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2012 Wheat Variety Trials Conducted in the Texas and New Mexico High Plains

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2011-2012 Wheat Crop in Review

Unfortunately, the High Plains wheat crop in 2012 was still experiencing the fallout from the extreme drought in 2011. Moisture conditions were extremely dry to start the season, but there were some scattered rains throughout the winter and spring. Locations that received timely rains had above average yields while yields in some areas were similar to the drought yields of 2011. By mid-April, wheat was still reported to be mostly in the "poor" condition across the High Plains region. Diseases and insects in this region were not prevalent this year due to the warm and abnormally dry climate though some light rust, whether leaf or stripe, were noted in some fields. In addition, season-long windy conditions in the High Plains kept this area's soil moisture low. Some irrigated fields with marginal grain yield potential were diverted to hay which commanded good prices, and many dryland wheat fields were cut for hay production where forage production was sufficient.

Variety Trial Results and Variety Picks

In this year's report the annual 2011-2012 harvest results of irrigated and dryland wheat trials (Tables 1 & 2) are complemented by multi-year averages for yield and test weight—up to four years—where results are available that long (Tables 3 to 6).

The popular "Picks" list of wheat varieties for the Texas High Plains is based on a minimum of three years of data, which sometimes begins when a commercially available variety was first entered as an advanced experimental line. This selection includes a ranking of wheat variety performance at each site where a variety is noted if its yield is in the top 25%. The cumulative number of top yielding sites is then calculated across irrigated or dryland sites. Though this means a variety may not be in the top 25% variety because of a yield difference <1 bu/A, the availability of data from 15 or more sites in a 3-year period makes this comparison very useful.

All test sites include at least three replications with each test, and the test sites are a mix of farmer's fields and Texas AgriLife research station settings (as well as one at NMSU-Clovis). Producer cooperators are instructed to treat their test site no differently than the rest of the field.

Irrigated Trials

Variety trials were planted and harvested at six irrigated locations around the Texas Panhandle and at the New Mexico State University Clovis station (Table 1). Yields ranged from mediocre (38 bu/A) to excellent at Clovis (91 bu/A). Winterhawk (Westbred) followed its strong performance in 2011 irrigated harvests by yielding in the top 25% at all six sites (averaging 8 bu/A above average for the 3-year period, Table 3), and this was followed closely by Texas and Oklahoma experimentals (OK07209, since released as Iba, 9 bu/A above average for 2 years) at five sites. One additional commercial line in the second year

trials, Cedar (Westbred), also yielded well above average at five sites. TAM 111 and TAM 112 performance in 2012 was slightly reduced from recent years, but these two varieties trail only Winterhawk by 1-2 bu/A for 3-year top average yields per acre among 17 sites. Their yield is essentially matched by TAM 113, which was released in 2011 by Texas AgriLife Research and is now commercially available for 2012. Other top varieties in 2012 tests included Oklahoma experimental OK7214 (now released as Gallagher), Duster (Oklahoma State), and TAM 304. Three beardless wheats (Razor, Syngenta; Pete, Oklahoma State; TAM 401), which are more intended for grazing, yield 5 bu/A lower than average wheat grain yields.

Dryland Trials

Due to lingering drought only three of five seeded dryland trials achieved harvest, and yields reflected spotty rains (17 bu/A at Bushland to 54 bu/A at Groom, Table 2). With limited data available, we note 39 bu/A average yields from Cedar, Winterhawk, and Ruby Lee (Oklahoma State) which were in the top 25% of yielding varieties at all three locations. Otherwise three sites and divergent yields make summarization of 2012 dryland yield results less certain, and we hope 2013 harvest will return to more harvested sites. TAM lines 111, 112, and 113 (all 36 bu/A) were slightly above average yield but retain consistently good test weight. Hatcher and Bill Brown yields tapered off significantly from previous years. Beardless wheats yielded 3 bu/A below average.

Wheat Varieties—The "Picks"

As noted above, varieties become top Picks after reviewing their performance at multiple locations (emphasizing consistency in yield in the top 25% at each location) over a minimum of three years. Varietal Picks are not exclusively top yielding but risk management considerations will also enable some slightly lower yielding varieties to become Picks due strong disease tolerance, standability, etc. For example, TAM 111 and TAM 112 have each been in the top 25% 13 and 15 times among 22 dryland variety trials in the High Plains over the last four years (Table 4). Their consistent high yield across a range of conditions easily qualifies them as varietal Picks for dryland production. Duster, Hatcher, and Endurance remain solid dryland performers (9 to 12 sites among 22 in top 25%). Hatcher offers Russian wheat aphid tolerance, and though its yields have tailed off some in the past two years, it has a solid record of long- term performance.

