

2023 Arkansas Soybean Performance Results, Disease Rating, and Agronomic Characteristics

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Hundreds of soybean varieties are commercially available to growers in Arkansas. Varietal performance, including yield, varies according to location, environmental adaptability to soils, maturity, lodging, height, disease and nematode resistance, and herbicide and chloride sensitivity. This information listed in this publication is largely derived from the University of Arkansas System Division of Agriculture Soybean Performance Trials and screening programs, and is provided as an aid in variety selection.

Since proper variety selection involves knowledge of yield potential, maturity, disease reaction, herbicide sensitivity, etc., these and many other important characteristics are listed in **Tables 10 and 11**. Varieties are considered adapted to Arkansas conditions based primarily on their yield performance across the different geographical

regions of Arkansas. The location, soil description, and cultural information for each of the 2021 Arkansas Soybean Performance Tests are

found in **Tables 1 and 2**. **All varieties listed in this publication have been tested in the University of Arkansas System Division of Agriculture's Soybean Performance Trials.**

Soybean variety performance may vary from year to year, and two-year averages are better predictors of performance than data from a single year. Superior performance across several locations suggests that a variety has wide adaptability, thus multi-year and multi-location yields are particularly useful for making variety selection decisions.

ADAPTED SOYBEAN VARIETIES FOR EARLY SOYBEAN PRODUCTION

Generally, varieties within MG IV are the best adapted for these early (April) plantings in Arkansas; however, there are situations where varieties from MG III and V may perform well. Recent research indicates that indeterminate MG IV varieties can produce acceptable yield when planted early (April) and will normally mature in August through mid-September. Varieties of differing relative maturity (even within the same MG) are recommended in an attempt to spread out the risk of shattering due to

2023 Soybean Update

adverse weather conditions or mechanical problems at harvest. In Arkansas, the following designations apply to varieties representing the various MG's: III – very early maturity; IV – early maturity; and V – mid-season maturity.

ABOUT THIS PUBLICATION

Tables 1 and 2 consist of cultural information that pertains to the 2021 University of Arkansas System Division of Agriculture's Soybean Performance Trials (<http://arkansas-variety-testing.uark.edu>). **Tables 3 through 9** contain varietal yield information for 2022 and 2023 for the Early-Planted tests, Full-Season Irrigated Tests, Late Planted Test, and Non-irrigated Test. **Tables 10 and 11** contain the many varietal characteristics of those varieties designated as being adapted to the Arkansas soybean production environment.

Users of this publication are encouraged to review the “Key Code” page for further explanation regarding varietal rating to disease, herbicide sensitivity and other agronomic considerations.

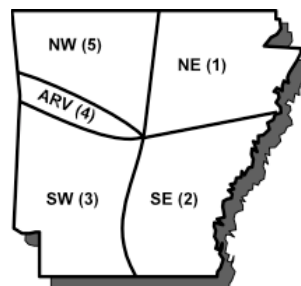


Figure 1. Area of Adaptation for Soybean Maturity Groups for All Production Systems

Northeast Arkansas (1): Groups III, IV, or V
Southeast Arkansas (2): Groups III, IV, or V
Southwest Arkansas (3): Groups III, IV, or V
Arkansas River Valley (4): Groups III, IV, or V
Northwest Arkansas (5): Groups IV or V

Acknowledgements are extended to the host of University of Arkansas System Division of Agriculture workers for their significant contributions to this update.

2023 Soybean Update

Table 1. Location, Soil Description, and Cultural Information of Early-Planted Soybean Performance Trials, 2023.¹

Location	Planting Target	Irrigation	Soil Texture	Row Spacing	Planting Date	Harvest Dates		
						Early 4	Late 4	MG 5
RRS, Rohwer, Ark.	Early Planted Trial	Irrigated	Herbert, silt loam	Single 38"	4/13/23	9/21/23	•	•
RREC, Stuttgart, Ark.	Early Planted Trial	Irrigated	Dewitt, silt Loam	Single 30"	4/13/23	10/10/23	•	•

Table 2. Location, Soil Description, and Cultural Information of Full-Season Irrigated and Non-irrigated, and Late-Planted Soybean Performance Trials, 2023.¹

Location	Planting Target	Irrigation	Soil Texture	Row Spacing	Planting Date	Harvest Dates		
						Early 4	Late 4	MG 5
NREC, Keiser, Ark.	Traditional Planting	Irrigated	Sharkey, silty clay	Single 38"	5/3/23, 5/8/23	10/3/23	10/3/23	10/10/23
NREC, Greenfield, Ark.	Traditional Planting	Irrigated	Henry Silt Loam	Single 30"	5/2/23	10/13/23	10/13/23	10/13/23
VRS, Kibler, Ark.	Traditional Planting	Irrigated	Dardanelle, silt loam	Twin 36"	5/25/23	10/23/23	10/23/23	10/23/23
LMCRS, Marianna, Ark.	Traditional Planting	Irrigated	Loring, silt loam	Single 38"	5/3/23	10/20/23	10/20/23	10/20/23
PTRS, Colt, Ark.	Traditional Planting	Irrigated	Calhoun, silt loam	Single 30"	5/9/23	10/18/23	10/18/23	10/19/23
RRS, Rohwer, Ark.	Traditional Planting	Irrigated	Sharkey, Desha silt loam	Single 38"	5/3/23	9/21/23	9/21/23	10/10/23
NEC, Newport, Ark.	Traditional Planting	Irrigated	Dexter, silt loam/Bosket, fine sandy loam	Single 30"	5/16/23	10/16/23	10/16/23	10/16/23
RREC, Stuttgart, Ark.	Traditional Planting	Irrigated	Dewitt, silt loam	Single 30"	5/25/23	11/6/23	11/6/23	11/6/23
RRS, Rohwer, Ark.	Late Planted	Irrigated	Sharkey, Desha silt loam	Single 38"	5/3/23	9/21/23	9/21/23	10/10/23
RREC, Stuttgart, Ark.	Traditional Planting	Dryland	Dewitt, silt loam	Single 30"	5/25/23	10/9/23	10/12/23	11/6/23

The KEY CODE for all the following tables is found on the back pages. Refer to the KEY CODE for a description of the abbreviated varietal characteristics.

HOW TO MAKE YIELD COMPARISONS USING THE FOLLOWING TABLES: The LSD (0.05), Least Significant Difference, represents the minimum yield difference required between two varieties within the same location before concluding that their yields are truly different (while assuming a 5% risk that the yield differences are due to random chance.) Use only the LSD value listed below each column (location-maturity group) to compare variety yield averages among varieties within that column.

Note: “Lighter Shading” of a variety mean indicates that there are no statistical difference between that varietal mean and the highest yielding (“Darker Shading”) varietal mean at the test location utilizing the appropriate LSD (0.05) value.

Table 3. Yield (bu/ac) of Maturity Group IV Soybean Varieties and Experimental Lines in the Early-Planted Tests at Rohwer, AR and Stuttgart, AR, 2023¹

