

Wheat Variety Grain Picks for Texas—2019-2020

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Texas A&M AgriLife staff in College Station, Amarillo/Lubbock, Vernon, Lubbock, and Corpus Christi have designated our annual wheat grain variety “Picks” for the 2019-2020 growing season for four distinct variety testing regions of Texas. These are the High Plains, Rolling Plains (Chillicothe/Vernon region in the north to south of Abilene), Blacklands & Northeast Texas, and South Texas.

Continuing a tradition established years ago, our ongoing Picks criteria include a minimum of three years of irrigated or dryland data in Texas A&M AgriLife regional variety trials across numerous annual locations.

Furthermore, 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.”



Fig. 1. Wheat variety trial harvest in Hale Co., Texas, 2019.

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, wheat

curl mite Hessian fly), or standability can also be important varietal traits that enable a producer to better manage potential risk.

High Plains Wheat Grain Picks for 2019-2020

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Continuing Pick Varieties

TAM 112 remains on the limited irrigated and dryland Picks Lists because of its’ drought tolerance and resistance to the wheat curl mite, which provides tolerance to wheat streak mosaic virus. Be aware though that TAM 112, unlike most of our other Picks, is susceptible to leaf and stripe rust. **TAM 113** remains on the list because of solid grain performance, forage potential, and ability to emerge under stressful conditions. It has moderate resistance to stipe and leaf rusts. Likewise, **TAM 114** continues as a strong Pick with good yields and a solid rust resistance package. This variety to date has been the common replacement for TAM 111, which was removed from the Picks list two years ago due to increasingly inconsistent performance.

Table 1. Texas A&M AgriLife wheat grain variety Picks for the Texas High Plains based on yield performance and consistency based on over 34 multi-year, multi-site irrigated, and dryland trials harvested in 2015-2019. Leaf rust and stripe rust reactions are included (see footnote).

Wheat Variety "Picks", Texas High Plains. 2019-2020		
<u>Full Irrigation</u> [‡]	<u>Limited Irrigation</u>	<u>Dryland</u>
TAM 113 (R/R) [§]	TAM 112 (S/S)	TAM 112
TAM 114 (MR/R)	TAM 113	TAM 113
CP7869 (R/R)	TAM 114	TAM 114
SY Monument (R/R)	CP7869	CP7869
Winterhawk (MS/MR)	SY Monument	LCS Mint (S/MR)
	Winterhawk	WB4721 (R/MR)
		T158 (MR/MS)
Wheat Variety "Watch" List, Texas High Plains, 2019-2020		
TAM 205 (R/R)	TAM 205	TAM 205
TAM 115 (R/R)	TAM 115	TAM 115
		Long Branch (MS/MR)

[‡]Full irrigation in the Texas & eastern NM High Plains reflects a production system also oriented to ample nitrogen fertilizer applications and likely fungicide application, for leaf rust and stripe rust even when infection is minimal or perhaps even not evident (preventive applications).

[§]Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible

Westbred Winterhawk, **Westbred WB4721** and **Limagrain LCS Mint** have continued to perform well in the past 4+ years Texas High Plains production. **Dyna-Gro Long Branch** will remain on the watch list. It has a good grain yield potential, but milling properties are not as good as other varieties and test weights are below average. **Limagrain T158** remains on the dryland list because of continued good performance under dryland conditions.

Changes in the High Plains Picks for 2019-2020

Additions

Croplan CP7869 has been evaluated as Croplan EXP 69-16 since the 2016-2017 production year. Released in 2018, it is well adapted for both irrigated and dryland conditions. In all years, it has been a top-yielding variety with good test weights, straw strength and a leaf disease package (good resistance to leaf, stem, and stripe rust). **Syngenta Monument** is another addition for the irrigated Picks Lists. It has been a top yielder in the High Plains Uniform Variety irrigated trials for 4+ years with good test weights. It is resistant to stripe and leaf rust and noted for very good drought tolerance. It was not placed on the dryland Picks List because it was not evaluated in 2018-2019 dryland trials.