Wheat Variety "Picks", TX High Plains

Full Irrigation	Limited Irrigation	Dryland
TAM 111	TAM 111	TAM 111
	TAM 112	TAM 112
TAM 113	TAM 113	TAM 113
TAM 304		
Duster	Duster	Duster
Hatcher	Hatcher	Hatcher
Winterhawk	Winterhawk	Winterhawk
		Endurance

The dryland Picks include two new members beginning in 2012. TAM 113 (formerly TX02A0252) has broader disease resistance to leaf and stripe rust and excellent bread making quality. Winterhawk now has 3 years of yield trial data, and it is the top yielding dryland wheat variety by 2 bu/A over the 3-year period (Table 4). One potential concern for this variety, however, is high susceptibility to stem rust which is otherwise rare in other wheat varieties in the Texas High Plains. While stem rust is rare, it can have devastating impact if conditions are favorable. Producers interested in Winterhawk are encouraged to limit plantings, perhaps no more than 25% of total acreage, to ensure that conditions favorable for stem rust do not damage your entire crop.

The Pick varieties for full and limited irrigation are nearly the same as those listed for dryland, including the addition of TAM 113 and Winterhawk (top average irrigated yield over 3 years) in 2012, with just a couple of exceptions. TAM 112 is not recommended for full irrigation because straw

strength is an issue under high water and nitrogen conditions. TAM 304 will work well under full irrigation because of its excellent straw strength and good disease resistance though we believe its potential for outperformance is best in high input production.

Watch List: Oklahoma's Iba has only two years of data, but at this point it certainly has strong yield potential. We will be watching to see how its disease package compares to current Pick varieties. Sister line Gallagher from Oklahoma may also be possible consideration in the future with more data.

Is TAM 113 a "Replacement" for TAM 111 or TAM 112?

This is a common early question from producers. Texas AgriLife believes that TAM 113 will fit well into any production system where producers have used either 111 or 112, but no, it is not a replacement—rather a *compliment*—to existing TAM 111 and TAM 112 production.

Table 7. Comparison of TAM 111, TAM 112, and TAM 113 for 4-year Texas High Plains irrigated and dryland production performance (2009-2012) and varietal traits important for Texas High Plains wheat.

Varietal Production

	Irrigated, 2009-2012			Dryland, 2009-2012		
	Yield	# of sites in top 25% of yield	Test Weight	Yield	# of sites in top 25% of yield	Test Weight
	Bu/A		*Lbs./bu*	*Bu/A*		*Lbs./bu*
TAM 111	67.6	14	59.7	35.2	13	59.6
TAM 112	65.4	13	59.6	36.1	15	59.5
TAM 113	63.7	12	59.4	35.6	12	59.8
Trial Averages	60.3	22 sites	58.6	32.6	22 sites	58.3

Varietal Traits

			Disease Reaction†			
	Relative Maturity	Standability	Leaf Rust	Stripe Rust	Wheat Streak Mosaic Virus	Greenbug Tolerance
TAM 111	Medium	Good	S	MS	MS	S
TAM 112	Medium-Early	Lower w/ high inputs	S	S	MR	MR
TAM 113	Medium	Good	R	R	MS	S

†S−Susceptible, MS−Moderately Susceptible, MR−Moderately Resistant, R−Resistant.

Based on absolute yield numbers TAM 111 appears to be a better choice than TAM 113 for irrigated production. The past four years, however, have largely been absent any major leaf or stripe rust concerns, which TAM 113 would handle better. We do not see any issue with TAM 113 that might preclude it from use in full irrigation like we do for TAM 112 (potential stalk strength/standability issue under high inputs). Though producers can get lulled into disregarding key traits like resistance to leaf or stripe rust if they haven't had a problem with this for a few years, TAM 113 offers a better package of resistance to these two diseases. For this reason, you may consider having TAM 113 share some of your acreage, especially if you have planted either TAM 111 or TAM 112 exclusively in either irrigated or dryland production. TAM 112 has provided strong performance in tough dryland conditions, and brings greenbug tolerance but no rust tolerance to that situation, whereas if TAM 113 proves of similar hardiness, it can introduce significant disease tolerance to rusts in dryland production.