Variety/Experimental Line	Herbicide Technology	Relative Maturity	Rohwer	Stuttgart	Mean
			(bu./ac)		
Asgrow 42XF4	RR2XF	4.2	59.9	59.4	59.7
Asgrow 43XF2	RR2XF	4.3	65.0	66.6	65.8
Asgrow 44XF4	RR2XF	4.4	64.1	63.3	63.7
Asgrow 45XF3	RR2XF	4.5	74.0	77.6	75.8
Asgrow 46XF3	RR2XF	4.6	75.2	64.7	69.9
Asgrow 47XF2	RR2XF	4.7	71.7	71.5	71.6
Asgrow 47XF4	RR2XF	4.7	68.7	69.7	69.2
Asgrow 48XF2	RR2XF	4.8	62.8	64.5	63.6
Asgrow 48XF3	RR2XF	4.8	76.3	73.8	75.0
Delta Grow 48X45	RR2X	4.8	64.7	63.2	64.0
Delta Grow 48XF33/STS	RR2XF	4.8	65.6	74.5	70.0
Delta Grow 49XF85/STS	RR2XF	4.9	61.2	74.0	67.6
Dyna-Gro S42XF93S	RR2XF	4.2	64.5	66.2	65.4
Dyna-Gro S46XF31S	RR2XF	4.6	66.6	71.8	69.2
Dyna-Gro S47XF23S	RR2XF	4.7	73.1	72.0	72.6
Dyna-Gro S49XF43S	RR2XF	4.9	71.6	79.7	75.6
Dyna-Gro S49XF82	RR2XF	4.9	71.4	75.7	73.6
Eagle Seed ES4800E3	Enlist E3	4.8	68.6	71.5	70.0
Eagle Seed ES4875XF	RR2XF	4.8	63.0	64.5	63.7
NK42-A6E3S	Enlist E3	4.2	67.9	69.8	68.9
NK44-J4XFS	RR2XF	4.4	68.2	66.4	67.3
NK44-Q5E3S	Enlist E3	4.4	62.0	69.9	65.9
NK46-B4XFS	RR2XF	4.6	73.5	67.2	70.4
NK48-A8XFS	RR2XF	4.8	69.6	65.9	67.8
NK49-C2XFS	RR2XF	4.9	75.3	69.1	72.2
NK49-T6E3S	Enlist E3	4.9	65.6	74.9	70.2
Pioneer P44A21X	RR2X	4.4	64.9	69.6	67.3
Pioneer P44A60LX	RR2XF	4.4	67.5	65.2	66.3
Pioneer P45A70LX	RR2XF	4.5	65.9	61.9	63.9
Pioneer P46A20LX	RR2XF	4.6	64.1	61.2	62.6
Pioneer P46A90LX	RR2XF	4.6	70.4	70.9	70.7
Pioneer P47A64X	RR2X	4.7	75.2	72.3	73.8
Pioneer P48A04LX	RR2XF	4.8	64.2	63.4	63.8
Progeny P4604XFS	RR2XF	4.6	62.6	68.5	65.6
Progeny P4623XFS	RR2XF	4.6	65.1	67.9	66.5
Progeny P4691XFS	RR2XF	4.6	66.1	66.6	66.3
Progeny P4755XFS	RR2XF	4.7	53.5	64.0	58.8
Progeny P4775E3S	Enlist E3	4.7	71.2	67.0	69.1
Progeny P4778XFS	RR2XF	4.7	67.3	62.4	64.8
Progeny P4798XF	RR2XF	4.7	73.0	72.1	72.6
Progeny P4806XFS	RR2X	4.8	55.0	60.0	57.5
Progeny P4850E3	Enlist E3	4.8	60.8	68.6	64.7
Progeny P4947XFS	RR2XF	4.9	68.6	67.2	67.9
Progeny P4999E3S	Enlist E3	4.9	64.8	67.1	65.9
R18C-13665	Conv.	4.9	66.5	72.6	69.5
R19-39415	Conv.	4.8	52.8	64.8	58.8
R19-39444	Conv.	4.8	54.9	68.6	61.7
R19C-1001	Conv.	4.9	65.0	62.9	64.0
R19C-1012	Conv.	4.4	61.1	66.7	63.9
R19C-1035	Conv.	4.5	64.0	70.5	67.2
R19C-1081	Conv.	4.3	60.2	59.2	59.7
R19C-2678	Conv.	4.8	65.7	70.7	68.2
R19C-3147	Conv.	4.9	56.2	67.3	61.7
S17-17644	Conv.	4.8	73.6	72.6	73.1
S19-10701	Conv.	4.5	63.0	64.9	63.9
Grand Mean	•	•	66.1	68.1	67.1
LSD	•	•	7.4	6.8	5.0
C.V.	•	•	8.3	7.4	7.8
LSD (Non-Xtend)	•	•	6.4	6.1	•
LSD (Xtend)	•	•	7.9	6.8	•

2023 Soybean Update

Table 4. 2023 Yield and 2-year Average Yield (bu/ac) of Relative Maturity 4.0-4.5 Non-Xtend Soybean Varieties/ Experimental Lines Across Arkansas.^{1,2,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Innotech 4233E3S	80.5	51.6	•	82.3	•	56.0	•	74.7	•	74.9	•	74.7	•	70.5	•	33.3	•	70.6
Innotech 4545E3S	79.3	61.7	•	87.0	•	59.9	•	81.8	•	77.3	•	68.5	•	66.5	•	38.8	•	72.8
NK42-A6E3S	85.1	57.6	•	92.4	•	63.1	•	74.1	•	82.9	•	71.5	•	74.3	•	26.6	•	75.1
NK44-Q5E3S	85.1	62.4	58.7	84.7	83.1	64.1	64.0	81.0	81.5	71.0	70.4	75.8	73.9	71.1	73.2	26.7	23.8	74.4
R19C-1012	70.7	59.0	52.9	73.0	70.8	57.3	54.6	63.4	65.9	58.0	59.6	64.7	68.7	68.9	69.4	33.7	•	64.4
R19C-1035	67.5	61.7	•	82.0	•	55.5	•	77.7	•	61.5	•	62.5	•	68.8	•	35.6	•	67.2
R19C-1081	73.3	63.5	•	68.7	•	69.7	•	78.8	•	65.4	•	64.5	•	69.2	•	35.6	•	69.1
S19-10701	67.2	58.1	•	78.4	•	59.2	•	70.9	•	64.2	•	62.4	•	61.2	•	28.1	•	65.2
Grand Mean	76.6	68.8	•	83.4	•	64.5	•	78.8	•	70.4	•	70.2	•	67.8	•	•	•	•
LSD (5%)	7.2	3.7	•	10.5	•	6.9	•	8.3	•	6.0	•	8.4	•	4.6	•	•	•	•
C.V.	6.8	3.9	•	9.2	•	7.8	•	7.7	•	6.2	•	8.7	•	5.0	•	•	•	•
LSD (Non-Xtend)	9.4	3.0	•	14.1	•	7.1	•	9.8	•	6.8	•	9.4	•	5.3	•	•	•	•

Table 5. 2023 Yield and 2-year Average Yield (bu/ac) of Relative Maturity 4.0-4.5 Xtend Soybean Varieties/ Experimental Lines Across Arkansas.^{1,3,4,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Asgrow 42XF4	74.3	64.7	•	82.7	•	59.7	•	82.7	•	68.3	•	67.1	•	57.0	•	29.4	•	69.5
Asgrow 43XF2	81.0	74.9	•	93.0	•	69.3	•	79.9	•	72.6	•	73.8	•	65.0	•	36.8	•	76.2
Asgrow 44XF4	81.5	75.7	•	83.0	•	67.9	•	91.8	•	69.7	•	73.2	•	69.2	•	32.5	•	76.5
Asgrow 45XF3	84.7	73.3	72.4	92.5	82.8	63.5	66.8	77.3	79.0	73.9	70.6	79.2	81.3	69.4	74.0	31.3	28.9	76.7
Delta Grow 44XF75/STS	74.4	75.5	•	95.2	•	66.9	•	74.4	•	70.6	•	64.9	•	66.6	•	34.9	•	73.5
DONMARIO DM45F23	74.7	75.8	69.6	78.5	75.6	66.0	65.4	78.4	82.2	66.5	67.0	64.8	72.2	73.0	77.2	37.2	30.5	72.2
Dyna-Gro S42XF93S	73.1	76.6	72.0	78.4	78.3	67.0	68.2	73.1	77.4	73.3	69.0	74.4	67.3	72.8	72.9	38.5	31.7	73.6
Integra XF4142S	68.9	64.4	•	75.0	•	65.2	•	82.9	•	68.9	•	63.5	•	61.3	•	34.8	•	68.8
Integra XF4454S	74.8	75.7	•	91.8	•	64.3	•	88.7	•	72.3	•	70.4	•	65.1	•	32.7	•	75.4
NK44-J4XFS	79.8	74.4	74.0	82.8	78.7	71.3	68.3	83.1	84.5	66.8	69.4	68.9	70.5	67.6	71.6	26.2	20.7	74.3
Pioneer P44A21X	78.3	79.4	72.2	81.4	77.2	70.4	71.3	85.3	84.5	72.9	74.2	75.8	78.6	66.3	71.9	38.1	32.4	76.2
Pioneer P44A60LX	78.5	76.7	•	81.4	•	74.0	•	73.7	•	72.9	•	75.8	•	72.1	•	32.9	•	75.6
Pioneer P45A70LX	76.5	74.6	•	85.9	•	76.0	•	82.7	•	76.2	•	77.6	•	72.5	•	34.2	•	77.8
Revere 4237XFS	71.6	68.9	•	83.1	•	64.2	•	83.9	•	65.0	•	75.1	•	63.8	•	33.3	•	72.0
Revere 4415XF	75.5	74.7	69.7	84.2	80.6	59.0	63.0	78.7	80.0	70.0	67.8	65.7	73.0	67.4	72.2	37.4	30.7	71.9
Revere 4526XFS	82.1	71.1	65.5	83.7	78.4	57.9	64.3	72.4	75.2	73.5	74.3	71.1	73.8	68.6	73.6	39.3	33.4	72.5
Grand Mean	76.6	68.8	•	83.4	•	64.5	•	78.8	•	70.4	•	70.2	•	67.8	•	•	•	•
LSD (5%)	7.2	3.7	•	10.5	•	6.9	•	8.3	•	6.0	•	8.4	•	4.6	•	•	•	•
C.V.	6.8	3.9	•	9.2	•	7.8	•	7.7	•	6.2	•	8.7	•	5.0	•	•	•	•
LSD (Xtend)	6.02	4.1	•	9.1	•	6.9	•	8.1	•	6.0	•	8.5	•	3.9	•	•	•	•