Deletions

OSU's Iba was dropped because it has not maintained an upper yield potential compared to newer varieties. Both **TAM 304** and **Limagrain T158** were dropped from the irrigated lists. TAM 304 does not have the upper yield potential of newer varieties, and T158 was no longer evaluated in 2018-2019 High Plains irrigated trials.

Changes in the Watch List

TAM 115 is a new variety on the 2019-2020 Irrigated and Dryland Picks Watch Lists. It has a solid 3-year history in the High Plains Uniform Variety trials especially in the limited irrigated and dryland trials. It has previously been evaluated as an experimental variety. TAM 115 is a dual-purpose variety resistant to leaf rust, stripe rust, stem rust, green bug and wheat curl mite (hence lower susceptibility to wheat streak mosaic virus) with excellent drought tolerance.

TAM 205 is a new addition to the 2019-2020 Irrigated and Dryland Picks Watch Lists. It has been evaluated for 2 years in the uniform variety trials. It is a dual-purpose variety with a high top-end yield potential, good test weights, and good fall forage production. It is resistant to leaf rust, stripe rust, stem rust, and green bug. It is also resistant to the wheat curl mite and wheat streak mosaic virus. It performed very well in the irrigated and dryland trials.

Both TAM 115 and TAM 205 will have limited seed availability in fall 2019, so we are not sure how widely available seed will be for the upcoming planting year.

We removed **PlainsGold Avery** (Colorado variety) from our watch list as ongoing results are insufficient to promote the variety to the Picks list for dryland.

Additional discussion of wheat grain variety Picks for the High Plains (with multi-year yield tables) will be posted at <http://lubbock.tamu.edu/programs/crops/wheat/> by August 26, 2019.

Northern Rolling Plains Wheat Grain & Dual-Purpose Picks for 2019-2020

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In the past AgriLife has reported a Picks List for all of the Rolling Plains, from south of Abilene/Concho Valley to the Wichita Falls/Chillicothe area. This year’s list focuses on data from trial sites only from Abilene north, hence we are designating it as the ‘Northern’ Rolling Plains Pick list. Also, Dr. Kimura, is testing forage and subsequent grain yields for dual-purpose wheats. This is AgriLife’s first list—Watch varieties due to two years of data—for this category in 2019-2020. We will look to develop a list of wheat variety selections more focused on the Lower Rolling Plains through Dr. Reagan Noland, San Angelo, (325) 657-7330, reagan.noland@ag.tamu.edu, will be developing a list of Picks and Watch varieties based on Brady, Millersview, as well as the same Abilene trials Dr. Kimura uses.

Pick’s List for Grain Only	Watch List for Dual-purpose (forage + grain)
WB 4269 (MS/MR)	No Picks yet
TAM 114 (MR/R)	due to development
LCS Chrome (R/R)	of a new category.
SY Drifter (R/MR)	
TAM 304 (MS/MR)	
Gallagher (S/R)	
WB 4721 (R/MR)	
SY Grit (S/R)	
Wheat Variety "Watch" List, Northern Rolling Plains, 2019-2020	
	WB 4595 (-/-)
	WB 4792 (-/-)
	Green Hammer (-/-)
	Smith’s Gold (-/-)
	TAM 114 (MR/R)

Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible.

Additions in 2019

Syngenta SY Drifter and **Westbred WB 4269** were added to the Northern Rolling Plains grain only Picks List in 2019 due to consistently good yields. Yields were comparable to other Pick List varieties. SY Drifter is a medium maturity with good leaf and stripe rust resistance. WB 4269 is medium early maturity and is moderately resistant to stripe rust but needs fungicide application for leaf rust.

