

TEXAS ROLLING PLAINS PICKS LIST FOR 2020-2021

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2019-2020 Cropping Season in Review

Texas Rolling Plains wheat season started with hot and dry conditions in the fall 2019. Soil temperature was not optimum for planting wheat until the first week of October. Dry months continued to the end of December, which reduced winter forage productivity throughout the Texas Rolling Plains. Dryland wheat gradually improved with the spring precipitation during January to March. Late-freezes in mid-April resulted in the freeze injury in many wheat fields across the region. Furthermore, golf-size hail hit spotted areas in the region in early May, which again resulted in the reduced yield potential. Leaf and strip rust pressures were lower than average. There were some reports of loose smut disease of wheat.

Among the three UVT sites (Abilene, Haskell, and Chillicothe), Chillicothe trial were affected by the mid-April freeze and the early-May hailstorm. Low test weight at the Chillicothe site may be caused by the combination among the freeze, drought, and heat stresses. Average grain yields among all varieties and three dryland locations (Abilene, Haskell, and Chillicothe) were 35.2 bu/ac in 2018, and 47.1 bu/ac in 2019, and 44.5 bu/ac in 2020 in the Texas Rolling Plains. Variety trial results for each trial site are available at Texas Rolling Plains Agronomy Website at <https://agrilife.org/txrollingplainsagronomy/wheat-3/> and Texas A&M AgriLife Variety testing website at <http://varietytesting.tamu.edu/wheat/>.

Wheat Picks and Watch Varieties for 2020-2021 Growing Season in the Rolling Plains

Grain-only

The AgriLife Extension wheat Picks variety was selected based on the Texas Rolling Plains Uniform Variety Trial (UVT) at Chillicothe, Haskell, and Abilene, coordinated by the AgriLife Research and Extension personnel. Our ongoing Picks criteria include a minimum of three years of data in Texas A&M AgriLife Rolling Plains wheat variety trials across multiple locations. **A “Pick” variety means this: given the data, these are the varieties we would choose to include and emphasize on our farm for wheat grain production.** Picks are not necessarily the numerical top yielders as important disease resistance traits (leaf or stripe rust, wheat streak mosaic virus), insect tolerance (greenbugs, Russian wheat aphid), or standability can also be important varietal traits that enable a producer to better manage potential risk. We look for **consistency** of yields, e.g. the regularity with which an individual variety is in the **top 25%** of yield over all trials.

Dual-purpose

Texas Rolling Plains dual-purpose variety trials were conducted at Wilbarger, Foard, and Haskell county. Watch varieties were selected based on the forage and grain yield. Dual-purpose watch varieties are discussed at Texas Rolling Plains Agronomy YouTube channel at <https://www.youtube.com/playlist?list=PLQeRtwVwL1DNzYrU8wnpn4AcbqO2du2z2>.

Table 1. Texas A&M AgriLife wheat grain Picks varieties for the Texas Rolling Plains for 2020-2021 growing season.

	Pick's list (Leaf rust/Stripe rust) ¹	Release	3-year average ²	2020 average
1	TAM 205 (R/R) New!	TAMU	44.5	45.1
2	TAM 114 (MR/R)	TAMU	43.6	47.2
3	WB 4515 (-*/-) New!	Westbred	43.6	46.6
4	WB 4269 (MS/MR)	Westbred	43.4	47.5
5	SY Grit (S/R)	Syngenta	43.3	46.1
Trial average			39.2 bu/ac	44.5 bu/ac

¹Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible. ²2017/2018-2019/2020 years among dryland trials at Chillicothe, Haskell, and Abilene. *Indicates that the rating was not collected from the Texas Rolling Plains trials due to low disease pressures.

Table 2. Texas A&M AgriLife wheat grain Watch varieties for the Texas Rolling Plains for 2020-2021 growing season.