2023 Soybean Update

Table 6. 2023 Yield and 2-Year Average Yield (bu/ac) of Relative Maturity 4.6-4.9 Non-Xtend Soybean Varieties/Experimental Lines Across Arkansas.^{1,2,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Delta Grow 46E10	77.0	47.5	49.0	69.5	62.6	52.0	57.9	72.2	74.8	63.2	62.0	60.4	55.3	64.7	68.5	31.1	24.9	63.3
Delta Grow 46E30	84.9	54.2	•	70.5	•	57.7	•	56.8	•	75.2	•	67.9	•	74.4	•	39.7	•	67.7
Delta Grow 47E20/STS	78.4	57.8	53.7	78.3	73.5	53.6	51.9	65.8	71.9	63.9	62.4	64.3	68.3	71.5	68.5	34.8	30.4	66.7
Delta Grow 48E59	84.3	52.7	52.9	72.9	74.6	56.8	62.9	73.9	81.9	73.4	71.1	67.3	67.1	74.2	69.3	33.3	30.9	69.4
Delta Grow 49E30/STS	81.2	57.5	•	66.0	•	61.7	•	77.8	•	68.9	•	66.3	•	78.1	•	40.7	•	69.7
Eagle Seed ES4800E3	80.5	60.3	•	79.6	•	63.7	•	78.9	•	71.0	•	68.1	•	79.3	•	31.2	•	72.7
Innotech 4983E3S	81.4	59.3	•	84.5	•	58.0	•	82.3	•	70.6	•	62.0	•	78.7	•	40.8	•	72.1
Innvictis B4603E	87.7	51.9	•	75.4	•	58.3	•	70.3	•	72.2	•	69.1	•	80.8	•	41.1	•	70.7
Innvictis B4903E	91.8	48.2	•	81.8	•	58.2	•	65.1	•	77.9	•	71.0	•	81.8	•	36.4	•	72.0
NK49-T6E3S	83.2	61.2	55.8	76.3	76.1	59.7	62.0	68.6	77.7	69.4	66.9	55.7	62.5	78.6	73.8	34.4	31.4	69.1
Progeny P4775E3S	78.4	57.2	54.3	80.1	75.2	53.6	55.2	67.2	69.0	60.1	59.0	70.2	69.4	73.0	69.9	34.9	29.4	67.5
Progeny P4850E3	85.3	48.0	•	65.7	•	56.4	•	71.2	•	76.7	•	67.0	•	77.9	•	38.2	•	68.5
Progeny P4999E3S	80.5	55.5	•	72.0	•	62.6	•	79.7	•	65.2	•	69.9	•	81.7	•	41.5	•	70.9
R18C-13665	76.0	60.6	56.9	68.0	68.7	53.3	56.6	72.0	75.5	62.4	61.7	63.9	63.3	74.8	70.9	33.8	31.0	66.4
R19-39415	64.8	58.7	•	69.3	•	43.5	•	46.2	•	56.0	•	50.5	•	63.6	•	32.6	•	56.6
R19-39444	62.8	54.0	•	53.4	•	39.9	•	49.7	•	54.5	•	49.7	•	65.7	•	35.9	•	53.7
R19C-1001	72.9	57.9	•	74.4	•	54.8	•	70.5	•	65.6	•	58.5	•	66.3	•	40.7	•	65.1
R19C-2678	74.4	58.0	•	71.4	•	49.4	•	67.5	•	56.6	•	52.4	•	64.4	•	33.0	•	61.8
R19C-3147	56.4	56.7	•	63.5	•	48.5	•	53.5	•	57.7	•	47.7	•	69.9	•	34.2	•	56.7
S17-17644	76.1	52.8	•	59.9	•	61.9	•	80.8	•	66.3	•	63.7	•	69.1	•	31.8	•	66.3
UA 46i20c	64.3	52.6	•	68.1	•	49.5	•	67.7	•	60.2	•	60.2	•	66.5	•	37.6	•	61.1
Grand Mean	79.8	67.7	•	77.4	•	58.1	•	74.6	•	69.1	•	68.5	•	74.8	•	•	•	•
LSD (5%)	7.8	4.6	•	12.5	•	6.1	•	7.5	•	5.4	•	8.6	•	5.1	•	•	•	•
C.V.	7.3	5.1	•	12.0	•	7.8	•	7.4	•	5.7	•	9.3	•	5.1	•	•	•	•
LSD (Non-Xtend)	8.8	3.8	•	12.5	•	5.1	•	8.1	•	4.5	•	8.3	•	4.4	•	•	•	•

2023 Soybean Update

Table 7. 2023 Yield and 2-Year Average Yield (bu/ac) of Relative Maturity 4.6-4.9 Xtend Soybean Varieties/Experimental Lines Across Arkansas. ^{1,3,4,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Asgrow 46XF3	77.9	66.5	70.4	79.4	83.6	60.6	65.4	80.5	79.5	71.1	69.1	75.2	77.3	75.7	73.9	36.5	33.0	73.3
Asgrow 47XF2	80.6	74.3	•	81.3	•	64.7	•	82.3	•	70.7	•	74.3	•	74.8	•	43.9	•	75.4
Asgrow 47XF4	80.7	78.6	•	82.6	•	59.8	•	92.9	•	67.3	•	76.0	•	76.5	•	37.9	•	76.8
Asgrow 48XF2	79.6	72.6	•	79.1	•	53.8	•	68.0	•	71.8	•	71.5	•	75.6	•	38.4	•	71.5
Asgrow 48XF3	79.5	69.2	64.8	75.5	77.1	52.1	60.1	76.5	81.6	71.5	69.6	74.3	76.8	79.5	78.6	36.9	32.5	72.3
Axis 4613XF	81.4	78.0	70.3	72.6	74.0	58.4	65.7	86.9	89.0	70.6	68.1	74.4	71.5	79.3	75.3	39.9	33.0	75.2
Axis 4641XFS	72.4	72.8	67.2	80.7	77.1	55.9	65.2	79.1	81.9	71.6	67.6	66.7	70.5	75.1	72.1	40.2	36.2	71.8
Axis 4813XFS	84.4	71.9	67.1	75.4	75.3	55.2	60.7	76.7	81.8	69.0	65.8	70.3	66.9	65.4	71.7	36.7	31.6	71.0
Delta Grow 46X65/STS	84.1	74.5	70.9	72.3	74.7	61.5	67.7	78.9	85.1	71.5	68.9	74.5	75.8	78.0	74.3	37.4	32.9	74.4
Delta Grow 46XF54	87.0	69.8	•	78.7	•	62.7	•	81.0	•	72.1	•	74.9	•	67.6	•	39.2	•	74.2
Delta Grow 47XF38	78.7	68.9	•	77.7	•	61.6	•	76.2	•	71.4	•	66.6	•	72.0	•	34.8	•	71.6
Delta Grow 48X45	81.9	73.9	68.4	89.2	80.1	63.9	68.9	81.1	84.4	69.5	69.2	73.8	70.9	67.8	72.3	38.0	34.1	75.1
Delta Grow 48XF33/STS	80.6	70.9	67.8	73.3	72.0	56.0	61.8	78.0	82.1	73.2	70.1	73.3	72.4	74.9	68.1	32.3	30.0	72.5
Delta Grow 48XF42	81.3	76.1	•	89.4	•	55.7	•	84.1	•	69.8	•	74.6	•	71.2	•	35.0	•	75.3
Delta Grow 49XF85/STS	88.3	76.1	•	80.4	•	53.6	•	72.9	•	75.3	•	61.9	•	79.3	•	33.4	•	73.5
DONMARIO DM48F53	77.5	74.1	72.2	85.4	81.7	59.6	65.9	78.4	85.1	71.6	70.6	73.5	72.8	74.6	63.2	41.9	36.1	74.3
Dyna-Gro S46XF31S	81.8	66.6	65.1	68.5	70.2	61.9	68.3	74.8	82.3	70.4	65.8	69.0	67.1	79.3	78.4	34.1	32.0	71.5
Dyna-Gro S47XF23S	77.2	69.7	70.5	72.0	75.0	64.3	70.7	73.6	80.5	74.0	70.6	74.2	73.5	76.2	68.9	34.8	31.7	72.7
Dyna-Gro S49XF43S	85.2	79.8	•	79.8	•	63.1	•	76.5	•	77.0	•	72.5	•	81.3	•	38.7	•	76.9
Dyna-Gro S49XF82	83.6	68.1	64.4	74.9	73.5	54.1	60.2	66.6	76.3	63.9	63.4	60.8	63.5	72.7	73.2	31.7	29.2	68.1
Eagle Seed ES4875XF	79.3	65.9	•	78.5	•	62.7	•	91.9	•	69.9	•	70.3	•	74.1	•	39.3	•	74.1
Integra X4660	79.9	73.9	•	74.1	•	64.1	•	77.9	•	70.7	•	74.9	•	77.6	•	39.7	•	74.1
Integra XF4621S	80.2	73.7	•	72.6	•	57.8	•	71.8	•	71.7	•	62.5	•	77.7	•	38.4	•	71.0
Integra XF4634S	86.5	74.6	•	76.7	•	60.6	•	78.0	•	74.4	•	79.0	•	71.9	•	42.1	•	75.2
Integra XF4893S	85.4	76.8	•	82.8	•	63.2	•	75.5	•	70.5	•	78.5	•	75.1	•	34.7	•	76.0
Integra XF4914S	85.2	78.3	•	73.9	•	55.6	•	72.2	•	74.7	•	59.6	•	79.7	•	33.6	•	72.4
NK46-B4XFS	76.9	72.9	•	83.1	•	57.9	•	79.5	•	68.1	•	73.2	•	75.5	•	37.5	•	73.4
NK48-A8XFS	80.7	70.7	•	80.3	•	55.7	•	78.4	•	69.8	•	70.7	•	76.2	•	37.9	•	72.8
NK49-C2XFS	87.2	75.1	•	90.3	•	61.6	•	77.2	•	72.6	•	70.3	•	82.9	•	35.7	•	77.1
Pioneer P46A20LX	71.4	72.7	71.6	75.1	81.5	51.2	60.7	77.9	79.9	65.7	66.4	68.9	74.1	72.6	74.9	36.2	32.4	69.4
Pioneer P46A90LX	79.4	76.6	•	86.7	•	65.8	•	71.3	•	71.4	•	76.3	•	78.0	•	41.4	•	75.7
Pioneer P47A64X	85.6	75.0	72.5	84.5	84.2	70.2	73.4	76.8	83.6	70.7	69.7	73.4	74.5	82.7	82.3	38.5	34.9	77.4
Pioneer P48A04LX	81.0	70.8	•	82.4	•	61.3	•	83.6	•	69.7	•	66.3	•	70.7	•	41.0	•	73.2

