

Wheat Cropping for Grain & Forage

Wheat Freeze Injury Potential

With temperatures early Monday morning in the South Plains ranging from the low and mid-teens in the north-east along the Caprock as well as the northwest South Plains to 20-22 F in the central and lower South Plains, there will be questions and concerns about the prospects for freeze injury on wheat, especially if crops are going to grain. The duration of freeze was double a concern as it was many hours. I saw some dryland wheat in Dawson Co. last Thursday that had flag leaves emerging on some plants (but no boot), the earliest stage of growth I have observed. Other fields throughout the region are spread out for maturity, some still at early jointing if planted late, but most well in to growth at some degree past jointing, and many fields 4-8" tall on forage.



The AgriLife Extension document 'Freeze Injury on Wheat' may be viewed, printed, or downloaded at : <http://varietytesting.tamu.edu/wheat/docs/mime-4.pdf>

There are many pictures there. Also, a scale of temperatures is listed as well. Duration of cold can influence potential injury and wheat that is lush (moisture content higher) is more susceptible to injury. Droughted, hardened off wheat is less susceptible. The above document's guidelines on temperature for potential and significant freeze injury are 28 F at booting, 24 F for wheat in some stage of jointing (and we were below that), but vegetative wheat injury may require temps as low as 12 F to inflict injury. My Extension colleague Dr. Travis Miller, College Station, noted that for wheat with two nodes above the soil line (second joint), 22 F is the critical temperature then of course duration, conditions of the wheat, the ACTUAL temperature down in any canopy near the soil line (in contrast to air temperature), etc. come into play.

I have not seen any indication of damaged foliage though I have received two producer reports in north or west Hale Co. noting darkened foliage, which is evidence of freeze damage, but if the temperatures are not that low at the bottom of the canopy (if there is a canopy, thinner stands where soil is still exposed will have lower temps to ground level), there will be favorable difference. I expect that some of our wheat will demonstrate burned back leaf tips and yellowing, but I may anticipate some of the characteristic "Water soaked" appearance of the vegetation. As long as that is on the upper leaves, at this point I don't think I would be too concerned. However, if in jointing wheat I examine the growing point in a week or so (use a small sharp knife or razor blade to shave away the surrounding tissues to find the growing point above the topmost hollow stem). If the growing point is brown or mushy, it is dead. Any emerging leaf that is brown is also a sign of a dead growing point.

The following URL notes helpful comments and pictures from Oklahoma State University on March 27th, <http://osuwheat.com/2013/03/26/freeze-injury-to-wheat/>

Two final considerations for potential wheat freeze injury: 1) Wheat freeze damage is rarely as bad as it looks. Freezes in March can hurt yield potential whereas freezes in April can lead to direct yield losses that may not be recovered. Tillering is your friend in wheat, and freezes at this time, if you indeed have damage to primary tillers, can still compensate for yield; 2) if you are going to hay or silage then the freeze is less of a concern. Whereas a freeze can diminish grain yield potential such that later tillers cannot very well compensate for the yield, tiller growth can still produce ample forage, so there is inherently less risk of a freeze to the forage crop than for grain.

Wheat Diseases Not Prominent at This Time

Limited reports of wheat streak mosaic virus (or it could be High Plains virus of Triticum mosaic virus, which require lab tests to distinguish from WSMV) and barley dwarf mosaic virus are limited at this time. It still early at this time to expect significant expression of many of these diseases at this point.

For information on wheat plant health, consult the plant pathology Extension page of the Texas A&M AgriLife Research & Extension Center, Amarillo, <http://amarillo.tamu.edu/amarillo-center-programs/extension-plant-pathology/wheat-publications/>

Two of the best resources on this URL are the pictures in ‘Wheat Disease Identification Book’ and the information for individual diseases in ‘Wheat Disease Fact Sheets.’

Our primary contact for wheat diseases in the Texas High Plains is Dr. Ron French, Extension plant pathologist, Amarillo, 806.677.5600, rdfrench@ag.tamu.edu Dr. French and his colleague Jacob Price run the plant disease diagnostic lab at Amarillo, and they welcome wheat samples to assess for disease incidence. A survey sheet to send with wheat samples is located at <http://amarillo.tamu.edu/files/2011/03/PlantDiagnosticForm.pdf>

Converting Wheat Grain to Hay/Grazing?

If the weather allowed, there is a significant acreage of wheat in the South Plains that would like to go to grain where prices are strong. But with limited irrigation or some dryland that actually has some decent forage, producers may consider moving to forage. We won’t know if this was the right decision until May, but if you have decent forage available now but the prospects for grain are dim, the worst-case scenario is to bypass the hay or grazing, only to have the forage burn up and get no grain either.



Grain Sorghum

Seed Supplies and Planting Intentions

The upward trend in cotton prices since the beginning of the year and the anticipated decline in grain prices are opening up a shift in grower planting intentions back to cotton from grain sorghum though this hasn’t appeared to be significant as of yet. Seed dealers are yet to report any significant release of booked seed, and seed supplies for grain sorghum are still tight. Some grain sorghum seed bookings may be returned which will reduce pressure on seed availability though popular hybrids are still ex-

pected to be scarce. Producers who need grain sorghum seed should still seek commitments on supply. If you have grain sorghum seed booked but didn’t get what you wanted then check with your seed dealer to see if any other hybrids might now be available.

