

Grain Variety Picks for Texas High Plains 2021-2022 Wheat Year & 2020-2021 Texas High Plains Wheat Production Summary

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2020-2021 Cropping Season in Review

Variable rainfall and an expanding drought in 2020 resulted in poor planting conditions across the Texas High Plains. Some fields benefitted from an October 2020 precipitation event, but across much of the region, rain was accompanied by ice. Many fields were dry sowed following corn and cotton harvest. There was minimal winter precipitation through the central and northern Panhandle resulting in another dry winter. South Plains producers benefitted from several early winter snowfall events. The severe freeze in February 2021 caused some injury in southern, more mature fields, but across the region, there was either no injury or minimal injury. Much of the region received several inches of snow before the onset of sub-zero temperatures, and timely snow buffered the wheat from extreme temperatures and potential injury. As in 2019-2020, the prolonged drought resulted in many producers pulling cattle off dryland wheat pasture early due to a lack of forage and irrigated fields were grazed past first hollow stem or grazed. Livestock producers struggled to optimize gain on wheat pasture as a result increased feeding costs in local feedyards. The region continued to see an increase in wheat planted and harvested for wheat silage (wheatlage) with most of the wheat in the southwestern Panhandle being harvested for forage because of the 2020 drought and resulting forage deficit. A mid-April freeze caused varying degrees of injury to regional wheat fields. Injury was most evident on early planted fields planted with earlier maturing varieties in the central and southeastern production region. Late April and early May were hot and dry resulting in water stress across much of the region's wheat, but conditions quickly changed in mid-May. Cool and wet conditions resulted in a prolonged grain-fill period and significantly boosted yields of later planted fields. Even with cool, wet conditions, rust conditions were moderate. Wheat streak mosaic virus was heavy in many areas. Frequent hailstorms were associated with May and June rainfall events. Regional yields were above the long-term average in many areas depending on variety, irrigation capacity, and precipitation timing and amount.

Wheat Grain Variety “Picks” for 2021-2022

Continuing a long-time tradition, 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 can be described as: “Varieties that we would choose to include and emphasize on our farm for wheat grain production given the 3-year performance and variety characteristics.” It is important to note that this list only includes varieties designated for grain or dual-

purpose. Varieties that are used primarily for grazing and forage are not listed on this “Grain Variety Picks” list.

Picks are not necessarily the numerical top yielders as milling and baking quality, important disease resistance traits (leaf or stripe rust, wheat streak mosaic virus), insect resistance (greenbugs, wheat curl mite, and Hessian fly), or standability can also be important varietal traits that enable a producer to better manage potential risk. Varieties placed on our Watch List show promise, but insufficient data is available to make a conclusion.

Table 1. Texas A&M AgriLife wheat grain variety Picks for the 2021-2022 Texas High Plains wheat season. Picks are based on yield performance and consistency from 20 irrigated and dryland trials primarily in the Texas Panhandle (northern Texas High Plains) harvested from 2019-2021.

Wheat Variety "Picks", Texas High Plains. 2021-2022		
Full Irrigation[†]	Limited Irrigation	Dryland
TAM 113	TAM 113	TAM 113
TAM 114	TAM 114	TAM 114
TAM 115	TAM 115	TAM 115
TAM 205	TAM 205	TAM 205
----	Winterhawk	Winterhawk
WB4792	WB4792	WB4792
Wheat Variety "Watch" List, Texas High Plains. 2020-2021		
Canvas	Canvas	----
CP 7869 [§]	CP 7869 [§]	CP 7869 [§]
Winterhawk [§]	----	----
SY Wolverine	----	----

[†] Full irrigation in the Texas High Plains reflects a production system that also is oriented to ample nitrogen fertilizer applications and likely fungicide application(s) for leaf rust and stripe rust even when infection is minimal or even preventative applications before infestation.

[§] Varieties were evaluated for a minimum of three years and on the 2020-2021 Picks List. While the varieties are known to have stable performance, they were not evaluated in the AgriLife 2020-2021 High Plains variety trials or not evaluated under the specific water regime so they have been moved to the watch list.

