directly in the soil or on raised beds using plastic mulches and drip irrigation. Small farm equipment may be used to prepare the soil bed inside the structures. High tunnels are used to extend production early and later in the season, and to protect crops from extreme climatic conditions (wind, hail, frost, heavy rains, etc.). High tunnels also are used to create ideal environments suitable for increasing earlier and higher quality yields.

The [attached flyer for the event](#) also presents some data from 2009 which demonstrate the superiority of high tunnels for tomato production. RPP



It is that time of year. Sand blowing across the road between two fields near Spade.

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