2010 Local Wheat Variety Trial Results Now Available

The Uniform Wheat Variety Trial (UWVT), coordinated and implemented by numerous Texas AgriLIFE Extension and Research faculty and staff plus AgriPro researchers in this area provides unbiased yield data for wheat producers in Wichita and Wilbarger Counties. With this information area wheat producers can make an educated decision about the most appropriate varieties for this region.

The selection of wheat varieties is one of the most important decisions a wheat producer will make. This decision impacts the potential yield (forage and grain), seed quality (test weight and protein), disease and insect management, and maturity. It is important that producers diversify the varieties to be planted on their farms. Variety diversification spreads the risk associated with potentially devastating pests (rusts, Hessian fly, leaf curl mite, greenbugs, etc.) and yield loss from adverse environmental factors (freeze, drought, hail, etc.).

Producers should select no fewer than two varieties to plant on their farms and preferably more, depending on size and location of fields. Variety selection should be based upon a combination of sound data from university trials, county agent strip trials, and other reliable sources. Wheat varieties should be chosen based on multiple years of data (yield, pest resistance, grain quality and maturity). High yields over multiple years and multiple locations demonstrate a variety's ability to perform well over diverse environmental factors. Stable yield performance of quality grain is the best variety selection tool. It is important to consider decreasing yields over a two or three year time frame, may reflect a change in disease and/or insect resistance.

When selecting a variety for the 2010-11 season, producers need to consider the 2009-10 season, recognizing the unusually wet, cold conditions that impacted yield and quality. It is strongly encouraged that producers look at the two and three year averages for the varieties and to look at all local variety trial locations.

Yield and test weight at each location has been statistically analyzed using the scientific procedures. The statistical analysis provides the mean, coefficient of variation (CV), and least significan difference (LSD) values. It is important to note these statistical values help to prevent the misinterpretation of the data.

The mean is another term for the average. Therefore, a mean value is the average of all the variety's yield within a trial. The CV value, expressed at a percentage, indicates the level of unexplained variability present within the trial. High CV values indicate a great deal of variation due to factors other than the genetic variation between varieties. CV values in excess of 15 percent should cause producers ask about problems in the trial that will misrepresent differences in varietal performance. The LSD value should be used to determine if the difference between hybrids is due to performance differences or random chance. This bulletin presents data with an LSD of five percent. If the difference between two varieties is equal to or greater than the LSD, the difference would be attributable to varietal differences in 19 out

of 20 (95%) instances when the two hybrids are evaluated under conditions similar to the test. A difference which is less than the LSD is likely due to chance.

Rolling Plains Location Details and Issues

Location[1]	Yield Limiting Issues	Planting Date	Fertilizer (Total)	Water*	Row Spacing	Seeding Rate
			(lb N/a)		inch	lb/a
Abilene	Moderate stripe rust; Low leaf rust; Some BYDV[2]	10/27/2009	Cooperator Applied	D	7	60
Brady[3]	Greenbugs Early, Minor Lodging	11/4/2009	96	D	7	80[3]
Chillicothe	Moderate stripe rust; Low leaf rust; Some BYDV[2]	10/19/2009	80	D	7	60
Hardeman Grain	Moderate stripe rust; Low leaf rust; Some BYDV[2]	10/26/2009	Cooperator Applied	D	7	60
Knox Co. (AgriPro)	Moderate stripe rust; Low leaf rust	11/18/2009	Cooperator applied	D	7	60
Vernon (AgriPro)	Heavy stripe rust, Moderate leaf rust	11/11/2009	115	D	7	60
Vernon (AgriPro)	Heavy stripe rust, Moderate leaf rust	11/12/2009	145	IL	7	60
Wichita Co. (AgriPro)	Poor Emergence, Variable Stands; **Data Not Shown**	11/13/2009	Cooperator applied	D	7	60
Young Co. (AgriPro)	Heavy stripe rust, Moderate leaf rust	11/18/2009	Cooperator applied	D	7	60

[1]Abilene, Chillicothe, and Hardeman Grain did not have any pesticides applied throughout the growing season.

