

Wheat Update 2019

ARKANSAS WHEAT PERFORMANCE TRIALS AND VARIETY SELECTION

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Wheat performance trials were conducted during the 2018-2019 growing season by the Arkansas Wheat Variety Testing Program under the direction of Dr. Esten Mason to provide information about yield potential, agronomic characteristics, and disease reaction of commercially available and experimental lines/varieties of wheat. Variety selection is very important for successful and profitable wheat production. This publication is a summary of the Arkansas Wheat Variety Testing Program results from only commercially available varieties with 2 or more years of data and is designed to help producers select adapted, high-yielding, and disease-resistant varieties.

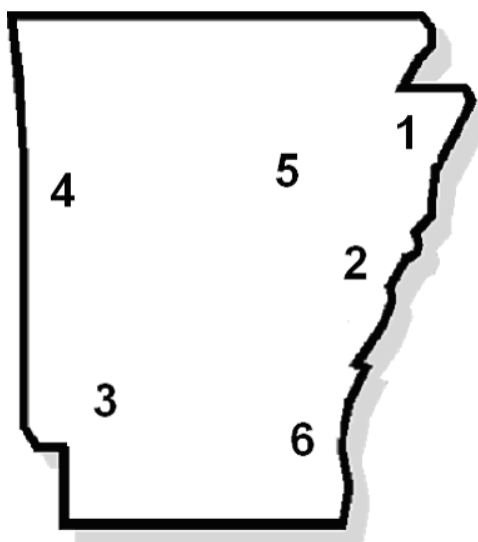


FIGURE 1. LOCATIONS OF ARKANSAS WHEAT PERFORMANCE TESTS

- 1 – Northeast Research and Extension Center, Keiser – Sharkey Silty Clay
- 2 – Lon Mann Cotton Research Station, Marianna – Loring Silt Loam
- 3 – Southwest Research and Extension Center, Hope – Clay Silt Loam
- 4 – Vegetable Substation, Kibler – Roxanna Silt Loam
- 5 – Newport Extension Center – Beulah Fine Sandy Loam
- 6 – Southeast Branch Station, Rohwer – Herbert Silt Loam

Methods

Wheat varieties and experimental lines were entered by seed companies and public institutions and evaluated for an unbiased comparison of their performance. In general, recommended cultural practices for wheat production in Arkansas were used. All locations were planted between October 24 and November 29 into conventionally tilled seedbeds using small plot planters.

Each trial consisted of 96 varieties and experimental lines replicated four times in a randomized complete block design. A seeding rate of 105 lb/A was used for all varieties at each location. Recommended production practices were followed and pests were controlled as needed. Plots were harvested with a small plot combine to determine yields, which were adjusted to 13 percent moisture.

For further details concerning methods and results, consult the *Small-Grain Cultivar Performance Tests 2018-19*, Arkansas Agricultural Experiment Station, located at: <https://aes.uark.edu/variety-testing/>