2023 Soybean Update

Table 7 (Continued). 2023 Yield and 2-Year Average Yield (bu/ac) of Relative Maturity 4.6-4.9 Xtend Soybean Varieties/Experimental Lines Across Arkansas.^{1,3,4,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Progeny P4604XFS	76.6	72.1	67.8	81.9	78.2	56.3	61.4	74.7	79.6	71.0	68.5	66.8	69.6	75.8	68.4	38.2	32.7	71.9
Progeny P4623XFS	80.5	77.7	•	80.4	•	67.9	•	82.4	•	73.2	•	75.2	•	76.5	•	37.6	•	76.7
Progeny P4665XFS	90.5	71.7	•	91.4	•	59.0	•	69.7	•	70.8	•	76.1	•	74.1	•	37.0	•	75.4
Progeny P4691XFS	81.7	73.2	71.9	81.2	78.4	48.6	62.4	80.4	82.9	70.9	68.7	68.0	72.3	72.5	68.4	41.2	33.2	72.1
Progeny P4755XFS	77.7	73.0	•	90.8	•	63.3	•	81.0	•	70.1	•	67.4	•	73.8	•	39.0	•	74.6
Progeny P4778XFS	79.0	68.0	•	72.0	•	46.9	•	69.2	•	64.4	•	70.9	•	72.2	•	38.0	•	67.8
Progeny P4798XF	83.8	69.5	67.4	82.2	80.5	57.8	62.1	76.0	78.8	67.4	67.2	69.7	63.3	78.0	74.2	37.3	32.9	73.0
Progeny P4806XFS	62.3	71.9	69.1	71.8	73.1	58.4	65.1	79.3	81.0	68.0	65.2	62.9	56.9	76.6	76.9	31.9	30.3	68.9
Progeny P4947XFS	86.6	76.9	•	94.6	•	61.3	•	74.2	•	76.3	•	76.2	•	73.8	•	38.2	•	77.5
Revere 4727XF	82.2	74.3	69.5	75.3	74.2	52.9	62.3	83.2	84.8	63.6	66.7	71.5	70.3	72.0	77.8	40.4	34.1	71.9
Revere 4731XF	75.4	74.5	•	73.8	•	63.5	•	75.7	•	69.4	•	71.1	•	76.9	•	41.3	•	72.5
Revere 4826XFS	85.5	71.6	70.5	79.5	80.1	62.7	68.1	75.7	79.0	69.4	67.2	74.9	77.8	77.2	77.8	38.9	33.7	74.6
Revere 4925XFS	80.0	68.4	•	74.9	•	60.2	•	73.8	•	59.0	•	67.0	•	75.6	•	40.0	•	69.9
Revere 4934XF	77.9	72.0	•	90.3	•	59.9	•	75.9	•	70.1	•	62.2	•	76.6	•	43.1	•	73.1
USG 7461XFS	79.0	71.9	67.1	84.0	79.2	64.7	67.6	68.9	72.8	72.0	68.0	71.1	68.4	75.4	76.2	41.5	35.6	73.4
USG 7463XF	78.4	73.3	•	82.8	•	61.7	•	81.5	•	71.7	•	70.8	•	76.8	•	39.5	•	74.6
USG 7474XFS	81.6	76.5	•	79.0	•	59.2	•	63.1	•	68.1	•	80.0	•	78.1	•	35.5	•	73.2
Grand Mean	79.8	67.7	•	77.4	•	58.1	•	74.6	•	69.1	•	68.5	•	74.8	•	•	•	•
LSD (5%)	7.8	4.6	•	12.5	•	6.1	•	7.5	•	5.4	•	8.6	•	5.1	•	•	•	•
C.V.	7.3	5.1	•	12.0	•	7.8	•	7.4	•	5.7	•	9.3	•	5.1	•	•	•	•
LSD (Xtend)	7.5	5.0	•	12.5	•	6.5	•	7.3	•	5.7	•	8.8	•	5.5	•	•	•	•

2023 Soybean Update

Table 8. 2023 Yield and 2-Year Average Yield (bu/ac) of Relative Maturity 5.0-5.9 Non-Xtend Soybean Varieties/Experimental Lines Across Arkansas.^{1,2,5,6}

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Asgrow 52XF0	84.2	64.6	•	76.6	•	50.5	•	•	•	60.0	•	68.4	•	72.7	•	36.8	•	68.1
Asgrow 53XF2	74.9	68.9	•	93.9	•	49.1	•	•	•	68.1	•	70.5	•	78.2	•	29.9	•	71.9
Asgrow 56XF2	67.9	53.3	•	83.0	•	33.4	•	•	•	52.7	•	52.0	•	75.6	•	28.4	•	59.7
Delta Grow 52XF22	79.0	72.6	•	84.3	•	56.2	•	•	•	73.7	•	75.8	•	78.7	•	34.9	•	74.3
Delta Grow 53XF95/STS	88.7	61.7	•	87.2	•	53.3	•	•	•	72.9	•	71.0	•	75.1	•	32.8	•	72.8
Innvictis A5003XF	89.9	72.4	•	80.0	•	50.3	•	•	•	68.9	•	67.1	•	66.1	•	35.4	•	70.7
Innvictis B5013E	79.0	46.5	•	92.5	•	40.5	•	•	•	53.0	•	57.3	•	76.5	•	34.8	•	63.6
NK52-D6E3	91.9	68.7	•	90.5	•	61.1	•	•	•	72.9	•	78.5	•	75.3	•	35.6	•	77.0
Progeny P5056XFS	84.4	72.2	•	85.3	•	58.2	•	•	•	76.1	•	68.7	•	75.0	•	31.2	31.2	74.3
Progeny P5751XF	55.6	70.7	65.7	80.3	78.4	59.6	63.2	•	•	73.2	69.7	76.0	77.7	80.4	79.6	29.9	•	70.8
R19-411424	67.0	45.8	•	85.0	•	41.8	•	•	•	47.4	•	58.5	•	76.3	•	36.8	•	60.3
R19-45980	68.6	64.0	60.3	83.0	77.4	59.1	62.6	•	•	71.0	69.9	73.7	67.5	78.3	79.6	38.2	•	71.1
R19C-3085	67.5	61.0	•	89.2	•	42.4	•	•	•	55.0	•	59.1	•	75.9	•	36.7	31.1	64.3
Revere 5029XFS	81.9	48.0	•	80.1	•	39.4	•	•	•	53.2	•	53.2	•	73.1	•	37.2	31.5	61.3
Revere 5143E3	89.3	64.5	•	83.6	•	51.2	•	•	•	62.5	•	67.8	•	72.7	•	37.3	•	70.2
S18-6328	73.3	57.7	•	85.4	•	49.2	•	•	•	63.3	•	61.1	•	79.6	•	36.6	•	67.1
Grand Mean	70.2	59.5	•	81.4	•	51.0	•	•	•	64.58	•	65.6	•	73.8	•	•	•	•
LSD (5%)	4.6	4.1	•	7.8	•	4.0	•	•	•	4.6	•	5.2	•	3.7	•	•	•	•
C.V.	4.8	5.0	•	7.0	•	5.8	•	•	•	5.22	•	5.8	•	3.6	•	•	•	•
LSD (Non-Xtend)	4.8	3.8	•	7.4	•	3.7	•	-	•	4.6	•	4.6	•	3.3	•	•	•	•