Huskie Herbicide Remains a Common Topic for Grain Sorghum

Huskie herbicide (Bayer) remains a topic of considerable interest from producers due to its good post emerge control of broadleaf weeds including the Palmer amaranth species of pigweed. An Extension overview of Huskie is available at <http://lubbock.tamu.edu/programs/crops/sorghum/>

Grain Sorghum Contract Prices

These are currently at \$0.35-0.40 per bushel under Dec13 corn futures in the central South Plains, then convert to cwt., e.g. about \$9.55/cwt.

Other Alternative Crop Option Retain Good Prices for 2013

Guar, sesame, and sunflower retain good pricing at or above 2012 pricing for West Texas for these drought tolerant, heat tolerant crops.

- Guar contracts are \$0.45/lb., up from \$0.35/lb. in 2012.
- Sesame contracts are \$0.44/lb. for dryland, \$0.50/lb. for irrigation. In addition, Sesaco is offering a \$0.10/lb. bonus to irrigated growers if yields surpass 1,200 lbs./A, which is very achievable. These higher yields will help set a more favorable APH & T-yield for the crop in the region. Seven counties in the South Plains were eligible for a federal crop insurance pilot program (sign up was March 15 for Lamb, Hale, Floyd, Lubbock, Crosby, Dawson, and Terry Counties).
- Sunflower—confectionary: \$38/25 to \$35/23 per cwt. depending on seed size.
Sunflower—oilseed: \$25-26/cwt., some for oilseed crushing, some for bird food.



Split-Pivot Irrigation Scenarios for the Texas South Plains

Producer interest in strategies to spread out cropping under the same pivot to avoid irrigation of the full circle at the same time (either all cotton or a cotton/alternative mix) remains. Extension has posted an updated PowerPoint with more scenarios for split-pivot strategies where major overlap of irrigation of two different crops at the same time is minimized. See the presentation at <http://lubbock.tamu.edu/files/2013/03/Texas-South-Plains-Irrigation-Strategies-2013.pdf>

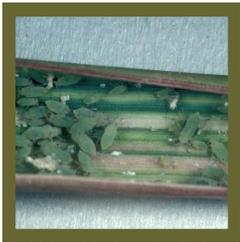
Interest in split-pivot scenarios has been driven in part by producers noting that in cotton they would prefer to grow 60 acres of well-irrigated, well-managed cotton where all their management expertise can come into play vs. having their hands tied and much less ability to manage a good crop if they are trying to water the whole circle.

The following is from the Panhandle Pest Update—Dr. Ed Bynum, Extension Entomologist (March 28, 2013)

Brown wheat mites are primarily a pest during drought stressed conditions which means dry-land fields often develop heavy infestations. Cold temperatures do not affect these mites. They actively feed on the wheat foliage on clear warm days, particularly during the mid-afternoon, and look like black specks moving on the leaves. At night they move down to the soil. A distinguishing trait for identifying these mites is the front legs which are about twice as long as long as their body. Knowing when to treat for infestations is difficult because drought stress can severely reduce crop yields, making treats uneconomical. And, if you can predict when it will rain, a driving rain of at least of 1/3 inch will cause mite densities to decline naturally, regardless of chemical controls.



Russian wheat aphids are a small (1/16 inch long) pale green spindled-shaped aphid that usually infests the younger leaves. The body may have a powdery coating of wax and their cornicles are not prominent. It has a small projection at the end of the abdomen that give it an appearance of having two tails. The majority of the aphids are wingless, but a few will have wings. Feeding from the aphids cause leaves to tightly curl around the colonies. This protects the colony for the climate, insecticides, and makes it more difficult for predators and parasitic wasps to effectively control infestations. The aphid injects a toxin while feeding that



cause longitudinal white, yellow, and purple streaks on leaves and tillers. Under heavy infestations, plants will be stunted and tillers will lay over giving the plant a flattened appearance. The aphids randomly aggregate across the field and as populations increase the damage is easily seen as hot spots. If infestations reach economic levels and are not controlled, yield losses can be 50% or more. Fortunately, the Russian wheat aphid is not an important vector of barley yellow dwarf or other cereal diseases. An economic

threshold is available based on the formula $ET = (CC*200)/(EY*MV)$ where: ET = Economic threshold (% infested tillers above which an insecticide treatment will be cost effective) CC = Control cost per acre (insecticide + application) EY = Expected yield per acre MV = Market value per bushel After flowering, substitute 500 for 200 in the numerator of the formula. A less precise threshold that does not consider the economic costs of control and market value per bushel is also available for determining spring insecticide treatment.

The following links are resources with information about management of insects and mites of small grains (https://agrilifebookstore.org/publications_details.cfm?whichpublication=31, <http://www.ksre.ksu.edu/bookstore/pubs/MF745.pdf>).

Each resource has a listing of insecticide products registered for use against brown wheat mites, Russian wheat aphids, and greenbugs.

Insecticide products commonly used on the Texas High Plains for control of brown wheat mites are dimethoate and chlorpyrifos and, generally, chlorpyrifos for greenbug, Russian wheat aphid, and other aphids. Each will provide effective control but the pre-harvest interval may be important depending on harvesting for grain, grazing, and cutting for forage.

Wheat Field Day — May 1st —8:30 to 11:00 A.M.
at L. A. Royal's Farm approximately 1 mile west of
I-27 on FM 788. 2 CEU's will be offered.



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