

Panhandle Ag Extra

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2006-2007 Wheat Crop in Review

The 2007 wheat crop will certainly be one to tell the grandkids about. Record dryland yields coupled with a very good wheat price made for an excellent year. The fall started out with good moisture conditions that were maintained in most areas throughout the growing season. An extremely hard freeze that occurred over the Easter weekend caused major damage to the Kansas crop. We probably avoided severe damage in our area by only a couple of degrees. There were a few isolated fields with significant injury, but for the most part the region escaped damage. Lodging was more prevalent than in most years. This was likely due to wheat being taller than normal, large full grain heads, and in some cases, weakening of the stalk caused by the Easter freeze.

Stripe rust, leaf rust, and powder mildew were a concern in some fields. These are all 'wet weather' diseases. Anytime we are fortunate to have spring moisture conditions like we had in 2007, we are potentially going to have infestations of these diseases. These can be controlled with timely fungicide applications, and in fact, many producers did have their fields sprayed. In many cases the applications were likely unwarranted given the degree of infection and the stage of growth of the wheat. That being said, many producers wanted to err on the side of caution due to the obvious potential of the wheat crop.

Variety Trial Results and Recommendations

The 2006 and 2007 years were two extreme growing seasons on opposite ends of the spectrum. In 2006, conditions were very dry in the spring leading to poor wheat yields. As already discussed, 2007 was just the opposite. These two extremes gave us an excellent opportunity to evaluate wheat variety performance.

Irrigated Trials

TAM 111 had the overall best yield average of all hard red winter wheats, only being bested by *Aspen* (by 6 bushels) a white wheat (Table 1). Other varieties topping the irrigated trials were *Fuller* (KSU), *Dumas* (AgriPro), and *Duster* (OSU). These varieties yielded in the top 25% in at least three of six irrigated locations. Other noteworthy varieties were *T81* (Trio), and *Overley* (KSU). *TAM 304* (TAMU) finished just out of the top 25 and will be marketed by Scott Seed in Hereford. Over the last three years, *TAM 111* has been the most consistent irrigated wheat, yielding in the top 25% in 13 of 19 locations. The variety has stripe rust resistance, good straw strength, and is unlikely to shatter. *Fuller* is a Kansas State University wheat that we have tested the last two years. It has *Jagger* in its background and has stripe rust resistance and some resistance to wheat streak mosaic. *Dumas* continues to consistently produce a high yield under



Irrigated Trials Continued

irrigation and has very good straw strength. *Duster* is an Oklahoma State University variety that has yielded well in trials the last two years. *T81* is a variety produced by Trio Research Inc. in Wichita, KS. *T81* has produced above average yields in the irrigated trials the last three years. *Overley* yielded well in 2005 and 2007, but not particularly good in 2006. Its strength is stripe rust resistance and excellent grain quality

Dryland Trials

Many of the varieties that performed well under irrigation also yielded well in dryland trials. Topping the trials were *Fuller*, *Hatcher* (CSU), *TAM 111*, *TAM 112* (TAMU), *Keota* (Westbred) and *TAM 304* (Table 2). Both *Fuller* and *TAM 111* were in the top 25% in five of six locations. *Hatcher* is a Colorado State variety that has yielded well the last two years. *TAM 112* is a green bug tolerant variety that had an excellent year in 2006. *Keota* has only been tested for two years, but it is one to keep and eye on in 2008. *TAM 304* will likely not yield as well in a dry year like what was experienced in 2006. Other varieties with high yields over multiple locations were *Duster* and *TAM 203*, which was released in 2007 and will be marketed by AgriPro.

Recommendations

Varieties that are placed in the recommended list in the text box are those that have consistently performed well over the years at multiple locations in the Panhandle. The varieties also cannot have significant deficiencies such as lodging or poor grain quality. Clearly the last three years *TAM 111* has been the best variety to plant in both dryland and irrigated trials. *Dumas* has provided consistently high yields under irrigation. *Jagalene* and *Cutter* were very disappointing varieties in 2007. However, their performance in previous years warrants keeping them in the recommended list. The poor performance of these two varieties in 2007 serves as a good example of why it is important to plant more than one variety. *TAM 112* with its greenbug tolerance and moderate level of

Variety Recommendations		
Full Irrigation	Limited Irrigation	Dryland
TAM 111	TAM 111	TAM 111
Dumas	Dumas	TAM 112
T81	T81	Endurance
Jagalene	Jagalene	Fuller
TAM 304	TAM 304	Hatcher
	Endurance	Cutter



Recommendations Continued

resistance to wheat streak mosaic has helped make it a consistent performer, particularly under dryland conditions. Varieties making the list for the first time are *T81*, *TAM 304*, *Endurance*, *Fuller*, and *Hatcher*. *TAM 304* has finished in the top 25% in over half of the irrigated trials the last three years. It has good leaf rust resistance and moderate stripe rust resistance. Test weight tends to be lower than average. *Endurance* from Oklahoma State is considered a dual-purpose wheat that is later in maturity than most of the other varieties. Although it is not going to lead many trials it always seems to be in the top 33% in yield. Normally I do not put a variety on the recommended list until we have tested it for at least three years. However, because of the performance of *Fuller* and *Hatcher* in two completely different environments (2006 and 2007), I feel comfortable in recommending them after only two years of trial data.

