

FOCUS on South Plains Agriculture

Texas AgriLife Research and Extension Center at Lubbock
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Sorghum Agronomy

Recent Grain Sorghum Pricing

Grain sorghum producers are delighted to see sorghum prices rise in the past month. We didn't expect this. Much of the sorghum pricing in the South Plains is being enhanced by the demand from sorghum-based ethanol production at Levelland Hockley County Ethanol and possibly White Energy, Hereford. Current pricing includes contracting through local elevators including Farmer's Co-op Levelland, which handles the paperwork, but grain delivery is directly to the ethanol plant east of Levelland. Recent pricing for October delivery is \$0.20/bu below Dec09 corn, then convert to cwt. As of this writing, sorghum prices under this arrangement have approached \$6.80/cwt for October delivery, and are near \$6.50/cwt for longer term delivery.

What is the cost of trucking if your hauling means extra miles? As of about two weeks ago Extension risk management ag. economist Jay Yates, Lubbock, was estimating trucking at \$3 per loaded mile, or about 0.6 cents/cwt./mile. Fuel prices have come up since then, but producers may calculate the difference on their price to factor in to what extent hauling a little further might net on their sorghum.

Late Season Grain Sorghum Observations

Although the South Plains has much less sorghum that was planted late like in 2008 (either too late planting or planting a longer season maturity hybrid later in the season), some fields are still going to be pushed for full maturity, especially in the northwest south Plains where much sorghum was shut down by the temperatures as low as 28 F in

the October 2nd freeze. Other sorghum such as in Hockley and Cochran counties has experienced temperatures in the mid 30s that greatly slowed further maturation of grain, particularly in the tillers. Although most fields made it through these conditions and have been able to resume maturation, Extension has observed on dryland fields that the leaf area for 1-2 weeks has been drying down and losing its green color and will not significantly sustain further grain development. 'Stay-green' hybrids, which tend to hold their color and integrity long after flowering, do appear to be less prone to leaf drydown so may be able to carry grain maturation further.

Wheat Agronomy

Wheat Grain Variety Selection

As noted in the Aug. 21, 2009 edition of FOCUS, Texas AgriLife Extension has compiled a list of 'Picks' for irrigated and dryland wheat production in the Texas High Plains. Refer to the past FOCUS edition for further information about some of these varieties.

Full Irrigation: TAM 111, TAM 304, Dumas, Hatcher, Endurance, Duster

Limited Irrigation: TAM 111, TAM 304, TAM 112, Hatcher, Endurance, Duster

Dryland: TAM 111, TAM 112, Hatcher, Endurance, Fuller

Additional wheat variety information averaging wheat trial yields across four years and as many as 25 sites has been compiled by Extension for the Texas High Plains. You may review the results at <http://lubbock.tamu.edu/wheat> One document compiles all Texas High Plains results, and a second document focuses on the five-year results of the Gaines-Yoakum County results.

Summary of 3 & 4-Year Results—High Plains Irrigated

Over four years across 25 locations, all varieties in annual irrigated wheat trials averaged 59.6 bu/A, whereas recommended varieties as a group averaged 64.7 bu/A (and individually as high as 67.8 bu/A for Hatcher). Recommended irrigated wheats as a group annually yielded 7 to 19% more than all other varieties in the tests. Likewise, the top five picks for recommended wheat yielded 10% better than all other varieties that were in the test all four years. TAM 105 for 2006-2008 yielded 12% less than recommended varieties in the years tested (and slightly below overall trial average). Hatcher and TAM 112 had the best composite test weights for 2006-2009 91.5-2.0 lbs/bu above trial average.

Beardless wheats, depending on the individual year of comparison, yielded 7 to 22% less (average 15% less) than recommended varieties. {Deliver and TAM 401 yielded within 1 bu/A of each other, but both yielding somewhat better than Longhorn.} These results suggest that producers should think twice about planting beardless wheat if you anticipate continuing to grain. Cattle removal from wheat grazing at jointing to first hollow stem is not affected by whether the wheat is bearded or beardless, and in the event that bearded wheat is not taken to grain it can still be managed to minimize the impact of beards.

Additional irrigated yield 5-year data from Gaines & Yoakum Counties

Exceptional performance has been noted, average 75 bu/A, for Russian wheat aphid resistant Hatcher, and no other wheat variety has reached 70 bu/A (trial average 62 bu/A), in the four-year trial average. Some Hatcher has been available in the South Plains from Kelly Green Seed, Farwell, TX.

Beardless Wheat—Due to the amount of beardless wheat harvested for grain in the South Plains, additional irrigated testing has

been conducted with more beardless varieties (TAM 109, WeatherMaster 135, 'Russian') than those found in the uniform High Plains trials noted above. But the results are similar: in a four-year summary, beardless wheat averaged 12% lower yield than all other bearded wheats, and 14% less than recommended varieties. There has been no consistent higher yielding beardless wheat for grain, including Deliver or TAM 401 vs. other beardless wheats although TAM 109 has yielded well in some individual years.