Wheat Variety "Pick" Deletions Since 2010

In addition to the reasoning behind adding new varieties to our Picks, it is also informative to note what varieties have been removed from the Picks list and why.

- TAM 304, limited irrigation: Removed (2011) as modest yields fells below several other Pick varieties. Low test weight is a concern. TAM 304 remains a Pick for high input production, in part due to data from other states demonstrating excellent performance under heavy irrigation.
- Bill Brown, dryland and all irrigated: Added in 2011 but deleted in 2012. Early performance (2009 & 2010) was exceptional; but yields, though still solid, have tailed off since 2010. It is susceptible to stem rust, which is rare on all other wheat varieties except Winterhawk. Sister line Hatcher (also tolerant to Russian wheat aphid) is still a Pick and a better choice.
- Armour, dryland: Added in 2011 after one exceptional year but now removed. Performance has been solid, but other recent dryland Picks have achieved better long-term performance.
- Endurance, full and limited irrigation: Endurance is not performing well under irrigation relative to other Picks (top 25% only 4 of 22 trials since 2009), but it continues to enjoy good performance on dryland (top 25% 10 of 22 sites, 2009-2012) and it has good dual purpose grazing/grain potential.

The Advantage of Variety Picks in Multi-Year Wheat Production

Texas AgriLife notes the relative outperformance of Pick varieties, averaged as a group, versus the non-pick varieties in the same trial for irrigated (Table 3) and dryland (Table 4) production. This is another means to demonstrate the potential for improvements in your wheat yield and ultimately your profit potential when you consider Pick wheat varieties for the Texas High Plains. These results are tabulated at the bottom for the above tables for yield and also for test weight (Tables 5 & 6).

For example, in 2012, the average yield of Pick wheat varieties under irrigation was 68.4 bu/A, which was 10% higher than non-Pick varieties (62.2 bu/A, Table 3). Furthermore, the 4-year average yield advantage for Pick varieties has a 12% yield advantage over non-Pick varieties. The same varieties had a 2% higher test weight over four years (Table 5). A similar advantage also exists among dryland varieties where Picks out-yielded non-Picks by 4 bu/A (12% increase, Table 4) over four years.

For Further Information

For updated wheat variety trial results, variety descriptions, past annual summaries and other Texas High Plains wheat production information, view reports online at http://amarillo.tamu.edu/amarillo-center-programs/agronomy/wheat-publications (the Agronomy link) or http://varietytesting.tamu.edu/wheat

Acknowledgments

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Table 1. Irrigated Wheat Variety Trials Harvested in 2012 in the Texas and New Mexico High Plains.

Jackie Rudd[2], Ravindra Devkota[2], Rex Kirksey[3], Brent Bean[1,2]