New for 2019-2020 is Dr. Kimura's Watch list for Northern Rolling Plains (Abilene north) for varieties that have a good combination of good grazing and subsequent grain yield. These five varieties will continue in testing with other lines to establish a Picks list for 2020-2021.

Deletions in 2019

Greer and **WB Cedar** were removed from the grain only Picks list due to inconsistent yields.

Blacklands/Northeast Texas Wheat Grain Picks for 2019-2020

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<u>Hard Red Winter Wheat</u>	<u>Soft Red Winter Wheat</u>
Gallagher (MR/R)	AGS 2055 (R/R)
TAM 304§ (MR/MR)	USG 3895 (R/R)
WB Cedar (S/MR)	AGS 2024 (R/MR)
	AGS 2038 (R/R)
Wheat Variety "Watch" List, NE & Central Texas, 2019-2020	
WB 4269 (MS/MR)	AGS 2033 (-/-)
WB 4303 (S/MS)	
WB 4418 (S/MR)	

Additions for 2019

While no varieties were added to the HRWW Picks List, **AGS 2024** and **AGS 2038** were added to the Picks for soft red winter wheat (SRWW). **Westbred WB 4418** and **WB 4303** remain on the Watch List for the Blacklands due to growing indications of good yield and other traits. Both WB 4418 and WB 4303 are intermediate on leaf and stripe rust resistance and may require a fungicide in the spring to maximize yields. Both are ranked high for straw strength as well. WB 4418 also has good Hessian fly tolerance which is an important trait in this region, whereas WB 4303 is rated excellent for grazing potential.

Deletions for 2019

After being on the Picks List for several years, Greer was finally dropped from the HRWW list after slipping in the yield rankings for two years in a row. Coker 9553 was also dropped from the SRWW list due to discontinued seed sales.

Other Notes

Westbred WB Cedar has had some average results in individual trials but has a very strong yield history. This variety is shorter in height with excellent straw strength, early maturity and good test weight. Leaf rust resistance has broken down however, and it is susceptible to stipe rust in the juvenile stage. If producers manage foliar diseases with fungicide, WB Cedar should still perform well. Also, WB Cedar has shown vernalization issues in the southern tip of the Blacklands during mild winters.

South Texas Wheat Grain Picks for 2019-2020

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<u>Hard Red Winter Wheat</u>	<u>Hard Red Spring Wheat</u>	<u>Soft Red Winter Wheat</u>
TAM 401 (MR/R)	LCS Trigger (R/MS)	USG 3120 (R/MS)
	Expresso (MR/R)	
	TAMSpr 801 (R/R)	
	WB 9518 (MR/R)	
Wheat Variety "Watch" List, South Texas, 2019-2020		
WB 4303 (S/MS)	WB 9350 (S/MR)	

Additions for 2019

No new additions for 2019-2020. **Westbred WB 9350** remains on the HRSW Watch List. This variety was only tested in 2017 and 2019, thus additional performance data will be needed before additional changes are considered.

Deletions for 2019

LCS Iguana (HRSW) and **SY Cypress** (SRWW) were deleted as Picks.

Other Notes

It appears **TAM 401** remains the sole hard red winter wheat entry for South Texas as it is the least sensitive winter type to vernalization issues that are a regular issue during mild winters. It is awnless and has lighter test weight, but still maintains good resistance to leaf and stripe rust and is one of the earliest maturing winter varieties available. Unfortunately, there is little if any seed availability remaining for this variety. Producers who can find a little, especially if certified, may wish to save some of their grain for their own planting (if permitted by Texas Dept. of Agriculture). We don't have any other stronger, more certain options than TAM 401 for South Texas. **Westbred WB 4303** is on the watch list for this region as it too appears less sensitive to the mild winters. In portions of South Texas, hard red spring wheats are a safer bet to avoid vernalization problems.

For Further Information

For additional information about wheat varieties and small grains production in Texas, consult <http://varietytesting.tamu.edu/wheat/>

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