NK 812—This older variety does indeed provide better ground cover than almost all other wheats, but NK 812's three-year yield, using many seed sources, averaged 16% less than the trial average for bearded wheat, and 19% less than recommended irrigated wheat varieties. Producers concerned about losing NK 812's good ground cover and wind/sand protection may consider using a recommended variety with either narrower drill spacing or increase the seeding rate. The yield differential justifies the immediate cost of more seed per acre as well as the long-term cost of a narrow space drill ($\leq 7''$) if planting large acreage.

Summary of 3 & 4-Year Results—High Plains Dryland

Over four years across 17 locations, all varieties in annual dryland wheat trials averaged 33.8 bu/A, whereas recommended varieties as a group averaged 37.8 bu/A (and individually as high as 39 bu/A for Hatcher and TAM 112). Recommended dryland wheats as a group yielded 14% more than all other varieties in the tests. Beardless wheats, depending on the individual year of comparison, yielded 17 to 23% less than the recommended dryland varieties. Just as in irrigated, TAM 105 for 2006-2008 yielded 12% less than recommended varieties in the years tested. Wheat growers, however, should consider newer wheat varieties as TAM 105 will increasingly have less identity preservation and will be subject to contamination going forward since it is no longer a protected variety.

Agronomics for Wheat for Grain

Optimum Planting Dates for Wheat Grain

With this week's rains many South Plains acres now have moisture to plant wheat at an optimum time for establishment and yield potential. The optimum range of planting dates for wheat grain is centered on the targets noted below. These targets represent typical planting dates that allow for good stand establishment before cold can diminish germination, stands, and tillering. On the other hand significantly earlier planting may not enhance yields and can in fact reduce yield or economic potential due to more water use, more insect pressure in warm temperatures, etc. See additional comments about dryland below.

- Northwest Counties—October 10-15
- Central South Plains—October 20
- Lower South Plains (Lamesa)—October 25

Producers can achieve similar yields in most years planting after these dates, but at some point yield potential does decline. In 2006 many wheat fields were planted throughout November, especially to the south of Lubbock. Producers who were able to seed before the teens of November did pretty well, but in contrast to 2005 fields that were planted in mid November and later, 2006 seedings appeared to suffer in establishment, and never caught up. For the central South Plains I expect a significant reduction in yield potential begins about mid November, and I would further expect that a December 1 planting date (which would require a higher seeding rate) would experience a reduction in yield potential of one fourth to one third (25-33%) relative to the more optimum planting date noted above.

"I have a lot of wheat to drill, but I can't get to it for several weeks or even a month."

If you have a lot of acres you plan to seed, but it might be well into November be-

fore you start, consider having someone drill at least some of your wheat. There is safety in getting some of your wheat seeded before mid-November in that you are ensuring preservation of yield potential. We don't know how cool it will get later. But if it turns off colder than normal then your germination, stand establishment, wind protection, and ultimately your yield potential could suffer.

Wheat Grain Seeding Rates

Recent recommendations for irrigated wheat at optimum planting dates target 60 lbs. of seed per acre. This is less than the rates Extension recommended as recently as about 2001, which was up to 90 lbs./A. Research has consistently shown that little to no yield increase has resulted from seeding rates above 60 lbs./A. If you have top end irrigation, you might bump it up a bit. Planting more than 3-4 weeks after your optimum planting date may require you begin increasing the seeding rate. If seeding after Thanksgiving it is advisable to increase the target seeding rate 50% to compensate for potential lack of tillering.

For dryland seeding rates 30 lbs./A should be adequate for most conditions, however, if seed bed and soil moisture is only fair, then a producer should err on the safe side to 40 lbs./A to ensure the stand is achieved. Similar to irrigated wheat noted above, for seedings from Thanksgiving on the seeding rate needs to be significantly increased.

Nitrogen Fertility Targets

There are two rules of thumb for nitrogen (N) in wheat depending on if you have soil test information available:

- No soil test: 1.2 lbs. N per bushel of yield goal
- With soil test: 1.5 lbs. N per bushel of yield goal, then adjust fertilizer N for the soil test

If residual fertility is good then you may choose to delay all N to topdressing in February and early March. Otherwise 1/3 of N

in the fall pre-plant or at planting will ensure that the tillering, etc. is not limited.

Extension will discuss in future newsletters the critical timing of topdress N for late winter applications before and up to jointing, which will affect potential seed number per spikelet and spikelet number per head. Applications after this growth stage will not have as much potential impact on yield. CT

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