White Wheats

Take note of the performance of the white wheats in this year's trial. *Aspen* was exceptional and *RonL* and *Guymon* have yielded well the last two years.

Other Comments

Yield data from previous years, variety descriptions, and other information can be found at the following website under publications: <http://amarillo.tamu.edu/programs/agronomy>.

Acknowledgements

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Table 1. Irrigated Wheat Variety Trials Harvested in 2007 In the Texas and New Mexico High Plains.

Brent Bean¹, Jackie Rudd², Ravindra Devkota², Calvin Trostle¹, Rex Kirksey³

Variety	Company	Location		Cas-	Bush-	Et-	Perry-	Gain
		Avg.	Clovis	tro	land	ter	yton ⁴	s Co.
Yield, bu/Acre*								
Aspen (white)	Westbred	82.4	108.9	102.8	102.8	60.4	55.0	64.5
TAM 111	TAMU	76.7	93.5	91.4	87.1	73.4	56.4	58.3
T81	Trio	75.1	94.0	95.1	89.2	63.4	54.8	54.1
Fuller	KSU	73.9	89.7	90.7	90.6	60.0	56.3	56.3
Dumas	AgriPro	73.4	90.4	87.8	83.3	65.2	58.0	55.7
Bullet	OSU	72.9	91.2	88.2	83.8	62.0	59.1	53.3
Duster	OSU	72.8	88.8	77.9	92.6	64.6	58.0	55.1
TX01V6008	TAMU	71.7	71.9	100.3	91.0	56.8	54.6	55.9
Overley	KSU	71.4	87.5	94.1	79.8	54.3	56.4	56.3
TX03M1096	TAMU	71.4	83.5	87.1	87.0	67.8	55.6	47.3
Shocker	Westbred	71.2	99.4	94.7	82.8	51.6	55.4	43.5
TAM 304	TAMU	70.5	95.1	89.5	82.6	59.1	52.3	44.4
TAM 203	TAMU	69.7	72.9	91.1	89.5	56.5	57.5	51.0
Endurance	OSU	69.5	82.5	86.1	89.5	52.1	54.5	52.0
TX99A0153-1	TAMU	69.0	74.1	79.4	94.9	50.6	55.9	59.4
Hatcher	CSU	68.7	70.0	68.3	96.5	66.9	54.7	55.8
Keota	Westbred	68.5	73.0	77.4	88.8	66.0	54.2	51.5
AP 04T8211*	AgriPro	68.4	83.4	72.3	90.3	57.6	56.8	50.3
Guymon (white)	OSU	68.4	73.2	74.1	80.6	67.6	54.7	60.4
Deliver	OSU	68.3	78.8	80.9	81.5	51.7	56.7	60.4
RonL (white)	KSU	68.3	62.4	76.6	90.8	73.8	55.3	50.8
Santa Fe	Westbred	68.2	77.1	81.6	90.0	52.1	55.5	53.1
Doans	AgriPro	67.2	81.3	81.7	75.0	55.9	59.1	49.9
Kojack	AgriPro	65.8	89.8	80.2	82.4	46.9	50.3	45.4
TAM W-101	TAMU	64.0	61.2	63.8	71.3	65.9	55.6	65.9
Blend (TAM 111, TAM 112, Jagalene)	Blend	63.5	64.8	65.7	78.5	68.5	56.5	46.9
TAM 112	TAMU	63.4	63.7	52.7	78.0	73.8	56.0	56.0
TAM 110	TAMU	62.7	70.4	68.9	76.1	64.5	48.2	47.9
Cutter	AgriPro	62.6	65.4	77.1	74.0	53.8	52.3	53.1
TX01A5936 (white)	TAMU	62.4	57.4	69.2	83.5	50.2	51.4	62.6
Sturdy 2K	TAMU	62.3	70.5	79.0	74.2	55.6	56.8	37.4
Fannin	AgriPro	62.1	71.3	68.7	74.2	57.1	58.7	42.7
Coronado	AgriPro	62.0	72.5	67.1	76.8	50.6	53.3	51.6
Jagalene	AgriPro	61.4	61.8	84.3	75.4	53.8	50.2	42.7
Neosho	AgriPro	61.3	70.4	78.7	74.5	60.5	30.4	53.6
Jagger	KSU	59.6	60.5	65.5	83.8	46.7	52.5	48.5
Longhorn	AgriPro	59.4	72.1	70.7	64.9	50.7	54.4	43.5
TAM 105	TAMU	59.2	62.8	61.8	72.1	57.0	50.8	50.9
AP 04TA9029*	AgriPro	58.4	73.6	77.4	58.5	51.4	57.8	31.5
Mean		67.3	77.4	79.3	82.3	58.8	53.3	52.0
CV (%)			14.85	10.7	7.4	14.0	11.5	12.6
LSD (5%)			18.7	13.8	9.9	13.3	10.0	10.6

* Bold numbers indicate top 25% yield by location.

