



Wheat Update 2018



ARKANSAS WHEAT PERFORMANCE TRIALS AND VARIETY SELECTION

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Wheat performance trials were conducted during the 2017-2018 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 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 of commercially available varieties and is designed to help producers select adapted, high-yielding, and disease-resistant varieties.

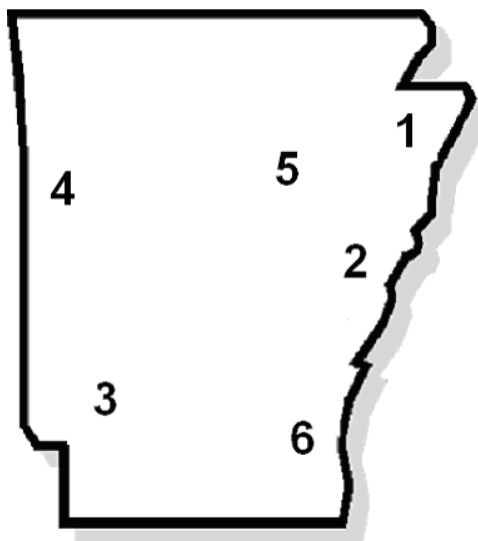


FIGURE 1. LOCATIONS OF ARKANSAS WHEAT PERFORMANCE TESTS

- 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 Station – 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 16th and October 30th 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, with the exception Rohwer which was 82 lb/A. 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, consult the *Small-Grain Cultivar Performance Tests 2017-18*, Arkansas Agricultural Experiment Station, located at www.arkansasvarietytesting.com.

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Table 1. Arkansas Wheat Performance Trials Summary of Commercially Available Entries, 2017 and 2018.

	-----2-year Average Performance (bu/acre)-----					
Entry Name	All Trials*	Kibler	Keiser	Marianna	Newport	Rohwer
AgriMAXX 415	70.0	78.3	59.1	68.2	74.4	73.7
AgriMAXX 446	68.8	84.6	53	64.7	72.7	64.0
AgriMAXX 463	59.8	60.9	45.4	58.4	74.6	70.0
AgriMAXX 473	76.9	86.1	62.6	77.0	82.0	83.3
AgriMAXX 474	71.9	76.2	59.4	70.4	81.4	72.4
AgriMAXX 475	66.9	80.8	52.5	68.4	65.7	76.2
AGS 2038	67.2	67.6	47.8	75.5	77.9	80.2
AGS 2055	73.2	72.6	63.8	76.9	79.4	83.9
Armor LOCKDOWN	67.0	73.3	55.8	60.2	78.8	---
Armor MAYHEM	77.7	86.8	60.3	77.6	86.2	75.9
Delta Grow 1000	74.9	80.6	63.0	76.8	79.0	82.1
Delta Grow 3500	59.3	52.0	49.3	58.0	78.0	91.3
Dixie Bentley	66.5	68.1	57.0	61.5	79.4	85.4
Dixie Brown	77.0	82.3	62.4	76.0	87.2	80.6
Dixie Jones	67.1	78.7	51.0	67.5	71.2	73.9
Dixie McAlister	68.4	82.1	54.4	65.7	71.3	72.6
Dyna-Gro 9012	72.4	77.8	62.9	71.2	77.7	72.3
Dyna-Gro 9171	72.3	87.8	59.5	61.8	80.1	75.8
Dyna-Gro 9701	75.8	80.3	59.2	76.4	87.3	82.5
Dyna-Gro 9750	61.9	62.9	50.0	61.8	72.9	---
Dyna-Gro 9811	71.8	72.7	62.2	70.5	81.7	---
Go Wheat 2058	73.7	73.1	65.0	72.0	84.7	68.6
Go Wheat 2059	58.5	63.5	49.0	55.6	65.8	67.8
Hilliard	72.5	78.9	62.1	71.6	77.4	85.5
L11538	71.8	71.7	65.4	69.8	80.4	---
Pioneer 26R10	66.9	80.7	50.7	65.1	70.9	58.3
Pioneer 26R36	72.3	87.3	54.5	77.0	70.3	85.4
Pioneer 26R41	77.1	83.9	63.3	77.3	83.8	81.8
Pioneer 26R45	76.8	82.8	62.7	81.5	80.2	---
Pioneer 26R59	75.1	85.9	59.6	70.9	84.0	77.2
Progeny #Blaze	65.9	79.5	52.6	66.6	64.7	---
Progeny #Boss	70.9	82.5	57.6	64.8	78.6	---
Progeny #Bullet	74.4	83.4	63.4	75.4	75.4	79.3
Progeny #Fury	67.9	58.2	53.2	72.5	87.7	---
Progeny #Turbo	66.8	64.8	55.5	62.6	84.2	76.7
Progeny #Warrior	72.1	75.7	64.2	71.5	77.0	70.7
SY 547	64.6	63.7	49.5	67.3	77.7	---
SY Viper	70.7	79.6	56.8	75.7	70.7	72.5
USG 3404	67.3	76.3	51.9	68.3	72.7	75.6
USG 3448	67.7	75.1	56.8	65.8	73.0	---
USG 3536	77.0	84.7	59.3	77.0	87.1	80.9
USG3895	74.3	89.9	60.9	71.9	74.5	---
Means	70.3	76.5	57.3	69.6	77.6	76.7