Variety[4]	Source	Irrigated Average	Bushland Full Irrigated	Clovis Full Irrigated	Dalhart Full Irrigated	Plainview Partial Irrigated	Etter Partial Irrigated	Perryton Partial Irrigated	Test Weight	Average Height
		Bushels per Acre[5]							Lbs./bu[5]	Inches
Winterhawk	Westbred	75.0	**83.2**	**114.3**	**76.9**	**60.8**	**43.0**	**71.6**	**60.1**	29
Iba (OK07209)	Okla. St.	73.4	**89.0**	96.4	**78.5**	**59.4**	**49.8**	**67.2**	**60.0**	29
TX06V7266	Texas A&M	71.8	**84.3**	**101.0**	**79.9**	**62.6**	36.8	**66.4**	57.6	29
TX03A0563-07	Texas A&M	70.5	**82.5**	**108.3**	72.3	**59.6**	**45.7**	54.8	**59.4**	28
Gallagher (OK07214)	Okla. St.	69.8	**79.7**	92.2	75.2	51.0	**45.9**	**74.5**	58.7	28
TAM 304	Texas A&M	68.2	69.5	**106.1**	**79.9**	52.3	38.8	**62.8**	56.7	26
Duster	Okla. St.	67.3	**81.3**	94.0	73.5	48.5	**45.3**	61.2	58.8	28
Cedar	Westbred	66.5	43.9	**113.8**	**80.2**	**54.1**	42.0	**65.1**	57.9	26
TAM 113	Texas A&M	66.3	**90.6**	79.6	76.0	46.7	42.3	**62.4**	**60.0**	28
TX07A001505	Texas A&M	65.5	**81.7**	95.9	73.7	34.6	**47.0**	60.1	**60.4**	28
T158	Trio Res.	65.3	67.7	**103.4**	76.1	47.0	40.1	57.7	**59.1**	28
TAM 112	Texas A&M	64.9	68.4	87.0	76.8	**59.7**	40.7	56.6	**59.2**	29
Everest	Kansas St.	64.9	55.5	**98.0**	**80.2**	**63.6**	38.5	53.3	57.4	27
Fuller	Kansas St.	64.7	69.8	91.3	70.8	**55.2**	36.9	**64.2**	58.3	29
Hatcher	Colo. St.	64.5	**82.0**	82.4	**77.1**	**55.1**	33.8	56.9	58.9	26
TAM 111	Texas A&M	64.2	**78.7**	**96.7**	73.3	38.2	41.2	56.9	**59.8**	29
Hitch	Westbred	63.8	72.3	86.7	**79.4**	51.9	36.8	55.9	57.6	27
Jackpot	Syngenta	63.5	62.1	90.9	76.0	**63.0**	33.6	55.3	57.8	28
TAM 305 (TX06A001263)	Texas A&M	63.3	69.7	85.4	76.7	50.7	35.4	**61.8**	**59.1**	26
Bill Brown	Colo. St.	63.0	77.9	89.8	75.5	44.0	38.9	52.0	**59.2**	26
Billings	Okla. St.	61.9	75.9	90.7	66.2	44.6	**43.3**	50.5	58.2	29
Endurance	Okla. St.	61.4	67.0	85.3	73.1	49.1	**42.5**	51.4	58.4	28
Greer	Syngenta	61.2	64.4	86.6	70.1	53.2	38.4	54.8	56.2	28
Armour	Westbred	61.1	70.1	86.8	72.8	49.8	39.9	47.1	57.5	27
TAM 203	Texas A&M	61.0	70.0	82.0	70.4	43.7	37.5	**62.3**	55.9	29
Ripper	Colo. St.	60.1	70.1	90.5	70.1	45.6	**42.9**	41.5	56.8	28
Santa Fe	Westbred	59.8	49.8	92.3	72.3	50.2	33.3	60.7	57.7	29
Garrison	Okla. St.	59.4	75.8	92.0	70.4	37.2	38.2	42.6	57.5	28
Ruby Lee	Okla. St.	58.3	54.8	79.0	75.0	40.1	**49.7**	51.1	58.7	30
TAM 401 (BL)	Texas A&M	58.1	65.7	90.0	68.8	33.4	33.1	57.4	57.1	30
TAM W-101	Texas A&M	57.8	70.0	90.4	68.3	34.8	33.2	50.3	58.4	27
Jagger	Kansas St.	57.3	47.5	**101.4**	68.9	36.6	35.9	53.8	57.5	28
Pete (BL)	Okla. St.	56.5	46.2	**98.9**	73.0	41.5	35.0	44.5	57.7	26
APH09T9614	Syngenta	55.9	58.5	80.6	75.3	40.7	32.4	47.7	58.8	26
Razor (AP08TA6927) (BL)	Syngenta	55.8	69.1	68.9	**78.9**	35.3	34.0	48.6	58.7	31
Doans	Syngenta	55.3	67.4	82.9	64.9	22.8	34.4	59.5	**59.1**	28
CJ	Syngenta	53.7	44.1	84.1	70.0	43.2	32.3	48.3	58.7	30
Mace	Nebraska	53.0	64.7	82.7	67.9	28.2	27.5	47.3	57.5	27
Fannin	Syngenta	47.7	47.5	77.5	67.1	19.7	27.2	47.5	58.5	29
APH09T2620	Syngenta	46.5	48.9	64.6	**77.0**	39.9	22.3	26.6	58.8	30
Average		62.0	67.9	90.5	73.7	46.2	38.1	55.3	58.3	28
Coefficient of Variation (%CV)		12.3	7.9	8.2	7.3	11.1	11.5	8.5	1.8	2.7
Least Significant Difference (5%)†		8.7	8.8	8.9	7.9	8.3	6.2	7.6	1.3	2.7
Number of Locations		6							5	4

†Values in the same column that differ by less than the LSD are not statistically different at the 95% confidence level.

[1]Texas AgriLife Extension, [2]Texas AgriLife Research, [3]New Mexico State Univ.

[4]Variety names in bold are TX AgriLife irrigated variety Picks; BL-Beardless wheat; [5]Bold yields mark top 25% by location.