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Table 1. Arkansas Wheat Performance Trials Summary of Commercially Available Varieties, 2018-2019.							
	-----2-year Average Performance (bu/acre)-----						
Entry Name	All Trials*	Hope	Kibler	Keiser**	Marianna	Newport	Rohwer**
Armor Mayhem	73.4	64.0	78.9	60.3	77.3	73.3	75.9
Dixie Brown	73.0	65.4	79.6	62.4	72.9	74.0	80.6
Pioneer 26R59	72.6	62.0	79.0	59.6	74.9	74.3	77.2
AgriMAXX 473	72.2	66.9	80.3	62.6	73.2	68.5	83.3
Progeny #WARRIOR	72.0	66.8	72.7	64.2	78.1	70.4	70.7
Delta Grow 1000	71.8	65.6	79.2	63.0	74.2	68.2	82.1
Dyna-Gro 9701	71.8	66.0	75.6	59.2	75.0	70.4	82.5
Croplan CP8550	71.6	63.6	80.1	---	74.3	68.5	---
USG 3536	71.1	61.9	76.2	59.3	78.1	68.3	80.9
Go Wheat 2058	70.0	66.8	75.0	65.0	68.1	70.1	68.6
Pioneer 26R41	69.9	63.4	78.9	63.3	71.5	65.8	81.8
Hilliard	69.8	67.7	73.0	62.1	70.8	67.7	85.5
Progeny #BULLET	69.5	59.6	75.6	63.4	72.4	70.4	79.3
Pioneer 26R45	69.4	59.0	76.4	62.7	77.8	64.3	---
USG 3895	68.5	71.0	78.3	60.9	66.1	58.6	---
Progeny #BLAZE	68.4	62.6	75.0	52.6	67.6	68.2	---
USG 3329	68.3	64.5	74.4	---	69.9	64.4	---
SY Viper	67.5	60.0	71.5	56.8	73.9	64.4	72.5
AGS 2024	66.9	70.4	68.4	---	53.0	75.7	---
AgriMAXX 415	66.4	61.2	73.6	59.1	67.8	63.0	73.7
SY 547	65.9	57.1	67.8	49.5	72.6	66.1	---
AGS 2038	65.8	70.2	60.3	47.8	68.7	64.0	80.2
AGS 2055	65.6	66.5	64.5	63.8	66.7	64.7	83.9
Dyna-Gro 9811	65.3	61.1	69.6	62.2	66.3	64.2	---
Progeny #TURBO	65.2	49.1	62.8	55.5	70.6	78.4	76.7
Pioneer 26R10	64.0	59.8	69.8	50.7	67.1	59.3	58.3
Dixie Bentley	63.9	68.0	65.9	57.0	50.8	71.0	85.4
Pioneer 26R36	63.5	59.3	72.0	54.5	67.9	54.8	85.4
Dixie Jones	62.6	60.1	70.4	51.0	63.3	56.7	73.9
AgriMAXX 475	62.4	61.4	73.4	52.5	63.0	51.8	76.2
Progeny #FURY	62.2	58.8	61.8	53.2	66.2	61.8	---
Croplan CP9606	60.0	63.5	65.2	---	58.2	53.0	---
Delta Grow 3500	60.0	64.9	59.7	49.3	46.6	68.6	91.3
Dyna-Gro 9862	58.1	43.6	62.1	---	65.8	60.7	---
USG 3640	56.4	57.8	59.0	---	44.1	64.8	---
Means	67.0	62.7	71.6	57.3	67.9	66.0	76.7
*Trials with data from 2018 and 2019 only. Includes Hope, Kibler, Marianna, and Newport							
**Keiser 2-year average calculated from 2017 and 2018 (no data from 2019)							
**Rohwer 2-year calculated from 2016 and 2017 (no data from 2018 or 2019)							

Table 2. Arkansas Wheat Performance Trials Summary of Commercially Available Varieties, 2017-2019.				
	-----3-Year Average Performance (bu/acre)-----			
Entry Name	All Trials*	Kibler	Marianna	Newport
Armor Mayhem	79.8	83.3	78.9	77.2
USG 3536	79.0	81.0	78.8	77.2
Dixie Brown	78.7	80.7	76.3	79.0
Dyna-Gro 9701	78.0	77.2	77.0	79.7
AgriMAXX 473	77.2	82.1	75.3	74.3
Pioneer 26R41	77.2	81.2	75.7	74.7
Pioneer 26R45	76.9	80.2	77.6	73.0
Delta Grow 1000	76.7	78.7	77.6	73.8
Progeny #BULLET	76.2	80.2	75.5	72.9
Pioneer 26R59	76.1	81.2	71.0	76.2
Go Wheat 2058	75.4	75.2	73.3	77.7
Progeny #WARRIOR	74.4	76.0	73.0	74.1
Hilliard	74.1	76.4	74.7	71.3
Progeny #TURBO	73.7	69.6	70.9	80.5
Dyna-Gro 9811	73.1	73.8	72.1	73.5
USG 3895	73.1	83.1	70.2	66.0
SY Viper	73.0	76.9	75.0	67.1
AgriMAXX 415	72.0	77.8	68.7	69.5
AGS 2055	71.4	68.6	73.2	72.5
Pioneer 26R36	70.8	78.8	71.0	62.6
SY 547	69.6	67.9	72.0	68.8
AGS 2038	69.5	65.6	73.3	69.7
Progeny #BLAZE	69.0	77.1	64.8	65.0
Dixie Bentley	68.8	69.4	62.5	74.6
Progeny #FURY	68.8	61.8	68.5	76.2
Pioneer 26R10	67.2	74.2	63.1	64.2
AgriMAXX 475	66.6	77.7	65.2	56.9
Dixie Jones	66.3	73.5	64.4	60.9
Delta Grow 3500	62.6	59.4	57.8	70.6
Means	72.9	75.5	71.6	71.7

*Trials with data each year from 2017-2019, includes Kibler, Marianna, and Newport

Table 3. Disease Reactions of Commercially Available Varieties in Arkansas Wheat Performance Trials, 2019.*

