

Grain Variety Picks for Texas High Plains 2024-2025 Wheat Year & 2023-2024 Texas High Plains Wheat Production Summary



Dr. Jourdan M. Bell, Professor and Agronomist, Texas A&M AgriLife Extension and Research, Amarillo, jourdan.bell@ag.tamu.edu, (806) 341-8925

Dr. Calvin Trostle, Professor and Agronomist, Texas A&M AgriLife Extension, Lubbock, ctrostle@ag.tamu.edu, (806) 746-6101

2023-2024 Cropping Season in Review

The 2023-2024 wheat season was another season marked by extreme weather events. Continued drought conditions in early fall 2023 resulted in poor early planting conditions across most of the Texas High Plains (Fig. 1) and reduced wheat pasture for fall grazing. Timely late fall rainfall across the southern Texas High Plains improved growing conditions and forage production for southern producers, but conditions remained variable across most of the Panhandle region. Rainfall in April and May 2023 was variable but improved dryland yields where it was received.

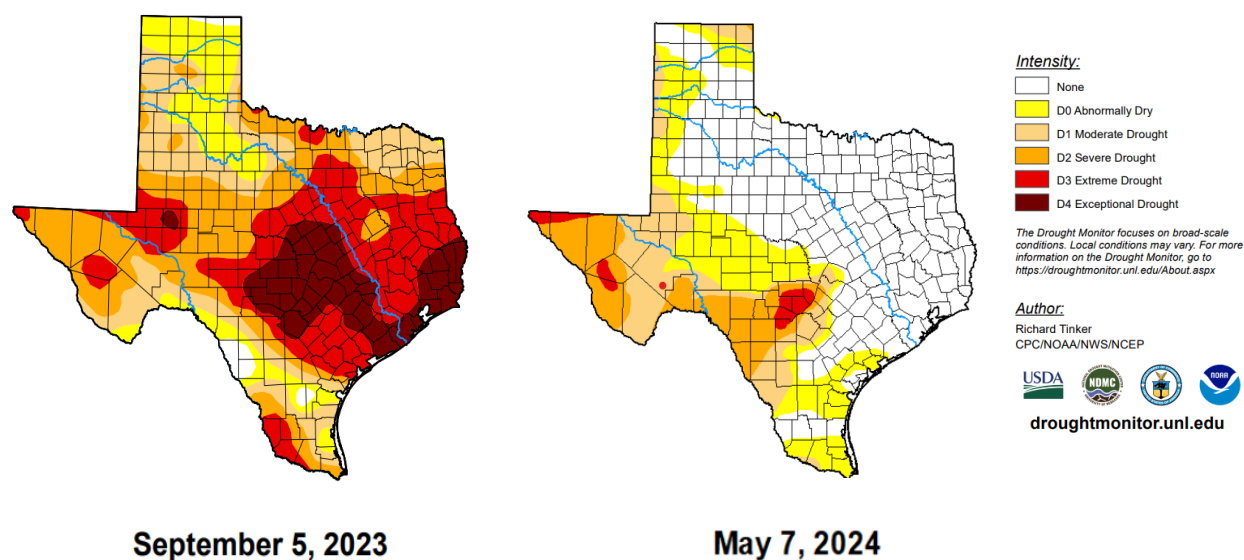


Figure 1. Changing drought conditions across Texas during the 2023-2024 wheat season (Source drought monitor.unl.edu).

Where rainfall was absent, there was negligible sub-soil moisture to carry wheat through the season. Many dryland fields in the western Panhandle failed. There was minimal winter precipitation (snowfall) through the central and northern Texas High Plains resulting in another dry winter. As in 2023, the few dry snowfall events provided little moisture. Forage demands continue to compete with wheat for grain. Across most of the western counties, irrigated wheat was harvested for silage.

Timely rain from mid-May through mid-June improved test weights for many producers, but where rainfall was minimal, the lack of water coupled with early June temperatures exceeding 100 °F resulted in low test weights and reduced yields for some producers.

Wheat Grain Variety “Picks” for 2024-2025

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 production evaluated in our trials. Varieties used primarily for grazing and forage are not listed on this “Grain Variety Picks” list.

Picks are not necessarily the numerical top yielders. The following criteria are also considered:

- 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)
- Standability.

These important varietal traits enable a producer to better manage potential risk.

Table 1. Texas A&M AgriLife wheat grain variety Picks for the 2024-2025 Texas High Plains wheat season. Picks are based on yield performance and consistency from 16 irrigated and dryland trials primarily in the Texas Panhandle (northern Texas High Plains) harvested from 2022-2024.

Wheat Variety "Picks", Texas High Plains. 2024-2025		
Full Irrigation [‡]	Limited Irrigation	Dryland
----	----	TAM 113
TAM 114	TAM 114	----
TAM 116	TAM 116	TAM 116
TAM 205	TAM 205	TAM 205
AP Prolific	AP Prolific	
CP7017AX [¶]	CP7017AX	----
----	----	Canvas
Showdown	----	----
WB4792 [¶]	WB4792	WB4792
Watch: Monarch [¶] , High Cotton*	Watch: Monarch, High Cotton	----

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

[¶]Certified Seed Only (CSO) varieties which contractually do not permit farmer-saved seed.

*Previously tested as OK18510.