Table 2. Characteristics of 2021-2022 Picks varieties based on marketed traits and observations in High Plains trials.

Variety	Leaf Rust	Stripe Rust	WSMV	Straw Strength	Maturity
TAM 113	Resistant	Resistant	Moderately Susceptible	Decent	Medium Early
TAM 114	Resistant	Resistant	Moderately Susceptible	Very Good	Medium
TAM 115	Resistant	Resistant	Very Good [†]	Very Good	Med-Late
TAM 205	Resistant	Resistant	Very Good [§]	Very Good	Medium
Canvas	Susceptible	Good	Very Good	Very Good	Medium
CP 7869	Good	Good	None	Very Good	Late
WB4792	Moderate Tolerance	Moderate Tolerance	None	Very Good	Med-Late
Winterhawk	Susceptible	Intermed. Resistance	Moderately Susceptible	Very Good	Medium
SY Wolverine	Susceptible	Susceptible	Susceptible	Very Good	Med. Early

[†] Resistant to the wheat curl mite which provides resistance to wheat streak mosaic virus (WSMV).

[§] Resistant to WSMV.

Notes about the High Plains Picks

TAM 112 was removed from the Picks list. **TAM 115** is a successor of TAM 112. It is a later maturing variety that is less susceptible to injury from late spring freezes. TAM 115 maintains the disease and insect package of 112 but with improved grain yields. TAM 115 is a large seeded variety that was added for the 2020-2021 Limited Irrigated and Dryland Picks Lists based on 3-year history in the High Plains Uniform Variety trials under limited irrigated and dryland trials. Recent observations indicate that it maintains performance under good dryland conditions and irrigated. but it does not have the tillering potential of TAM 113 under tough, water stressed dryland conditions. TAM 115 is a dual-purpose variety with very good milling and baking quality that is resistant to leaf rust, stripe rust, stem rust, green bug, and wheat curl mite with good drought tolerance. Wheat curl mite resistance conveys resistance to wheat streak mosaic virus. **TAM 205** continues to demonstrate stable yields in the uniform variety trials. It is a dual-purpose variety with a high top-end yield potential, good test weights, very good end-use quality, and good fall forage production. It is resistant to leaf rust, stripe rust, and stem rust. It is also resistant to wheat streak mosaic virus and soil-borne wheat mosaic virus. It performed very well in the across all water regimes.

Croplan CP7869 was moved to the Watch List from the 2020-2021 Picks List because it was not tested in 2020-2021. Because of its' solid performance in previous irrigated and dryland conditions, it is still a variety of consideration. **Syngenta Wolverine** was a new addition to the 2020-2021 Watch List. Wolverine is a 2019 AgriPro release that was previously evaluated in Texas A&M AgriLife trials as (08BC379-40-1). It has been a top yielder in the High Plains Uniform Variety irrigated trials for the last 2 years with good test weights. It is a high tillering variety noted for good drought tolerance, but it was not evaluated in the 2020-2021 dryland trials. It showed susceptibility to WSMV, so it should not be placed in a WSMV susceptible field. It shows high-end potential under well managed conditions. **Westbred WB4792** has been added to the Picks List. It was a 2018 release that has been a top yielder in the High Plains Uniform Variety irrigated and dryland trials for the last three years with good test weights. It has very good tillering potential.

TAM 113 remains on the list because of solid grain performance, end use quality, forage potential, and ability to emerge and tiller under stressful conditions. It has resistance to stripe, leaf, and stem rusts. **TAM 114** remains on the list because of solid grain performance, excellent milling and baking quality, and forage potential under irrigated and dryland conditions. It tolerates heavy grazing and is resistant to stripe, leaf, and stem rust.

The 2021-2022 wheat grain variety "Picks" for the Texas High Plains have been designated based on performance of varieties in 20 different trials conducted from 2018-2021 under irrigated and dryland conditions.