Table 2. Dryland Wheat Variety Trials Harvested in 2012 in the Texas High Plains.

Jackie Rudd[2], Ravindra Devkota[2], Brent Bean[1,2]

Variety[4]	Source	**Dryland Average**	Bushland Dryland	Groom Dryland	Perryton Dryland	Avg. Test Weight	Average Height
		Bushels per Acre[5]				Lbs./bu[5]	Inches
Cedar	Westbred	40.4	**19.2**	**62.3**	**39.6**	55.7	20
Winterhawk	Westbred	40.1	**20.4**	**59.8**	**40.0**	59.9	22
TX06V7266	Texas A&M	39.2	18.0	**60.3**	**39.1**	55.7	22
Ruby Lee	Okla. St.	39.1	**20.7**	**58.1**	**38.6**	57.7	24
Jackpot	Syngenta	39.1	17.7	**57.8**	**41.7**	55.2	22
TAM 304	Texas A&M	38.2	17.9	**60.5**	36.3	53.3	21
Iba (OK07209)	Okla. St.	38.1	**18.7**	57.1	**38.4**	59.7	20
Endurance	Okla. St.	37.7	**18.9**	56.1	**38.1**	56.4	21
Gallagher (OK07214)	Okla. St.	37.5	18.4	56.2	**37.9**	58.0	20
Santa Fe	Westbred	36.4	17.4	56.7	35.1	55.7	22
Greer	Syngenta	36.2	14.9	**57.9**	35.9	53.4	20
TAM 111	Texas A&M	36.1	**19.0**	55.0	34.5	58.7	22
Duster	Okla. St.	36.1	17.8	54.1	36.4	57.9	21
Billings	Okla. St.	36.1	**19.2**	**58.3**	30.6	56.4	21
T158	Trio Res.	35.8	17.2	**57.4**	32.9	56.6	20
TAM 112	Texas A&M	35.8	**19.5**	53.5	34.4	58.7	22
TAM 113	Texas A&M	35.8	17.4	54.9	35.1	58.3	21
TX07A001505	Texas A&M	35.6	14.8	**58.0**	34.2	57.9	21
APH09T9614	Syngenta	35.3	15.1	49.7	**41.2**	56.7	20
CJ	Syngenta	35.3	16.8	48.5	**40.6**	56.7	23
Fuller	Kansas St.	35.2	16.3	55.0	34.2	56.3	22
Hitch	Westbred	35.1	15.3	54.4	35.6	56.4	20
Jagger	Kansas St.	34.8	16.5	54.1	33.8	54.8	22
Armour	Westbred	34.8	16.0	54.3	34.0	56.2	19
Everest	Kansas St.	34.2	18.3	54.0	30.3	56.9	20
Doans	Syngenta	34.0	16.5	51.8	33.6	57.3	22
TX03A0563-07	Texas A&M	33.4	**18.5**	54.6	27.1	57.2	21
TAM 305 (TX06A001263)	Texas A&M	33.2	17.0	48.0	34.6	57.2	21
Garrison	Okla. St.	33.1	**18.5**	54.4	26.5	57.2	20
Razor (AP08TA6927) (BL)	Syngenta	32.9	16.3	48.4	34.0	58.3	23
Hatcher	Colo. St.	32.8	13.8	54.1	30.5	56.4	20
Fannin	Syngenta	32.1	14.9	48.3	33.3	57.6	21
APH09T2620	Syngenta	31.9	16.8	43.7	35.2	56.4	22
TAM 203	Texas A&M	31.9	15.8	47.8	32.0	54.6	20
Pete (BL)	Okla. St.	31.7	16.4	53.1	25.7	57.1	21
Bill Brown	Colo. St.	31.5	14.3	52.4	27.8	57.8	20
TAM 401 (BL)	Texas A&M	31.3	16.5	45.4	31.9	54.5	22
Ripper	Colo. St.	29.5	14.8	50.8	22.9	56.5	21
TAM W-101	Texas A&M	28.0	14.4	46.1	23.6	57.2	20
Mace	Nebraska	27.2	12.3	45.3	24.2	56.1	19
Average		34.8	16.9	53.7	33.8	56.8	21
Coefficient of Variation (%CV)		7.8	9.6	6.7	9.0	1.4	1.4
Least Significant Difference (5%)†		5.5	2.7	5.8	5.0	1.6	1.5
Number of Locations		3				2	2

†Values in the same column that differ by less than the LSD are not statistically different at the 95% confidence level.