*Trials with data from 2017 and 2018 only. Includes; Kibler, Keiser, Marianna, and Newport
Rohwer 2-year average calculated from 2016 and 2017 (no data from 2018)

Table 2. Arkansas Wheat Performance Trials Summary of Commercially Available Entries, 2016-2018.						
	-----3-year Average Performance (bu/acre)-----					
Entry Name	All Trials*	Kibler	Keiser	Marianna	Newport	Rohwer
AgriMAXX 415	70.7	72.2	60.4	71.6	68.4	91.3
AgriMAXX 446	71.4	75.6	53.0	68.4	70.2	86.9
AgriMAXX 463	65.7	63.7	---	65.5	67.9	---
AgriMAXX 473	78.5	78.7	---	79.3	77.4	---
AgriMAXX 474	74.6	71.7	---	73.4	78.6	84.7
AgriMAXX 475	71.4	74.9	---	71.9	67.5	83.9
AGS 2038	71.9	63.2	50.3	78.2	74.4	---
AGS 2055	76.5	73.4	63.2	80.2	76.0	---
Armor MAYHEM	80.8	79.4	---	82.1	80.9	---
Delta Grow 1000	77.2	74.9	61.8	79.2	77.4	83.1
Delta Grow 3500	63.3	54.4	46.6	65.0	70.4	---
Dixie Bentley	69.7	66.9	---	69.6	72.5	---
Dixie Brown	78.2	76.2	---	79.9	78.4	---
Dixie Jones	70.5	73.7	---	70.1	67.7	81.3
Dixie McAlister	71.1	75.6	56.7	70.2	67.6	77.6
Dyna-Gro 9012	72.6	70.9	57.1	74.8	72.1	---
Dyna-Gro 9171	74.2	80.2	55.6	69.3	73.0	---
Dyna-Gro 9701	79.3	75.4	---	80.1	82.5	78.9
Go Wheat 2058	72.8	65.7	60.5	75.2	77.6	78.8
Go Wheat 2059	62.9	64.9	---	64.1	59.8	78.3
Hilliard	73.9	73.6	60.4	77.1	71.0	---
Pioneer 26R10	69.3	73.7	49.5	65.9	68.3	78.8
Pioneer 26R36	74.7	78.9	59.2	77	68.1	---
Pioneer 26R41	79.5	78.8	64.7	79.9	79.9	---
Pioneer 26R59	76.9	80.3	54.2	74.1	76.3	78.1
Progeny #Bullet	75.8	74.4	---	78.4	74.5	81.9
Progeny #Turbo	69.2	64.9	---	69.6	73.2	86.3
Progeny #Warrior	68.3	66.9	---	73.7	64.2	---
SY Viper	71.6	74.5	54.2	77.1	63.2	---
USG 3404	68.5	70.7	49.1	69.1	65.8	71.3
USG 3536	80.0	76.9	---	81.8	81.3	68.3
Means	72.9	72.4	56.3	73.9	72.5	80.6
*Trials with data from 2016, 2017, and 2018. Includes; Kibler, Marianna, and Newport						
Rohwer 3-year average calculated from 2015-2017 and Keiser from 2015-2016 and 2018						

Table 3. Disease Reactions of Commercial Varieties in The Arkansas Wheat Performance Trials, 2018.