Entry Name	Fusarium Head Blight Severity 0-9	Septoria Leaf Blotch Severity 0-9	Stripe Rust Severity 0-9	Leaf Rust Severity 0-9	Bacterial Leaf Streak Severity 0-9
AgriMAXX 415	1.8	1.0	0	3	1.8
AgriMAXX 473	0.8	1.0	0	2	1.0
AgriMAXX 475	1.0	1.0	0	5	2.3
AGS 2024	3.3	1.5	0	0	2.5
AGS 2038	3.7	1.3	0	1	1.3
AGS 2055	3.3	1.5	1	0	2.8
Armor Mayhem	1.0	1.0	0	2	1.0
Croplan CP8550	0.8	1.0	0	1	1.0
Croplan CP9606	1.7	2.0	0	1	2.5
Delta Grow 1000	1.0	1.0	0	1	1.3
Delta Grow 3500	4.5	1.5	1	2	3.5
Dixie Bentley	1.8	1.0	0	2	2.3
Dixie Brown	0.8	1.0	0	2	1.0
Dixie Jones	0.5	1.0	0	6	2.3
Dyna-Gro 9701	1.0	1.0	0	3	1.3
Dyna-Gro 9811	2.0	1.3	0	2	2.3
Dyna-Gro 9862	0.7	2.0	0	9	1.3
Go Wheat 2058	1.7	1.0	1	1	3.0
Hilliard	1.5	1.0	0	1	1.8
Pioneer 26R10	1.0	1.3	0	6	2.5
Pioneer 26R36	1.0	1.5	0	1	2.8
Pioneer 26R41	1.2	1.5	0	2	1.5
Pioneer 26R45	0.7	2.0	0	3	1.3
Pioneer 26R59	2.3	1.3	0	6	1.8
Progeny #BLAZE	1.5	1.0	1	6	1.3
Progeny #BULLET	0.8	1.0	0	1	1.5
Progeny #FURY	4.5	2.0	2	0	3.0
Progeny #TURBO	2.5	1.5	0	1	1.8
Progeny #WARRIOR	1.7	1.3	0	8	1.5
SY 547	1.2	1.3	0	2	2.8
SY Viper	2.7	1.3	0	6	2.0
USG 3329	1.0	1.0	0	4	1.5
USG 3536	1.2	1.5	0	0	1.0
USG 3640	3.7	1.8	0	0	3.0
USG 3895	2.5	1.8	0	1	2.3
Means	1.8	1.3	0.2	2.6	1.9

*Summary of available data from all locations in 2019 trials.

Entry Name	Test Weight Lb/bu	Plant Height Inches	Lodging 0-9	Relative Maturity	Awne Variety
AgriMAXX 415	56.2	33.9	2.3	Medium	Yes
AgriMAXX 473	55.6	34.6	4.5	Late	Yes
AgriMAXX 475	52.5	32.4	2.3	Late	Yes
AGS 2024	53.9	33.1	2.3	Late	Yes
AGS 2038	52.0	38.4	0.5	Medium	Yes
AGS 2055	52.5	34.6	1.0	Medium	Yes
Armor Mayhem	54.8	33.8	7.3	Late	Yes
Croplan CP8550	54.6	35.0	3.0	Late	Yes
Croplan CP9606	50.1	32.8	3.0	Medium	Yes
Delta Grow 1000	53.8	35.3	3.0	Late	Yes
Delta Grow 3500	54.1	31.8	3.8	Early	Yes
Dixie Bentley	56.3	35.5	3.3	Early	Yes
Dixie Brown	55.0	34.3	3.0	Late	Yes
Dixie Jones	52.1	30.7	3.0	Late	Yes
Dyna-Gro 9701	54.7	35.7	2.8	Late	Yes
Dyna-Gro 9811	54.7	34.1	1.3	Medium	Yes
Dyna-Gro 9862	53.2	31.7	2.3	Late	No
Go Wheat 2058	54.5	30.9	1.3	Medium	Yes
Hilliard	55.3	35.5	1.0	Early	Yes
Pioneer 26R10	49.9	33.1	3.0	Late	Yes
Pioneer 26R36	53.0	32.6	2.8	Late	Yes
Pioneer 26R41	53.6	31.8	4.0	Medium	Yes
Pioneer 26R45	49.3	33.7	4.8	Medium	No
Pioneer 26R59	51.0	30.8	1.8	Medium	No
Progeny #BLAZE	51.4	33.5	2.8	Medium	Yes
Progeny #BULLET	54.8	35.0	4.3	Late	Yes
Progeny #FURY	47.8	31.9	1.8	Early	No
Progeny #TURBO	56.6	33.0	3.3	Early	No
Progeny #WARRIOR	52.6	31.9	2.3	Medium	Yes
SY 547	55.1	35.0	3.3	Medium	No
SY Viper	54.7	33.3	4.0	Early	No
USG 3329	51.8	33.0	6.0	Medium	Yes
USG 3536	55.0	34.0	5.3	Late	Yes
USG 3640	54.7	34.0	2.5	Early	Yes
USG 3895	52.3	30.8	2.3	Medium	Yes
Means	53.4	33.5	3.0	---	---

*Summary of available data from all locations in 2019 trials.