[1]Texas AgriLife Extension, [2]Texas AgriLife Research, [3]New Mexico State Univ.

[4]Variety names in bold are TX AgriLife dryland variety Picks; BL-Beardless wheat; [5]Bold yields mark top 25% by location.

Table 3. Multi-year Irrigated Wheat Variety Trial Yields, 2009-2012, Texas & NM High Plains.
Variety names in bold indicate Pick varieties for irrigated production.

Variety	Source	4-Year	3-Year	2-Year	2012
		Multi-year Bushels per Acre Average			
TAM 111	Texas A&M	67.6	70.4	62.2	66.1
Hatcher	Colorado St.	67.5	66.7	63.0	65.2
Bill Brown	Colorado St.	65.9	67.0	65.7	65.6
Duster	Oklahoma St.	65.5	69.2	65.7	68.5
TAM 112‡	Texas A&M	65.4	69.8	66.3	66.5
Billings	Oklahoma St.	64.0	66.9	60.4	64.2
TAM 113	Texas A&M	63.7	67.2	65.5	67.1
TAM 304§	Texas A&M	63.6	67.9	63.3	69.3
TAM 203	Texas A&M	63.0	66.0	61.1	60.7
Armour	Westbred	62.2	66.6	61.8	63.9
Endurance	Oklahoma St.	61.0	63.5	60.0	63.4
Greer	Syngenta	60.7	64.7	59.2	62.5
Fuller	Kansas St.	59.1	63.6	59.3	64.8
Jackpot	Syngenta	58.4	62.7	58.6	65.1
Santa Fe	Westbred	58.4	61.4	57.4	59.6
Jagger	Kansas St.	56.3	58.3	54.2	58.1
TAM W-101	Texas A&M	55.5	59.2	54.8	59.3
TAM 401 (BL)	Texas A&M	54.1	57.1	52.4	58.2
Fannin	Syngenta	49.7	51.8	46.4	47.8
Winterhawk	Westbred		71.4	70.0	75.6
Garrison	Oklahoma St.		65.6	61.5	62.7
Mace	Nebraska		59.2	52.7	54.2
Pete (BL)	Oklahoma St.		57.3	55.3	58.9
Iba (OK07209)	Oklahoma St.			68.8	74.6
Gallagher (OK07214)	Oklahoma St.			64.3	68.8
Cedar	Westbred			62.2	66.8
TAM 305 (TX06A001263)	Texas A&M			60.1	63.6
Razor (BL)	Syngenta			53.2	57.2
TX03A0563-07	Texas A&M				73.7
TX06V7266	Texas A&M				72.9
Everest	Kansas St.				67.2
T158	Trio Res.				66.9
TX07A001505	Texas A&M				66.6
Hitch	Westbred				65.4
Ripper	Colorado St.				63.8
Ruby Lee	Oklahoma St.				59.7
APH09T9614	Syngenta				57.5
CJ	Syngenta				54.7
Doans	Syngenta				54.5
APH09T2620	Syngenta				50.5
Annual Average, All Varieties¶		**60.3**	**63.7**	**59.9**	**63.3**
Average of Pick Varieties		65.9	68.9	65.5	68.4
Average of Non-pick Varieties		59.1	62.5	58.7	62.2
%Yield, Picks over Non-Picks		**12%**	**11%**	**12%**	**10%**
Number of total test sites		22	17	12	6

‡TAM 112 is a Pick for limited irrigation only; §TAM 304 is a Pick for full irrigation only. BL = Beardless

¶Reports all varieties included in each individual year; only 2012 test varieties are listed from previous year's trials.

Table 4. Multi-year Dryland Wheat Variety Trial Yields, 2009-2012, Texas & NM High Plains.

Varieties in bold indicate Pick varieties for dryland production.