Table 9. 2023 Yield and 2-Year Average Yield (bu/ac) of Relative Maturity 5.0-5.9 Xtend Soybean Varieties/Experimental Lines Across Arkansas.^{1,3,4,5,6}

2023 Soybean Update

Variety/Experimental Line	2023 Greenfield	2023 Keiser	Keiser 2-Yr Avg	2023 Keibler	Keibler 2-Yr Avg	2023 Marianna	Marianna 2-Yr Avg	2023 Newport	Newport 2-Yr Avg	2023 Pine Tree	Pine Tree 2-Yr Avg	2023 Rohwer	Rohwer 2-Yr Avg	2023 Stuttgart	Stuttgart 2-Yr Avg	2023 Stuttgart NI	Stuttgart NI 2-Yr Avg	Irrig Avg ⁶
	(bu./ac)																	
Delta Grow 55X25	61.8	60.8	•	77.2	•	56.2	•	•	•	66.5	•	64.2	•	72.6	•	26.2	•	65.6
Delta Grow 55XF23	52.4	61.4	•	73.7	•	64.1	•	•	•	75.9	•	67.6	•	70.3	•	30.1	•	66.5
Innictis A5813XF	53.8	62.4	•	89.2	•	50.5	•	•	•	78.2	•	77.1	•	81.7	•	26.9	•	70.4
NK54-J9XFS	77.0	63.8	•	86.0	•	56.2	•	•	•	74.7	•	76.5	•	80.3	•	44.2	•	73.5
NK56-Z6XFS	66.1	52.5	•	72.4	•	53.6	•	•	•	58.3	•	66.0	•	68.4	•	33.0	•	62.5
Progeny P5441XF	62.9	58.3	•	77.9	•	43.5	•	•	•	61.0	•	59.8	•	69.1	•	32.2	•	61.8
Progeny P5641XF	60.6	58.3	•	73.9	•	49.8	•	•	•	58.1	•	56.4	•	71.5	•	23.6	•	61.2
R18-10491	53.1	63.1	•	95.0	•	59.1	•	•	•	75.8	•	67.5	•	81.1	•	31.4	•	70.7
R18-10919	64.2	53.0	•	67.9	•	51.4	•	•	•	62.5	•	65.5	•	66.1	•	28.1	•	61.5
R19-410712	55.7	52.5	48.0	72.6	68.3	43.9	46.3	•	•	57.4	53.6	57.0	54.8	66.4	68.4	31.8	•	57.9
R19-424115b	65.4	51.8	•	72.8	•	47.2	•	•	•	62.1	•	66.4	•	71.7	•	27.1	•	62.5
R19-42447b	62.8	56.6	•	78.0	•	56.4	•	•	•	68.0	•	65.8	•	74.6	•	31.2	•	66.0
R19-4593	64.2	55.8	•	74.6	•	43.1	•	•	•	52.7	•	53.3	•	66.0	•	39.8	•	58.5
R19-46252	67.0	50.8	•	74.4	•	48.3	•	•	•	52.2	•	64.1	•	65.1	•	35.4	•	60.3
R19C-3194	58.8	55.1	53.5	74.0	70.2	56.7	53.9	•	•	67.3	65.6	62.8	60.9	65.7	68.2	34.8	32.7	62.9
S18-6013	78.4	54.6	•	86.2	•	55.5	•	•	•	71.8	•	73.4	•	80.9	•	33.9	•	71.5
Grand Mean	70.2	59.5	•	81.4	•	51.0	•	•	•	64.58	•	65.6	•	73.8	•	•	•	66.6
LSD (5%)	4.6	4.1	•	7.8	•	4.0	•	•	•	4.6	•	5.2	•	3.7	•	•	•	4.9
C.V.	4.8	5.0	•	7.0	•	5.8	•	•	•	5.22	•	5.8	•	3.6	•	•	•	5.3
LSD (Xtend)	4.6	4.0	•	8.7	•	4.5	•	•	•	4.8	•	6.0	•	4.1	•	•	•	5.2

2023 Soybean Update

Table 10. Nematode, Disease, and Chloride Sensitivity for Soybean varieties in 2023 Arkansas Soybean Variety Performance Test.

Variety/Experimental Line	RKN Field ⁷	RKN GH ^{7,8}	Stem ^{7,9}	Frogeye Leaf ^{7,10}	Chloride Reaction ¹¹
Asgrow 42XF4	S	S	S	MR	Strong Excluder
Asgrow 43XF2	S	VS	S	MR	Strong Includer
Asgrow 44XF4	VS	S	S	R	Strong Excluder
Asgrow 45XF3	MS	VS	S	MS	Strong Excluder
Asgrow 46XF3	S	VS	S	MS	Strong Excluder
Asgrow 47XF2	S	VS	S	R	Mod. Includer
Asgrow 47XF4	S	VS	S	R	Mod. Includer
Asgrow 48XF2	VS	MS	S	MR	Strong Excluder
Asgrow 48XF3	S	MS	S	MS	Strong Excluder
Asgrow 52XF0	S	VS	S	MS	Mod. Includer
Asgrow 53XF2	S	MS	S	R	Strong Includer
Asgrow 56XF2	R	R	S	R	Strong Excluder
Axis 4613XF	S	VS	R	MR	Mixed
Axis 4641XFS	S	S	R	MR	Mod. Includer
Axis 4813XFS	S	S	S	MR	Mod. Includer
Delta Grow 44XF75/STS	S	VS	R	R	Mixed
Delta Grow 46E10	R	MR	R	MS	Strong Excluder
Delta Grow 46E30	VS	VS	R	R	Strong Excluder
Delta Grow 46X65/STS	S	VS	S	MR	Strong Excluder
Delta Grow 46XF54	S	S	R	R	Mod. Excluder
Delta Grow 47E20/STS	MS	MS	R	MS	Strong Excluder
Delta Grow 47XF38	VS	VS	S	MR	Mod. Includer
Delta Grow 48E59	S	VS	R	MR	Strong Excluder
Delta Grow 48X45	S	VS	S	MR	Strong Excluder
Delta Grow 48XF33/STS	S	MS	R	R	Strong Includer
Delta Grow 48XF42	S	VS	S	MR	Strong Excluder
Delta Grow 49E30/STS	S	S	R	MS	Strong Excluder
Delta Grow 49XF85/STS	S	MR	S	R	Mixed
Delta Grow 52XF22	MS	VS	S	MS	Mod. Includer
Delta Grow 53XF95/STS	S	S	S	R	Mod. Includer
Delta Grow 55X25	R	R	R	R	Strong Excluder
Delta Grow 55XF23	R	MR	R	MS	Strong Excluder
DONMARIO DM45F23	S	S	R	R	Mixed
DONMARIO DM48F53	S	VS	R	R	Mod. Includer
Dyna-Gro S42XF93S	VS	VS	R	MR	Mixed
Dyna-Gro S46XF31S	S	S	S	R	Strong Includer
Dyna-Gro S47XF23S	S	S	S	MR	Strong Excluder
Dyna-Gro S49XF43S	S	S	R	R	Mod. Includer
Dyna-Gro S49XF82	VS	MS	S	MR	Mixed
Eagle Seed ES4800E3	S	S	.	MS	Mod. Includer
Eagle Seed ES4875XF	S	S	S	MS	Mod. Includer
Innotech 4233E3S	VS	S	R	MS	Mod. Includer
Innotech 4545E3S	S	MR	R	R	Strong Includer
Innotech 4983E3S	S	VS	R	MS	Strong Excluder
Innictis A5003XF	VS	VS	S	R	Mixed
Innictis A5813XF	MS	MR	S	MS	Mod. Excluder
Innictis B4603E	S	S	S	R	Strong Excluder
Innictis B4903E	S	VS	S	MR	Strong Excluder
Innictis B5013E	S	S	R	MS	Strong Excluder
Integra X4660	S	S	R	MR	Strong Excluder
Integra XF4142S	VS	S	R	R	Strong Includer
Integra XF4454S	VS	S	R	R	Mod. Includer
Integra XF4621S	MS	S	R	MR	Mod. Includer
Integra XF4634S	S	VS	R	R	Strong Excluder
Integra XF4893S	S	MS	S	R	Strong Excluder
Integra XF4914S	VS	VS	R	R	Mixed