¹ Texas Cooperative Extension, ² Texas Agricultural Experiment Station, ³ New Mexico Agricultural Experiment Station.

⁴ Perryton yields were lower than expected likely because of late planting.

Table 2. Dryland Wheat Variety Trials Harvested in 2007 In the Texas and New Mexico High Plains.

Brent Bean¹, Jackie Rudd², Ravindra Devkota², Rex Kirksey³

Variety	Company	Avg. Over Locations	Clovis	Bushland	Claude ⁴	Hereford	Etter	Sherman Co.	Bushland Height
Yield, bu/Acre *									inches
Aspen (white)	Westbred	65.7	69.7	54.6	83.1	49.1	64.5	73.4	28
TX99A0153-1	TAMU	65.1	67.6	52.7	89.9	34.9	59.4	86.1	28
Fuller	KSU	62.3	72.5	47.6	72.0	45.3	56.3	80.1	30
Hatcher	CSU	62.0	80.4	52.9	84.0	39.3	55.8	59.4	31
TAM 111	TAMU	59.5	72.4	49.5	80.3	44.5	58.3	52.0	30
TAM 112	TAMU	59.5	79.1	47.4	79.9	37.9	56.0	56.5	30
TX01A5936 (white)	TAMU	58.7	66.0	42.4	78.7	36.7	51.0	77.3	29
Keota	Westbred	58.2	66.5	43.4	69.6	45.3	51.5	72.6	32
TAM 304	TAMU	58.0	67.7	46.8	83.1	32.2	62.6	55.3	27
Blend (TAM 111, TAM 112, Jagalene)	Blend	57.8	70.0	44.5	80.1	45.1	46.9	60.0	29
Duster	OSU	57.5	67.7	41.7	74.0	45.2	55.1	61.3	29
Endurance	OSU	56.5	68.7	53.1	68.5	38.8	52.0	58.1	29
TAM 110	TAMU	56.4	74.6	46.3	76.7	40.2	47.9	52.7	31
TAM 203	TAMU	56.2	69.3	44.1	62.3	32.7	65.9	62.8	29
Guymon (white)	OSU	56.1	63.3	43.4	76.8	39.4	60.4	53.5	28
Neosho	AgriPro	56.1	63.4	35.0	71.1	40.1	53.6	73.5	29
Bullet	OSU	56.0	66.3	46.5	73.6	37.6	53.3	58.8	31
RonL (white)	KSU	55.7	63.7	34.5	78.4	47.8	50.8	59.0	25
Dumas	AgriPro	55.6	73.6	40.6	79.2	37.8	55.7	46.8	28
Santa Fe	Westbred	55.3	70.8	49.7	72.5	33.3	53.1	52.3	28
T81	Trio	54.9	65.1	45.8	72.7	37.7	54.1	54.3	30
Jagger	KSU	53.5	74.5	46.5	67.5	33.1	48.5	50.9	31
Kojack	AgriPro	53.4	60.9	42.5	75.8	45.2	45.4	50.7	27
TAM 105	TAMU	53.2	62.0	44.2	63.0	32.2	50.9	66.8	28
Deliver	OSU	52.6	63.1	45.1	78.9	26.2	60.4	41.7	30
Jagalene	AgriPro	52.5	75.0	39.0	68.4	34.0	42.7	56.1	28
TX01V6008	TAMU	52.3	68.2	40.5	65.0	30.2	55.9	53.8	29
AP 04T8211*	AgriPro	51.5	68.7	49.7	78.2	23.0	50.3	39.0	29
Shocker	Westbred	51.1	68.7	49.3	68.5	27.3	43.5	49.3	30
Overley	KSU	51.0	65.1	47.0	66.8	24.5	56.3	46.3	31
Coronado	AgriPro	50.9	65.4	38.3	71.5	31.1	51.6	47.4	27
TAM W-101	TAMU	49.9	53.4	39.5	61.1	41.5	44.4	59.6	31
Doans	AgriPro	49.1	62.8	35.1	76.6	27.0	49.9	43.2	31
TX03M1096	TAMU	48.6	61.4	44.8	62.4	27.6	47.3	48.4	31
Cutter	AgriPro	48.2	62.1	33.5	70.3	31.8	53.1	38.2	29
Fannin	AgriPro	47.9	66.1	42.8	67.0	29.0	42.7	39.9	30
Longhorn	AgriPro	47.2	58.0	32.3	66.4	25.4	43.5	57.4	30
Sturdy 2K	TAMU	42.1	58.3	35.9	65.6	24.2	37.4	31.0	30
AP 04TA9029*	AgriPro	34.3	57.0	29.2	51.5	12.9	31.5	23.3	31
Mean		54.1	67.0	43.8	72.1	35.1	52.0	55.4	
CV (%)			7.11	8.3	8.5	13.0	12.6	20.7	
LSD (5%)			7.8	5.9	10.0	7.4	10.6	18.7	

* Bold numbers indicate top 25% yield by location.

¹ Texas Cooperative Extension, ² Texas Agricultural Experiment Station, ³ New Mexico Agricultural Experiment Station

⁴ Claude location was sprayed with a fungicide to control rust.