Notes about the High Plains Picks

TAM 112 was removed from the Picks list for the 2021-2022 wheat crop, but it remains a good option for tough dryland conditions. **TAM 115** was removed from the 2024-2025 Picks list. Although the pedigree and traits are similar to TAM 112, performance has not been consistent, and it should not be positioned on tough dryland acres. TAM 115 does not have the tillering potential of TAM 113 under tough, water-stressed dryland conditions. **TAM 113** remains on the current dryland list because producers continue to report good performance under dryland conditions. **TAM 116** is a 2023 variety previously tested as TX14A001035. TAM 116 is an excellent dual-purpose wheat well adapted to irrigated systems with good yields and test weights. It has leaf, stripe, and stem rust resistance that continues to demonstrate strong performance across varying environments. **TAM 205** continues to perform well under irrigated and good dryland conditions. Despite earlier reports it was no longer being produced, that is not the case.

Croplan CP7017AX remains on the PICKS list. It has a strong 5-year production history in the High Plains Uniform Variety trials. It contains CoAxiom® as denoted by AX. CoAxiom® varieties contain the AXigen trait which conveys resistance to Aggressor herbicide for control of annual grassy weeds. It is moderately resistant to stripe rust. It requires a Stewardship Agreement and seed cannot be saved. **Canvas** from PlainsGold (Colorado State Univ.) has a good record of grain yield in the Texas High Plains and resistance to WSMV, good tolerance to stripe rust, and good milling and baking qualities, but it is not a top yielding variety in current irrigated trials. **Syngenta SY Wolverine**, while still a high yielding wheat variety with good test weights for High Plains irrigated conditions was removed from the current Picks list and replaced by higher yielding varieties. **Syngenta AP Prolific** was added to the 2024-2025 irrigated and limited irrigated Picks lists because of strong performance history under irrigated conditions since its release in 2022. It is not recommended for dryland acres. AP Prolific has excellent leaf and stripe rust tolerance as well as good tillering potential. Oklahoma State University **Showdown** was added to the current irrigated Picks list because of strong long-term performance in the irrigated trials. Showdown is marketed by Oklahoma Genetics. Showdown is resistant to stripe rust but moderately susceptible to leaf rust. **Westbred WB4792** remains on the Picks List because of continued stable performance under irrigated and dryland conditions with good test weights.

Watch List Varieties: Watch list varieties show promise based on two years of data to date. These are evaluated after Year 3 for possible graduation to our Pick list.

Monarch remains on the Watch list. It is Plains Gold hard white winter wheat variety with a very good yield potential in irrigated trials. Monarch also shows good resistance to WSMV as well as leaf, stripe, and stem rusts. No saved seed is allowed.

High Cotton was added to the Watch list. It is an Oklahoma State 2023 release marketed by Oklahoma Genetics previously tested as OK18510. High Cotton is dual-purpose variety with good grain yield potential plus leaf and rust resistance. It has been a high yielding variety under irrigated conditions. It is not recommended for tough dryland conditions.

Table 2. Characteristics of 2024-2045 Picks varieties based on marketed traits and observations in Texas A&M AgriLife 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 116	Resistant	Resistant	Good§	Very Good	Medium
TAM 205	Resistant	Resistant	Resistant	Very Good?	Medium
AP Prolific	Resistant	Resistant	Susceptible	Good	Medium
Canvas	Susceptible	Good Tolerance	Very Good	Very Good	Medium
CP7017AX	Susceptible	Moderate Resistance	Susceptible	Good	Medium
High Cotton	Moderate Resistance	Moderate Resistance	Susceptible		Med. Early
Monarch	Resistance	Resistance	Very Good	Very Good	Med. Late
Showdown	Good	Resistance	Susceptible	Good	Medium
WB4792	Moderate Tolerance	Moderate Tolerance	Susceptible	Very Good	Med-Late

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

§ Resistant to WSMV.

Certified Seed Only and PVPA: Wheat Varieties

In the past few years many if not most companies have moved to implement additional protections on their wheat varieties. This includes limiting planting to Certified Seed Only (CSO). This is an effort to better recapture the cost of developing and releasing a new wheat variety. This cost can be several million dollars in great part because wheat breeding programs test potentially hundreds of crosses through many generations over multiple locations to find one that is commercially viable. When farmers purchase a CSO variety, farmers are required to sign a Stewardship Agreement with the variety developer. The key regulation is the farmer may NOT save any seed for planting a future crop. The developer of a CSO variety who finds a farmer in violation of a CSO agreement has the right to seek civil recourse through the court system. If a farmer is unwilling to agree to these terms, the farmer should not purchase a CSO variety. The farmer should consider non-CSO variety choices.

The Plant Variety Protection Act (1994) allows a farmer to save his or her own harvested grain to the extent of their own acres they intend to plant the next cropping season. The primary reason is to reduce wheat seed purchase costs, which can be substantial over large acreages. PVPA expires at 20 years. Most wheat variety developers also use patents to govern the use and reuse of their varieties. This provision is generally regarded as stronger than PVPA. Texas A&M AgriLife will be updating a

previous guide on wheat and PVPA in August 2023. For a 2005 AgriLife review of PVPA see <https://varietytesting.tamu.edu/wp-content/uploads/sites/17/legacy-files/wheat/docs/plantvarietyprotectionact.pdf>



Additional Wheat Production Information

The AgriLife wheat group for the Texas A&M High Plains region is preparing multi-year tables for grain yield and test weight, irrigated and dryland. These tables offer an excellent summary of Pick & Watch list performance and demonstrate the yield advantages of Pick varieties vs. all other wheat varieties (usually 5 to 8% higher).

For further AgriLife wheat information for the Texas High Plains and statewide visit the online wheat pages at:

- <https://amarillo.tamu.edu/amarillo-center-programs/agronomy/wheat-publications/>
- <http://varietytesting.tamu.edu/wheat>

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