2023 Soybean Update

Table 10 (Continued). Nematode, Disease, and Chloride Sensitivity for Soybean varieties in 2023 Arkansas Soybean Variety Performance Test.

Variety/Experimental Line	RKN Field ⁷	RKN GH ^{7,8}	Stem ^{7,9}	Frogeye Leaf ^{7,10}	Chloride Reaction ¹¹
NK42-A6E3S	MS	MS	R	R	Strong Excluder
NK44-J4XFS	S	VS	R	MR	Strong Includer
NK44-Q5E3S	MS	MS	R	R	Mixed
NK46-B4XFS	S	VS	S	MR	Mod. Includer
NK48-A8XFS	S	MS	S	MS	Mixed
NK49-C2XFS	S	VS	R	MR	Strong Excluder
NK49-T6E3S	MS	VS	R	R	Strong Excluder
NK52-D6E3	MS	R	R	R	Strong Excluder
NK54-J9XFS	MS	VS	R	R	Mod. Includer
NK56-Z6XFS	R	R	R	MS	Strong Includer
Pioneer P44A21X	MS	VS	S	R	Mod. Excluder
Pioneer P44A60LX	VS	VS	R	R	Strong Excluder
Pioneer P45A70LX	S	VS	R	R	Strong Excluder
Pioneer P46A20LX	MS	VS	S	R	Strong Excluder
Pioneer P46A90LX	S	VS	R	R	Strong Excluder
Pioneer P47A64X	S	VS	S	R	Strong Excluder
Pioneer P48A04LX	S	S	R	R	Strong Excluder
Progeny P4604XFS	S	VS	S	MR	Strong Includer
Progeny P4623XFS	S	MS	R	MR	Strong Excluder
Progeny P4665XFS	S	S	R	R	Strong Excluder
Progeny P4691XFS	S	S	R	MR	Strong Excluder
Progeny P4755XFS	S	S	S	MR	Strong Includer
Progeny P4775E3S	MS	MS	R	MS	Strong Excluder
Progeny P4778XFS	S	S	R	R	Mod. Includer
Progeny P4798XF	VS	VS	S	MR	Mod. Excluder
Progeny P4806XFS	S	MR	R	MS	Mod. Includer
Progeny P4850E3	MS	S	S	MR	Strong Excluder
Progeny P4947XFS	S	S	S	MR	Strong Excluder
Progeny P4999E3S	S	S	R	MR	Strong Excluder
Progeny P5056XFS	S	VS	R	R	Mod. Includer
Progeny P5441XF	MS	S	S	R	Mod. Includer
Progeny P5641XF	R	S	R	MS	Mod. Includer
Progeny P5751XF	S	MR	R	MR	Strong Excluder
R18-10491	MS	MS	R	R	Strong Excluder
R18-10919	VR	R	R	R	Strong Excluder
R18C-13665	S	VS	R	R	Mod. Includer
R19-39415	S	S	R	MS	Mixed
R19-39444	MR	VS	R	MS	Mixed
R19-410712	MR	MS	S	R	Strong Excluder
R19-411424	MS	VS	S	R	Mod. Excluder
R19-424115b	MR	S	R	R	Mod. Includer
R19-42447b	S	S	S	R	Mod. Includer
R19-4593	MS	S	R	R	Strong Excluder
R19-45980	MR	VS	R	R	Strong Excluder
R19-46252	MS	S	R	MR	Strong Excluder
R19C-1001	R	MS	R	R	Mixed
R19C-1012	R	MS	R	R	Strong Excluder
R19C-1035	R	MS	R	R	Strong Excluder
R19C-1081	MS	MS	S	R	Mod. Excluder
R19C-2678	R	MR	R	R	Mod. Excluder
R19C-3085	S	VS	R	R	Strong Includer
R19C-3147	MS	MS	R	R	Mod. Includer
R19C-3194	MS	S	R	R	Mod. Includer

2023 Soybean Update

Table 10 (Continued). Nematode, Disease, and Chloride Sensitivity for Soybean varieties in 2023 Arkansas Soybean Variety Performance Test.

Variety/Experimental Line	RKN Field ⁷	RKN GH ^{7,8}	Stem ^{7,9}	Frogeye Leaf ^{7,10}	Chloride Reaction ¹¹
Revere 4237XFS	S	VS	R	MS	Mixed
Revere 4415XF	MS	S	R	R	Mod. Includer
Revere 4526XFS	S	VS	R	MS	Strong Excluder
Revere 4727XF	S	S	R	R	Mod. Includer
Revere 4731XF	S	MS	S	R	Strong Includer
Revere 4826XFS	MS	VS	S	MR	Strong Excluder
Revere 4925XFS	S	VS	S	R	Mod. Includer
Revere 4934XF	S	VS	R	R	Strong Includer
Revere 5029XFS	VS	MS	S	MR	Mod. Includer
Revere 5143E3	MS	R	R	R	Strong Excluder
S17-17644	R	R	R	R	Strong Excluder
S18-6013	R	R	R	R	Strong Includer
S18-6328	MS	S	R	R	Mod. Excluder
S19-10701	VR	MS	R	R	Mod. Excluder
UA 46i20c	•	•	•	•	Mixed
USG 7461XFS	S	VS	R	MR	Strong Includer
USG 7463XF	S	S	S	MR	Mod. Includer
USG 7474XFS	MS	VS	S	MR	Strong Excluder

2023 Soybean Update

Table 11. Agronomic Characteristics for Soybean Varieties/Experimental Lines in 2023 Arkansas Soybean Variety Performance Tests.