Variety	Source	4-Year	3-Year	2-Year	2012
		Multi-year Bushels per Acre Average			
Hatcher	Colorado St.	36.5	35.6	28.7	33.9
TAM 112	Texas A&M	36.1	36.7	31.2	36.5
TAM 113	Texas A&M	35.6	36.2	31.0	36.1
TAM 111	Texas A&M	35.2	35.7	29.5	37.0
Endurance	Oklahoma St.	35.0	36.0	30.1	37.5
Duster	Oklahoma St.	34.8	36.0	29.0	35.9
TAM 304	Texas A&M	33.9	35.7	30.0	39.2
Bill Brown	Colorado St.	33.9	34.0	27.6	33.3
Armour	Westbred	33.8	35.1	29.9	35.2
Billings	Oklahoma St.	33.8	35.3	29.2	38.8
Greer	Syngenta	32.7	34.2	29.0	36.4
Santa Fe	Westbred	32.6	33.6	29.4	37.0
Jackpot	Syngenta	32.5	34.1	29.7	37.8
Fuller	Kansas St.	31.7	33.2	27.9	35.6
TAM 203	Texas A&M	31.2	32.9	27.0	31.8
Jagger	Kansas St.	31.0	31.6	27.1	35.3
TAM W-101	Texas A&M	30.3	31.3	25.8	30.2
Fannin	Syngenta	29.3	29.7	25.0	31.6
TAM 401 (BL)	Texas A&M	28.3	28.9	24.8	31.0
Winterhawk	Westbred		38.6	31.8	40.1
Garrison	Oklahoma St.		35.3	28.9	36.5
TAM 305 (TX06A001263)	Texas A&M		33.2	26.8	32.5
Mace	Nebraska		31.1	25.4	28.8
Pete	Oklahoma St.		31.0	26.7	34.8
Iba (OK07209)	Oklahoma St.			31.5	37.9
Cedar	Westbred			30.7	40.7
Gallagher (OK07214)	Oklahoma St.			29.9	37.3
Razor (AP08TA6927) (BL)	Syngenta			25.9	32.4
Ruby Lee	Oklahoma St.				39.4
TX06V7266	Texas A&M				39.2
T158	Trio Res.				37.3
TX03A0563-07	Texas A&M				36.5
TX07A001505	Texas A&M				36.4
Everest	Kansas St.				36.1
Hitch	Westbred				34.8
Doans	Syngenta				34.1
Ripper	Colorado St.				32.8
CJ	Syngenta				32.6
APH09T9614	Syngenta				32.4
APH09T2620	Syngenta				30.3
Annual Average, All Varieties¶		**32.6**	**33.6**	**28.3**	**35.1**
Average of Pick Varieties		35.8	36.4	30.2	36.7
Average of Non-Pick Varieties		31.9	33.0	28.1	35.0
%Yield, Picks over Non-Picks		**12%**	**10%**	**9%**	**5%**
Number of sites per year		22	17	10	**3**

¶Reports all varieties included in each individual year; only 2012 test varieties are listed from previous year's trials.

BL = Beardless

Table 5. Multi-year Irrigated Wheat Variety Trial Test Weights, 2009-2012, Texas & NM High Plains.
Variety names in bold indicate Pick varieties for irrigated production.

Variety	Source	4-Year	3-Year	2-Year	2012
		Multi-year Pounds per Bushel Average			
TAM 111	Texas A&M	59.7	60.1	59.9	59.8
TAM 112‡	Texas A&M	59.6	60.0	60.0	59.2
Bill Brown	Colorado St.	59.5	59.8	60.0	59.2
Hatcher	Colorado St.	59.5	59.6	59.8	58.9
TAM 113	Texas A&M	59.4	60.0	60.1	59.0
Fannin	Syngenta	59.4	59.8	59.8	58.5
Billings	Oklahoma St.	59.4	59.8	59.5	58.2
Duster	Oklahoma St.	59.3	59.7	59.7	58.8
TAM W-101	Texas A&M	58.8	59.1	58.7	58.4
Fuller	Kansas St.	58.6	59.3	59.1	58.3
Endurance	Oklahoma St.	58.6	59.1	59.3	58.4
Santa Fe	Westbred	58.3	59.0	58.8	57.7
Armour	Westbred	58.3	58.9	59.1	57.5
Jackpot	Syngenta	58.2	59.0	58.8	57.8
Jagger	Kansas St.	57.8	58.6	58.5	57.5
TAM 304§	Texas A&M	57.2	57.9	58.1	56.7
Greer	Syngenta	56.9	57.4	57.3	56.2
TAM 203	Texas A&M	56.5	56.9	56.9	55.9
TAM 401 (BL)	Texas A&M	56.4	57.4	57.9	58.0
Winterhawk	Westbred		60.2	60.2	60.1
TAM 305 (TX06A001263)	Texas A&M		59.4	59.4	59.1
Pete (BL)	Oklahoma St.		59.1	59.1	57.7
Garrison	Oklahoma St.		58.9	58.7	57.5
Mace	Nebraska		58.4	58.7	57.5
Iba (OK07209)	Oklahoma St.			60.5	60.0
Gallagher (OK07214)	Oklahoma St.			59.4	58.7
Cedar	Westbred			59.1	57.9
Razor (BL)	Syngenta			58.9	58.7
TX07A001505	Texas A&M				60.4
TX03A0563-07	Texas A&M				59.4
Doans	Syngenta				59.1
T158	Trio Res.				59.1
APH09T2620	Syngenta				58.8
APH09T9614	Syngenta				58.8
CJ	Syngenta				58.7
Ruby Lee	Oklahoma St.				58.7
Hitch	Westbred				57.6
TX06V7266	Texas A&M				57.6
Everest	Kansas St.				57.4
Ripper	Colorado St.				56.8
Annual Average, All Varieties¶		**58.6**	**59.2**	**59.2**	**58.3**
Average of Pick Varieties		59.2	59.7	59.7	59.0
Average of Non-Pick Varieties		58.1	58.5	58.2	56.5
%TW, Picks over Non-Picks		**2%**	**2%**	**3%**	**4%**
Number of sites per year		22	17	12	**6**