Entry Name	Stripe Rust Severity, Kibler 0-100%	Stripe Rust Severity, Fayetteville, 0-100%	Septoria Leaf Botch (0-9), 0=Low Disease	Powdery Mildew (0-3), 0=Low Disease	Fusarium Head Blight Severity, Newport 0-100%
AgriMAXX 415	0	5	3	1	5
AgriMAXX 446	6	7	4	2	8
AgriMAXX 463	4	23	3	2	0
AgriMAXX 473	0	0	2	1	3
AgriMAXX 474	1	0	2	2	10
AgriMAXX 475	1	2	4	3	0
AGS 2038	4	1	2	1	40
AGS 2055	2	1	5	2	38
Armor LOCKDOWN	0	0	5	3	13
Armor MAYHEM	0	0	1	2	0
Delta Grow 1000	1	0	2	1	0
Delta Grow 3500	25	30	4	0	48
Dixie Bentley	0	0	5	3	23
Dixie Brown	0	1	2	1	8
Dixie Jones	6	2	5	3	5
Dixie McAlister	0	0	6	2	15
Dyna-Gro 9012	0	0	3	2	8
Dyna-Gro 9171	0	1	5	1	10
Dyna-Gro 9701	0	0	2	1	5
Dyna-Gro 9750	6	9	2	2	3
Dyna-Gro 9811	0	0	4	0	15
Go Wheat 2058	4	4	6	2	8
Go Wheat 2059	6	9	6	2	0
Hilliard	1	0	3	1	10
L11538	0	0	3	1	15
Pioneer 26R10	1	2	3	2	5
Pioneer 26R36	1	1	4	3	0
Pioneer 26R41	0	0	3	1	8
Pioneer 26R45	0	1	2	1	8
Pioneer 26R59	0	0	1	1	8
Progeny #Blaze	1	0	2	1	5
Progeny #Boss	1	0	4	2	5
Progeny #Bullet	1	0	1	2	5
Progeny #Fury	25	15	4	1	25
Progeny #Turbo	1	7	4	1	15
Progeny #Warrior	2	0	1	1	10
SY 547	42	50	5	1	8
SY Viper	0	1	3	1	18
USG 3404	1	4	2	1	5
USG 3448	0	1	4	3	3
USG 3536	0	0	3	1	0
USG 3895	0	0	4	2	5
Means	3	4	3	1	10

Table 4. Agronomic Characteristics of Commercially Available Varieties in Arkansas Performance Trials, 2018

Entry Name	Test Wt (lb/bu)	Lodging (0-9)	Plant Height (in)	Relative Maturity (2-year avg)	Awned Variety
AgriMAXX 415	57.3	0	33	Medium	Yes
AgriMAXX 446	55.8	1	34	Late	Yes
AgriMAXX 463	52.9	0	31	Early	No
AgriMAXX 473	55.6	1	33	Late	Yes
AgriMAXX 474	53.8	0	31	Medium	No
AgriMAXX 475	56.0	0	32	Medium	Yes
AGS 2038	56.7	2	39	Medium	Yes
AGS 2055	55.4	0	34	Early	Yes
Armor LOCKDOWN	58.3	1	38	Early	Yes
Armor MAYHEM	55.8	0	35	Late	Yes
Delta Grow 1000	54.9	2	34	Late	Yes
Delta Grow 3500	57.8	2	31	Early	Yes
Dixie Bentley	58.4	2	38	Early	Yes
Dixie Brown	55.7	0	35	Late	Yes
Dixie Jones	56.2	2	32	Medium	Yes
Dixie McAlister	54.9	0	32	Medium	Yes
Dyna-Gro 9012	57.4	0	33	Medium	Yes
Dyna-Gro 9171	54.1	0	33	Medium	Yes
Dyna-Gro 9701	55.2	3	35	Late	Yes
Dyna-Gro 9750	53.1	0	31	Early	No
Dyna-Gro 9811	56.0	1	34	Medium	Yes
Go Wheat 2058	56.3	0	30	Medium	Yes
Go Wheat 2059	52.7	1	30	Early	No
Hilliard	56.5	1	35	Early	Yes
L11538	55.8	0	36	Medium	Yes
Pioneer 26R10	54.3	0	34	Late	Yes
Pioneer 26R36	56.1	0	34	Late	Yes
Pioneer 26R41	56.2	2	33	Medium	Yes
Pioneer 26R45	50.2	0	35	Medium	No
Pioneer 26R59	53.9	0	31	Medium	No
Progeny #Blaze	52.1	2	35	Medium	Yes
Progeny #Boss	54.6	0	30	Medium	Yes
Progeny #Bullet	55.4	2	35	Late	Yes
Progeny #Fury	54.9	1	30	Medium	No
Progeny #Turbo	54.9	0	31	Early	No
Progeny #Warrior	53.8	0	32	Medium	No
SY 547	55.2	2	36	Early	No
SY Viper	56.5	0	37	Early	No
USG 3404	54.9	0	34	Medium	Yes
USG 3448	55.6	1	32	Medium	Yes
USG 3536	55.8	0	35	Late	Yes
USG 3895	55.7	0	31	Medium	Yes
Means	55.3	1	33	---	---