

## **Grain Variety Picks for Texas High Plains, 2020-2021 & Texas High Plains Wheat Production Summary, 2019-2020**

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### **2019-2020 Cropping Season in Review**

Variable rainfall in August and September resulted in varying planting conditions across the Texas High Plains. Some fields were planted with replenished soil moisture while other fields were dry sowed. October 2019 rains delivered valuable moisture for the region's wheat crop. There was minimal winter precipitation through the central and northern Panhandle resulting in another dry winter. A prolonged winter drought resulted in many producers pulling cattle off dryland wheat pasture early due to a lack of forage; however, irrigated fields were grazed past first hollow stem or grazed out to optimize gain on wheat pasture as a result of the Spring 2020 cattle market. Dryland fields benefited from March rain. The region continued to see an increase in wheat planted for wheat silage (wheatlage). April freezes resulted in 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 southwestern production region; however, prolonged periods below 24°F when wheat was jointing also resulted in damage across the northern High Plains production area NW of Amarillo. Conditions rapidly changed in late April. Above average temperatures through May and June drove the crop water demand resulting in water stress in both dryland and limited irrigated fields during anthesis through grain fill. Because of warm, dry conditions, disease pressure was minimal during late spring. Hailstorms across the region resulted in significant hail injury to many regional wheat fields. Even with extreme environmental conditionals, yields were above the long-term average in many areas. Dryland yields ranged 20 to 50 bu/ac, and irrigated yields ranged from 20 to 95 bu/ac depending on variety, irrigation capacity, and precipitation timing and amount.

### **Wheat Grain Variety “Picks” for 2019-2020**

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 (most likely just two years) is available to make a conclusion.

**Table 1.** Texas A&M AgriLife wheat grain variety Picks for the Texas High Plains based on yield performance and consistency from 22 irrigated and dryland trials harvested in 2018-2020 primarily in the Texas Panhandle (northern Texas High Plains). Leaf rust and stripe rust reactions are included (see footnote).

<b>Wheat Variety "Picks", Texas High Plains. 2020-2021</b>		
<b>Full Irrigation<sup>‡</sup></b>	<b>Limited Irrigation</b>	<b>Dryland</b>
		TAM 112 (S/S)
TAM 113 (R/R) <sup>§</sup>	TAM 113	TAM 113
TAM 114 (MR/R)	TAM 114	TAM 114
TAM 205 (R/R)	TAM 115	TAM 115
CP7869 (R/R)	CP7869	CP7869
Winterhawk (MS/MR)	Winterhawk	Winterhawk
		WB 4721 (R/MR)
		T158 (MR/MS)
<b>Wheat Variety "Watch" List, Texas High Plains. 2020-2021</b>		
TAM 115 (R/R)	TAM 205	TAM 205
SY Monument (R/R)	SY Monument	
SY Wolverine (MS/R)	SY Wolverine	SY Wolverine
CP 7010 (MR/MS)	CP 7010	CP 7010
WB 4792 (MS/MS)	WB 4792	WB 4792

<sup>‡</sup>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.

<sup>§</sup>Leaf rust/stripe rust resistance ratings: R, Resistant; MR, moderately resistant; MS, moderately susceptible; and S, susceptible

### Changes in the High Plains Picks

**TAM 115** is a new, large seeded variety on the 2020-2021 Limited Irrigated and Dryland Picks Lists. It has a solid 3-year history in the High Plains Uniform Variety trials especially in the limited irrigated and dryland trials. 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 excellent drought tolerance. Wheat curl mite resistance conveys resistant to wheat streak mosaic virus. It has shown to maintain yield in water limited conditions, and in many instances, it exceeds a regional favorite TAM 112. TAM 115 is on the 2020-2021 Irrigated Watch List. **TAM 205** is a new addition to the 2020-2021 Irrigated Picks List. It has shown stable yield during the 3-years evaluated in the uniform variety trials

as well as in TAMU breeding nurseries. 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 irrigated trials. It is on the 2020-2021 Watch Lists. **TAM 112** has been removed from the limited irrigated Picks Lists because TAM 115 also has drought tolerance and wheat curl mite resistance but with an improved yield potential. It remains on the Dryland Picks list because of its' drought tolerance and resistance to the wheat curl mite.

**Croplan CP7869** remains of the 2020-2021 Picks List because of its' solid performance. 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** has been moved to the Watch List because it did not perform as well in 2019-2020 as in previous years. **Syngenta Wolverine** is 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 resistant to stripe rust and tolerant to leaf rust. It is a high tillering variety noted for good drought tolerance. **Westbred WB4792** has also been added to the Watch 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 two years with good test weights.

**TAM 113** remains on the list because of solid grain performance, end use quality, forage potential, and ability to emerge 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. **Winterhawk and Westbred WB4721** have continued performed well in the past 5+ years Texas High Plains production. **Dynagro Long Branch** was dropped because it was not evaluated in 2019-2020. It has a good grain yield potential, but baking properties are not as good as other varieties. **Limagrain T158** remains on the dryland list because of continued good performance under dryland conditions.

The 2020-2021 wheat grain variety "Picks" for the Texas High Plains have been designated based on 2019-2020 irrigated and dryland Uniform Variety Trials in the Panhandle (Northern Texas High Plains); 2018-2019 irrigated and dryland Uniform Variety Trials in the Panhandle and at the NMSU Research Center at Clovis; and 2017-2018 irrigated and dryland Uniform Variety Trials in the Panhandle, South Plains, and at the NMSU Research Center at Clovis.