Variety/Experimental Line	Relative	Herb. Tech. ¹²	STS	Metribuzin Sensitivity ¹³	Flower Color	Pubescence	Hilum Color	Growth Habit ¹⁴	Days to Maturity ¹⁵	Lodging Score ¹⁶	Plant Height ¹⁷
Asgrow 42XF4	4.2	RR2XF	No	Slight	P	LT	B	IND	132	1	39
Asgrow 43XF2	4.3	RR2XF	No	Moderate	W	LT	B	IND	133	1	38
Asgrow 44XF4	4.4	RR2XF	Yes	Slight	P	T	B	•	134	1	33
Asgrow 45XF3	4.5	RR2XF	No	Slight	P	LT	B	IND	132	1	40
Asgrow 46XF3	4.6	RR2XF	Yes	Slight	P	LT	B	IND	134	1	38
Asgrow 47XF2	4.7	RR2XF	Yes	Slight	P	LT	B	IND	135	1	37
Asgrow 47XF4	4.7	RR2XF	Yes	Severe	P	LT	B	•	135	1	41
Asgrow 48XF2	4.8	RR2XF	No	Moderate	P	T	B	IND	134	2	38
Asgrow 48XF3	4.8	RR2XF	Yes	Slight	P	LT	B	IND	134	1	42
Asgrow 52XF0	5.2	RR2XF	No	Slight	W	LT	B	IND	141	2	42
Asgrow 53XF2	5.3	RR2XF	No	Moderate	P	LT	B	IND	139	1	41
Asgrow 56XF2	5.6	RR2XF	No	Slight	W	T	B	DET	141	1	35
Axis 4613XF	4.6	RR2XF	No	Slight	P	G	IB	IND	131	1	40
Axis 4641XFS	4.6	RR2XF	Yes	Slight	P	LT	B	IND	133	1	42
Axis 4813XFS	4.8	RR2XF	Yes	Slight	W	LT	B	IND	135	1	37
Delta Grow 44XF75/STS	4.4	RR2XF	Yes	Slight	W	LTW	B	DET	132	1	37
DELTA GROW 46E10	4.6	Enlist E3	No	Slight	W	G	BU	IND	131	1	37
DELTA GROW 46E30	4.6	Enlist E3	No	Slight	P	LTW	B	IND	132	2	35
DELTA GROW 46X65/STS	4.6	RR2X	Yes	Moderate	P	LTW	B	IND	134	1	39
DELTA GROW 46XF54	4.6	RR2XF	No	Moderate	W	LTW	B	IND	134	2	44
DELTA GROW 47E20/STS	4.7	Enlist E3	Yes	Slight	P	G	IB	IND	135	1	45
DELTA GROW 47XF38	4.7	RR2XF	No	Moderate	p	LTW	B	IND	132	2	41
DELTA GROW 48E59	4.8	Enlist E3	No	Moderate	W	G	BU	IND	136	1	35
DELTA GROW 48X45	4.8	RR2X	No	Slight	P	LTW	B	IND	137	1	39
DELTA GROW 48XF33/STS	4.8	RR2XF	Yes	Moderate	P	LTW	B	IND	136	2	42
DELTA GROW 48XF42	4.8	RR2XF	No	Slight	•	•	•	IND	134	1	39
DELTA GROW 49E30/STS	4.9	Enlist E3	Yes	Slight	W	G	BU	IND	137	1	38
DELTA GROW 49XF85/STS	4.9	RR2XF	Yes	Slight	W	G	BU	SEMI	139	2	38
Delta Grow 52XF22	5.2	RR2XF	No	Moderate	•	•	•	•	141	1	40
Delta Grow 53XF95/STS	5.3	RR2XF	Yes	Slight	W	G	BU	SEMI	140	1	36
Delta Grow 55X25	5.5	RR2X	No	Slight	W	TW	B	IND	141	1	34
Delta Grow 55XF23	5.5	RR2XF	No	Slight	w	TW	B	DET	150	1	33
DONMARIO DM45F23	4.5	RR2XF	No	Moderate	P	G	IB	IND	134	2	37
DONMARIO DM48F53	4.8	RR2XF	No	Slight	P	LT	B	IND	133	2	36
Dyna-Gro S42XF93S	4.2	RR2XF	Yes	Moderate	P	LT	B	IND	134	2	39
Dyna-Gro S46XF31S	4.6	RR2XF	Yes	Slight	P	LT	B	IND	135	1	42
Dyna-Gro S47XF23S	4.7	RR2XF	Yes	Moderate	P	LT	B	IND	134	1	39
Dyna-Gro S49XF43S	4.9	RR2XF	Yes	Slight	W	G	BU	IND	137	2	39
Dyna-Gro S49XF82	4.9	RR2XF	Yes	Slight	W	LT	B	IND	136	2	40
Eagle Seed ES4800E3	4.8	Enlist E3	No	Slight	•	•	•	•	135	2	38
Eagle Seed ES4875XF	4.8	RR2XF	No	Slight	•	•	•	•	137	1	38
Innotech 4233E3S	4.2	Enlist E3	Yes	Slight	W	LT	•	IND	131	2	33
Innotech 4545E3S	4.5	Enlist E3	Yes	Slight	W	G	•	IND	133	1	32
Innotech 4983E3S	4.9	Enlist E3	Yes	Slight	W	G	•	IND	136	1	40
Innvictis A5003XF	5.0	RR2XF	No	Moderate	W	G	BU	IND	140	2	37
Innvictis A5813XF	5.8	RR2XF	No	Slight	W	T	B	DET	152	1	35
Innvictis B4603E	4.6	Enlist E3	No	Severe	P	LT	B	IND	133	2	36
Innvictis B4903E	4.9	Enlist E3	No	Severe	W	LT	B	IND	134	2	37
Innvictis B5013E	5.0	Enlist E3	No	Severe	W	G	BU	IND	138	1	37

2023 Soybean Update

Table 11 (Continued). Agronomic Characteristics for Soybean Varieties/Experimental Lines in 2023 Arkansas Soybean Variety Performance Tests.

Variety/Experimental Line	Relative	Herb. Tech. ¹²	STS	Metribuzin Sensitivity ¹³	Flower Color	Pubescence	Hilum Color	Growth Habit ¹⁴	Days to Maturity ¹⁵	Lodging Score ¹⁶	Plant Height ¹⁷
Integra X4660	4.6	RR2X	No	Slight	P	LT	B	IND	134	1	38
Integra XF4142S	4.1	RR2XF	Yes	Slight	W	LT	B	IND	133	1	30
Integra XF4454S	4.4	RR2XF	Yes	Slight	W	LT	B	IND	132	1	36
Integra XF4621S	4.6	RR2XF	Yes	Slight	P	LT	B	IND	134	2	42
Integra XF4634S	4.6	RR2XF	Yes	Slight	W	LT	B	IND	134	1	44
Integra XF4893S	4.8	RR2XF	Yes	Slight	P	LT	B	IND	137	1	44
Integra XF4914S	4.9	RR2XF	Yes	Slight	W	G	BU	IND	139	2	39
NK42-A6E3S	4.2	Enlist E3	Yes	Moderate	W	G	BU	IND	133	2	35
NK44-J4XFS	4.4	RR2XF	Yes	Slight	W	G	BU	IND	131	1	36
NK44-Q5E3S	4.4	Enlist E3	Yes	Moderate	W	G	BU	IND	133	1	31
NK46-B4XFS	4.6	RR2XF	Yes	Slight	W	LTW	BU	IND	131	1	40
NK48-A8XFS	4.8	RR2XF	Yes	Slight	W	LTW	BR	IND	134	2	42
NK49-C2XFS	4.9	RR2XF	Yes	Slight	P	LTW	B	IND	136	1	41
NK49-T6E3S	4.9	Enlist E3	Yes	Slight	W	G	BU	IND	137	2	41
NK52-D6E3	5.2	Enlist E3	No	Moderate	W	G	BU	IND	140	2	40
NK54-J9XFS	5.4	RR2XF	Yes	Slight	W	TW	B	IND	148	2	44
NK56-Z6XFS	5.6	RR2XF	Yes	Slight	W	LTW	B	DET	141	1	28
Pioneer P44A21X	4.4	RR2X	No	Moderate	P	LT	BL	•	132	2	38
Pioneer P44A60LX	4.4	RR2XF	No	Slight	W	LT	B	IND	132	2	42
Pioneer P45A70LX	4.5	RR2XF	No	Slight	W	G	BU	•	133	1	37
Pioneer P46A20LX	4.6	RR2XF	No	Moderate	P	T	B	•	131	2	39
Pioneer P46A90LX	4.6	RR2XF	No	Moderate	W	LT	B	•	133	1	39
Pioneer P47A64X	4.7	RR2X	No	Slight	P	G	IB	•	135	2	45
Pioneer P48A04LX	4.8	RR2XF	No	Moderate	W	LT	BR	•	136	2	42
Progeny P4604XFS	4.6	RR2XF	Yes	Slight	P	LT	BL	IND	136	1	43
Progeny P4623XFS	4.6	RR2XF	Yes	Slight	P	LT	BL	IND	136	1	36
Progeny P4665XFS	4.6	RR2XF	Yes	Moderate	W	LT	BL	IND	134	2	45
Progeny P4691XFS	4.6	RR2XF	Yes	Slight	P	GR	IB	IND	132	1	42
Progeny P4755XFS	4.7	RR2XF	Yes	Slight	P	LT	B	IND	133	2	41
Progeny P4775E3S	4.7	Enlist E3	Yes	Slight	P	G	IB	IND	135	1	45
Progeny P4778XFS	4.7	RR2XF	Yes	Slight	W	GR	BU	IND	134	2	40
Progeny P4798XF	4.7	RR2XF	No	Slight	P	T	B	IND	137	2	40
Progeny P4806XFS	4.8	RR2XF	Yes	Moderate	W	T	B	IND	136	1	39
Progeny P4850E3	4.8	Enlist E3	No	Slight	W	LT	BL	IND	135	2	37
Progeny P4947XFS	4.9	RR2XF	Yes	Slight	P	LT	B	IND	137	2	42
Progeny P4999E3S	4.9	Enlist E3	Yes	Slight	W	G	BU	IND	135	1	39
Progeny P5056XFS	5.0	RR2XF	Yes	Moderate	P	LT	B	IND	139	2	42
Progeny P5441XF	5.4	RR2XF	No	Slight	P	G	IB	IND	145	3	47
Progeny P5641XF	5.6	RR2XF	No	Slight	W	G	BU	IND	145	1	43
Progeny P5751XF	5.7	RR2XF	No	Slight	W	T	B	DET	151	1	35
R18-10491	5.4	Conv.	No	Slight	P	G	B	DET	141	2	33
R18-10919	5.4	Conv.	No	Moderate	P	T	B	DET	145	1	32
R18C-13665	4.9	Conv.	No	Moderate	W	LT	B	IND	137	2	44

2023 Soybean Update

Table 11 (Continued). Agronomic Characteristics for Soybean Varieties/Experimental Lines in 2023 Arkansas Soybean Variety Performance Tests.