[2] BYDV – Barley Yellow Dwarf Virus

[3]Brady was sprayed with Dimethoate (3/4 pt/a) and Finesse (7 g/a) on 1/22/2010 and had a seeding rate of 1.2 million seed/a (~80 lb/a)

*Irrigation: IL = Irrigated Limited, D = Dryland

Uniform Wheat Variety Trial - Vernon - Dryland, HRWW 2010 (AgriPro)

2010 Rank	Variety	Source	Grain Yield (bu/ac) 2010	2-Year †	3-Year ‡
1	Fannin	AgriPro	63.1	58.3	58.2
2	Billings	OSU	62.3	-	-
3	Greer	AgriPro	61.2	63.5	-
4	OK05212*	OSU	59.8	-	-
5	Doans	AgriPro	57.6	56.6	54.2
6	Jackpot	AgriPro	56.3	60.9	63.3
7	TAM 111	TAMU	55.8	58.7	56.2
8	Duster	OSU	55.1	52.5	56.1
9	OK05511*	OSU	54.4	-	-
10	TX02A0252*	TAMU	54.3	57.8	-
11	TAM 203	TAMU	52.0	48.6	52.4
12	CJ	AgriPro	51.9	-	-
13	TAM 304	TAMU	51.6	54.4	57.2
14	Art	AgriPro	50.6	53.6	-
15	Santa Fe	WestBred	50.2	55.0	55.0
16	OK05526*	OSU	49.5	-	-
17	Fuller	KSU	47.2	52.4	56.3
18	TAM 401	TAMU	46.9	48.9	54.2
19	Shocker	WestBred	46.5	51.9	54.3
20	Endurance	OSU	46.1	51.2	52.3
21	Bullet	OSU	42.4	51.0	52.0
22	Armour	WestBred	40.8	-	-
23	Pete	OSU	38.8	-	-
24	TAM 112	TAMU	38.3	54.3	55.1
25	TX06A001263*	TAMU	36.1	-	-
26	AP06T3621*	AgriPro	34.8	-	-
27	AP503CL*	AgriPro	34.7	-	-
28	TX05A001822*	TAMU	32.4	-	-
29	Jagger	KSU	31.9	46.0	48.0
30	SY Gold (AP00x0100-51)	AgriPro	31.6	-	-
31	TAM W-101	TAMU	30.4	38.2	42.7
32	Jagalene	AgriPro	20.8	36.8	39.6
		Mean	**46.4**	**52.5**	**53.4**
		CV (%)	**11.9**		
		LSD (5%)	**9.1**		

* experimental wheat breeding line

† yield average for 2010 and 2007

‡ yield average for 2010, 2008, and 2007

Yield data was not available for 2009

Uniform Wheat Variety Trial - Vernon - Irrigated, HRWW 2010 (AgriPro)

2010 Rank	Variety	Source	Grain Yield (bu/ac) 2010	2-Year †	3-Year ‡
1	Fannin	AgriPro	63.9	64.9	63.2
2	Doans	AgriPro	62.4	69.2	62.2
3	OK05511*	OSU	62.1	-	-
4	Billings	OSU	61.2	-	-
5	Greer	AgriPro	61.1	63.6	-
6	CJ	AgriPro	59.5	-	-
7	Duster	OSU	59.2	69.7	63.0
8	TAM 111	TAMU	58.6	66.1	59.4
9	Jackpot	AgriPro	55.8	64.7	66.5
10	OK05526*	OSU	53.8	-	-
11	Armour	WestBred	53.7	-	-
12	OK05212*	OSU	53.5	-	-
13	TAM 203	TAMU	53.2	63.1	63.0
14	TX02A0252*	TAMU	51.7	64.6	-
15	TX06A001263*	TAMU	51.6	-	-
16	Shocker	WestBred	51.3	59.5	61.3
17	Santa Fe	WestBred	47.4	61.1	60.1
18	Fuller	KSU	47.3	63.0	62.0
19	Endurance	OSU	47.0	59.9	58.0
20	TAM 401	TAMU	46.8	59.0	61.2
21	TAM 112	TAMU	46.0	66.8	64.7
22	TAM W-101	TAMU	44.6	57.9	54.6
23	TAM 304	TAMU	43.7	60.9	59.1
24	Art	AgriPro	42.9	53.4	-
25	Bullet	OSU	42.8	55.7	56.2
26	TX05A001822*	TAMU	41.1	-	-
27	AP503CL*	AgriPro	40.4	-	-
28	AP06T3621*	AgriPro	39.3	-	-
29	SY Gold (AP00x0100-51)	AgriPro	37.6	-	-
30	Jagger	KSU	36.5	54.2	49.7
31	Pete	OSU	32.2	-	-
32	Jagalene	AgriPro	27.6	46.4	41.6
		Mean	**49.3**	**61.2**	**59.2**
		CV (%)	**10.4**		
		LSD (5%)	**8.6**		

* experimental wheat breeding line

† yield average for 2010 and 2007

‡ yield average for 2010, 2008, and 2007

Yield data was not available for 2009