	Pick's list (Leaf rust/Stripe rust) ¹	Release	2-year average ²	2020 average
1	WB 4699 (-*/-) New!	Westbred	53.3	47.0
2	Bob Dole (-/-) New!	Syngenta	50.8	46.0
3	Green Hammer (-/R) New!	OSU	50.1	45.5
4	Showdown (-/MR) New!	OSU	49.6	45.4
Trial average			46.7 bu/ac	44.5 bu/ac

¹Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible. ²2018/2019-2019/2020 years among dryland trials at Chillicothe, Haskell, and Abilene. *Indicates that the rating was not collected from the Texas Rolling Plains trials due to low disease pressures.

Table 3. Texas A&M AgriLife wheat dual-purpose Watch varieties for the Texas Rolling Plains for 2020-2021 growing season.

	Watch list (Leaf rust/Stripe rust) ¹	Release	Forage DM 2-year average	Grain 2-year average
1	WB 4792 (-*/MS)	Westbred	109%	121%
2	WB 4595 (-/MS)	Westbred	94%	134%
3	Green Hammer (-/R)	OSU	111%	103%
4	TAM 114 (MR/R)	TAMU	113%	89%
5	Smith's Gold (-/MR)	OSU	106%	92%
Test Average			1370 lb/ac	33.9 bu/ac

¹Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible. ²2018/2019-2019/2020 years among dryland trials at Wilbarger, Foard, and Haskell. *Indicates that the rating was not collected from the Texas Rolling Plains trials due to low disease pressures.

Changes in the Rolling Plains Grain Picks

Varieties kept from 2019-2020 Picks: TAM 114, SY Grit, and WB 4269. These varieties continued to perform excellent in the Texas Rolling Plains in terms of grain yield and disease resistance.

Varieties added for 2020-2021 Picks: TAM 205 and WB 4515. These varieties have performed well under dryland conditions in the Texas Rolling Plains and met the Picks criteria (top 25%).

Variety removed from 2019-2020 Picks: TAM 304, Gallagher, and LCS Chrome. These varieties performed relatively well as compared to other non-Picks varieties; however, they did not meet the top 25% criteria over 3-year trial average. WB 4721 was not available for purchase during 2019-2020 season for the Texas Rolling Plains growers. SY Drifter was not included in the 2019-2020 variety trial.

Texas Rolling Plains Dual-Purpose Picks

Dual-purpose Picks for 2020-2021 seasons are same as 2019-2020 year. The five varieties (WB 4792, WB 4595, Green Hammer, TAM 114, and Smith's Gold) performed well over the past two years (2018/2019 and 2019/2020). Rust pressure was not high in two out of three trial locations; therefore, the rust rating found at <https://agrilife.org/txrollingplainsagronomy/wheat-3/> was taken from the Wilbarger trial site. Although the forage and grain yields of WB 4792 and WB 4595 were well above average, they were moderately susceptible to strip rust. To maintain the high forage and grain potential, make sure to use necessary fungicide applications.

Relative height for varieties tested in the Texas Rolling Plains

Taller															Shorter															
<u>OK12912C</u>	Bob Dole	TAM 114	Showdown	Green Hammer	<u>TX15M8024</u>	TAM 115	LCS Valiant	WB 4792	SY Grit	WB 4515	Greer	WB 4721	LCS Chrome	WB 4595	Gallagher	TAM 205	<u>OCW04S71T-6W</u>	WB 4303	WB 4418	SY Flint	<u>TX14A001035</u>	<u>TX14V70214</u>	TAM 304	TAMW-101	<u>09BC308-14-16</u>	WB 4269	<i>Weathermaster 135</i>	TX14M7061	SY Rugged	WB 4699

Figure 1. Relative height for varieties in 2019-2020 UVT trials.

Height data were obtained at the end of season in Munday and Chillicothe UVT trials. Varieties are placed in order of relative height. Actual height can vary widely based on environmental condition and management practices (e.g., fertility).

Variety name with underline is an experimental line.

Italized variety names are awnless varieties.