Variety/Experimental Line	Relative	Herb. Tech. ¹²	STS	Metribuzin Sensitivity ¹³	Flower Color	Pubescence	Hilum Color	Growth Habit ¹⁴	Days to Maturity ¹⁵	Lodging Score ¹⁶	Plant Height ¹⁷
R19-39415	4.8	Conv.	No	•	P	G	B	IND	138	3	50
R19-39444	4.8	Conv.	No	Severe	P	T	K	•	137	2	47
R19-410712	5.4	Conv.	No	Slight	P	G	IB	•	144	1	32
R19-411424	5.2	Conv.	No	Slight	W	G	BR	DET	140	2	32
R19-424115b	5.2	Conv.	No	Moderate	P	S	B	IND	142	2	49
R19-42447b	5.3	Conv.	No	Slight	P	LT	B	IND	142	3	47
R19-4593	5.3	Conv.	No	Slight	W	G	BU	•	141	1	29
R19-45980	5.4	Conv.	No	Slight	W	G	BU	DET	140	1	32
R19-46252	5.4	Conv.	No	Slight	P	G	IB	IND	143	2	45
R19C-1001	4.9	Conv.	No	Slight	P	G	B	IND	139	2	46
R19C-1012	4.4	Conv.	No	Slight	P	G	IB	IND	139	1	44
R19C-1035	4.5	Conv.	No	Moderate	W	G	IB	IND	139	2	42
R19C-1081	4.3	Conv.	No	Slight	W	G	IB	IND	137	1	42
R19C-2678	4.8	Conv.	No	Slight	P	G	IB	IND	138	2	38
R19C-3085	5.1	Conv.	No	Slight	W	T	B	•	139	2	30
R19C-3147	4.9	Conv.	No	Slight	W	T	B	IND	138	1	43
R19C-3194	5.3	Conv.	No	Slight	W	T	B	IND	140	1	42
Revere 4237XFS	4.2	RR2XF	Yes	Slight	W	LT	•	IND	129	1	36
Revere 4415XF	4.4	RR2XF	No	Slight	P	LT	•	IND	132	1	35
Revere 4526XFS	4.5	RR2XF	Yes	Slight	P	LT	•	IND	133	1	40
Revere 4727XF	4.7	RR2XF	No	Slight	W	LT	•	•	135	1	36
Revere 4731XF	4.7	RR2XF	No	Slight	P	G	•	•	133	2	40
Revere 4826XFS	4.8	RR2XF	Yes	Moderate	P	LT	•	IND	136	1	37
Revere 4925XFS	4.9	RR2XF	Yes	Moderate	P	LT	•	IND	137	1	43
Revere 4934XF	4.9	RR2XF	No	Moderate	P	LT	•	•	135	2	39
Revere 5029XFS	5.0	RR2XF	Yes	Moderate	P	LT	•	IND	140	2	43
Revere 5143E3	5.0	Enlist E3	No	Slight	W	G	•	IND	140	2	39
S17-17644	4.8	Conv.	No	Slight	W	T	B	IND	136	2	30
S18-6013	5.4	Conv.	No	Slight	W	T	B	SEMI	142	1	30
S18-6328	5.2	Conv.	No	Slight	P	LT	B	SEMI	140	2	29
S19-10701	4.5	Conv.	No	Slight	W	T	B	IND	136	2	34
UA 46i20c	4.6	Conv.	•	•	•	•	•	•	136	2	37
USG 7461XFS	4.6	RR2XF	No	Slight	P	LT	B	IND	135	2	44
USG 7463XF	4.6	RR2XF	No	Moderate	P	G	BU	IND	132	1	41
USG 7474XFS	4.7	RR2XF	No	Slight	P	LT	B	IND	136	1	38

2023 Soybean Update

Key Codes for All Tables

“ • ” Information Not Available

¹LMCRS = Lon Mann Cotton Research Station, Marianna, AR
NEC = Newport Extension Center, Newport, AR
NREC = Northeast Research and Extension Center, Keiser, AR
NRECG= Northeast Research and Extension Center, Greenfield, AR
PTRS = Pine Tree Research Station, Colt, AR
RREC = Rice Research and Extension Center, Stuttgart, AR
RRS = Rohwer Research Station, Rohwer AR
VRS = Vegetable Research Station, Kibler, AR

² ANOVA of Non-Xtend varieties (Conv., RR1, and Enlist E3)

³ ANOVA of Xtend varieties (Xtend and XtendFlex)

⁴ Soybean varieties with Xtend/XtendFlex technologies were tested separately from varieties with all other herbicide technologies.

⁵ Average Yield from 2022 and 2023.

⁶ Yield mean (bu/ac) from Greenfield, Keiser, Kibler, Marianna, Newport, Pine Tree, Rohwer, and Stuttgart Full-Season irrigated tests.

⁷ By using the greatest level of disease reported over the years tested, a standardized designation system for all disease and nematode screenings is as follows: **HR = Highly Resistant, R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible, S = Susceptible, VS = Very Susceptible**

⁸ Evaluation of soybean cultivars for reaction to root-knot nematode was conducted in a greenhouse. Nematode population density ranged from moderate to severe in the field and eggs of *M. incognita* were used as inoculum in the greenhouse test. Greenhouse tests were conducted at the Southeast Research and Extension Center, Hope. Greenhouse root gall ratings were a visual assessment of the of the entire root system using a 0-9 scale (<1.0 = R; 1.0-2.0 = MR; 3.0-5.0 = MS; 6.0-50.0 = S; >50.0 = VS).

⁹ Stem Canker Reaction-10 plants per plot were inoculated with infested toothpicks, replicated 3 times. Ratings were based on the greatest level of disease observed using a R = no stem canker found and S = stem canker found.

¹⁰ Frogeye Leaf Spot values represent a visual estimate of the disease severity.

¹¹ Chloride Reaction – Excluder varieties accumulate chloride and restrict it to the roots. Includer varieties accumulate chloride throughout the plants. Trifoliolate-leaf samples were collected from each soybean variety at the Rohwer Research Station in 2023. Based on leaf-CL concentrations, varieties were rated as Strong Excluder, Moderate Excluder, Mixed, Moderate Includer, and Strong Includer. Chloride levels should be determined by irrigation water tests and/or plant tissue analysis.

¹² Herbicide Technologies: Conv. = Conventional; RR1= RoundUp Ready; RR2X = RoundUp Ready 2 Xtend; and RR2XF = RoundUp Ready 2 XtendFlex.

¹³ Metribuzin Ratings - Slight = Some symptoms observed in the green house but unlikely to injure soybean plants in the field at a 1X rate if applied to the correct soil texture at the appropriate soil pH. It is recommended that these soybean varieties be planted if metribuzin is intended to be applied. Moderate = Likely to observe some injury in the field, even when applying a premix product that contains a lower rate of metribuzin. Severe = Do not spray any formulation or rate of metribuzin if these varieties are planted as severe injury and yield loss would be expected.

2023 Soybean Update

¹⁴ Soybean growth habit; Ind = Indeterminate; Det = Determinate; Std = Semi-determinate.

¹⁵ Days to Maturity represent the average number of days (Keiser Irrigated, Pine Tree Irrigated, Rohwer Irrigated, and Stuttgart Irrigated Tests) from planting until 80% of the soybeans in the plot were thought to be mature.

¹⁶ Soybean lodging is an average of data from the Keiser Irrigated, Kibler Irrigated, Marianna Irrigated, Newport Irrigated, Pine Tree Irrigated, Rohwer Irrigated, and Stuttgart Irrigated Tests and is reported using the following criteria: 1 = all plants erect, 2 = all plants slightly leaning or a few plants down, 3 = all plants moderately leaning or 25-50% of the plants are down, 4 = all plants considerably leaning or 50-80% of the plants are down, 5 = all plants down.

¹⁷ Soybean plant height reported in inches and is an average of data from the Keiser Irrigated, Pine Tree Irrigated, Rohwer Irrigated, and Stuttgart Irrigated Tests.