‡TAM 112 is a Pick for limited irrigation only; §TAM 304 is a Pick for full irrigation only. BL = Beardless

¶Reports all varieties included in each individual year; only 2012 test varieties are listed from previous year's trials.

Table 6. Multi-year Dryland Wheat Variety Trial Test Weights, 2009-2012, Texas & NM High Plains.
Varieties in bold indicate Pick varieties for dryland production.

Variety†	Source	4-Year	3-Year	2-Year	2012
		Multi-year Pounds per Bushel Average			
TAM 113	Texas A&M	59.8	59.8	60.2	58.3
Bill Brown	Colo. St.	59.6	59.3	59.5	57.8
TAM 111	Texas A&M	59.6	59.7	60.5	58.7
TAM 112	Texas A&M	59.5	59.6	60.1	58.7
Fannin	Syngenta	59.3	59.3	59.6	57.6
Hatcher	Colo. St.	59.1	58.7	59.0	56.4
Endurance	Okla. St.	58.5	58.5	58.7	56.4
Duster	Okla. St.	58.4	58.0	57.9	57.9
TAM W-101	Texas A&M	58.3	58.1	58.4	57.2
Billings	Okla. St.	58.3	58.1	58.0	56.4
Fuller	Kansas St.	58.1	58.0	58.2	56.3
Jackpot	Syngenta	57.7	57.5	57.0	55.2
Armour	Westbred	57.7	57.9	58.3	56.2
Santa Fe	Westbred	57.6	57.5	57.8	55.7
Jagger	Kansas St.	57.2	57.1	57.4	54.8
TAM 304	Texas A&M	56.4	56.6	56.6	53.3
TAM 203	Texas A&M	56.2	56.0	56.0	54.6
TAM 401 (BL)	Texas A&M	55.8	55.8	56.3	54.5
Greer	Syngenta	55.7	55.7	55.9	53.4
Winterhawk	Westbred		60.1	60.4	59.9
Pete	Okla. St.		58.7	58.8	57.1
Garrison	Okla. St.		58.3	58.9	57.2
TAM 305	Texas A&M		58.2	58.4	57.2
Mace	Nebraska		57.8	58.1	56.1
Iba (OK07209)	Okla. St.			60.9	59.7
Razor (AP08TA6927) (BL)	Syngenta			59.2	58.3
Gallagher (OK07214)	Okla. St.			59.0	58.0
Cedar	Westbred			57.3	55.7
TX07A001505	Texas A&M				57.9
Ruby Lee	Okla. St.				57.7
Doans	Syngenta				57.3
TX03A0563-07	Texas A&M				57.2
Everest	Kansas St.				56.9
APH09T9614	Syngenta				56.7
CJ	Syngenta				56.7
T158	Trio Res.				56.6
Ripper	Colo. St.				56.5
APH09T2620	Syngenta				56.4
Hitch	Westbred				56.4
TX06V7266	Texas A&M				55.7
Annual Average, All Varieties¶		**58.3**	**58.3**	**58.5**	**56.8**
Average of Pick Varieties		59.4	59.4	59.8	58.0
Average of Non-Pick Varieties		58.1	58.1	58.2	56.5
%TW, Picks over Non-Picks		**2%**	**2%**	**3%**	**3%**
Number of sites per year		22	17	10	**3**

¶Reports all varieties included in each individual year; only 2012 test varieties are listed from previous year's trials.

BL = Beardless