

**Table 10-a. Mean<sup>†</sup> yield, agronomic traits, and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials at nine REC locations in Tennessee during 2023. Analysis included variety performance over a 1 yr, 2 yr, and 3 yr period.**

Variety	Herbicide Pkg <sup>†</sup>	Avg. Yield <sup>§</sup> (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging <sup>  </sup> (1-5)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
NK 42-A6E3S	E3	90 A			12.8 B-F			40 B			1.3 HI		
Asgrow AG45XF3	XF	77 B			12.7 E-G			42 A			1.2 I		
Revere 4299XS	R2XS	76 BC	66 A	67 A	12.9 B-F	12.5 A	12.8 A	42 A	40 B	38 A	1.3 HI	1.2 BC	1.2 B
Innvictis A4503XF	XF	74 B-D			12.4 H			38 D-F			1.3 HI		
Revere 4526XFS	XFS	74 B-D	67 A		12.9 B-E	12.5 A		44 A	41 A		1.4 G-I	1.3 B	
Xitavo 4522E	E3	74 B-D			12.7 F-H			37 E-G			1.2 I		
NK 44-Q5E3S	E3	74 B-E	62 BC		12.7 F-H	12.1 C		35 H	33 E		1.4 G-I	1.3 B	
Dyna-Gro S41EN72	E3	73 B-F	64 A-C	64 B	12.4 H	12.3 BC	12.6 B	39 B-D	37 D	35 B	1.7 D-G	1.6 A	1.6 A
Revere 4237XFS	XFS	73 C-G			12.8 C-G			40 BC			1.3 HI		
Dyna-Gro S45XF02	XF	73 C-G	65 AB		13.1 B	12.6 A		40 B	38 C		1.4 F-I	1.4 B	
Asgrow AG43XF2	XF	71 D-H	61 C		12.8 D-G	12.4 AB		40 B	38 C		1.1 I	1.1 C	
Innvictis B5013E	E3	70 D-H			12.9 B-F			43 A			1.3 HI		
Xitavo 4364E	E3	69 E-H			12.9 B-F			37 E-G			1.7 D-G		
Don Mario DM45F23	XF	69 F-H			13.1 BC			39 B-D			1.8 C-F		
Innvictis A4411XF	XF	69 GH			13.0 B-E			39 B-D			1.6 E-H		
Xitavo 4084E	E3	68 H			13.0 B-D			37 E-G			2.0 B-D		
Perdue Agribusiness P4 Conv		62 I			12.6 GH			37 FG			2.1 BC		
MO S19-10701	Conv	58 J			12.8 D-G			43 A			2.1 B		
Perdue Agribusiness P4 Conv		57 J			12.7 F-H			39 C-E			2.5 A		
Perdue Agribusiness P4 Conv		48 K			13.9 A			36 GH			1.9 B-E		
Average		70	64	65	12.8	12.4	12.7	40	38	37	1.6	1.3	1.4
Standard Error		4	10	6	0.8	0.5	0.4	2	3	2	0.2	0.1	0.1
L.S.D. <sub>.05</sub>		4	3	3	0.3	0.2	0.2	2	1	1	0.3	0.2	0.2
C.V.		11	12	13	4	4	5	7	6	7	38	32	40
Site-Years		8	16	24	8	16	24	8	16	24	8	16	24

† Varieties that have any MS letter in common are not significantly different at the 5% level of probability. Values highlighted in light orange are above average for a given trait, MS letters highlighted in dark orange are in the "A group", indicating no statistical difference from the top-performing variety, for a given trait.

C.V. is only reported for variables evaluated on a ratio scale.

L.S.D. values are given for ANOVA that were significant at P<0.05. Variables in which minimal variation was observed were not subjected to ANOVA and are reported as N.E.

‡ For a full description of abbreviated biotech traits, see table 29.

\* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.

§ All yields are adjusted to 13% moisture.

|| Lodging was evaluated on a scale of 1 (no lodging) to 5 (complete lodging).

T Indicate data that were log transformed to meet assumptions of normality, raw means are reported and mean separation letters are given. L.S.D values are not reported as these would be relative to transformed mean values.

**Table 10-b. Mean<sup>†</sup> yield, agronomic traits, and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials at nine REC locations in Tennessee during 2023. Analysis included variety performance over a 1 yr, 2 yr, and 3 yr period.**

Variety	Herbicide Pkg <sup>‡</sup>	Avg. Yield <sup>§</sup> (bu/ac)			Maturity (DAP)			Protein <sup>¶</sup> (%)			Oil <sup>¶</sup> (%)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
NK 42-A6E3S	E3	90 A			140 DE			33.3 G-J			24.9 CD		
Asgrow AG45XF3	XF	77 B			141 B-D			33.8 E-H			23.9 EF		
Revere 4299XS	R2XS	76 BC	66 A	67 A	140 DE	138 B	137 A	34.4 DE	34.6 B	34.9 A	23.7 EF	23.5 C	23.4 B
Innvictis A4503XF	XF	74 B-D			138 F-H			32.8 IJ			25.4 B		
Revere 4526XFS	XFS	74 B-D	67 A		141 CD	138 AB		32.7 J	32.7 D		24.5 D	24.2 B	
Xitavo 4522E	E3	74 B-D			141 CD			35.3 C			23.8 EF		
NK 44-Q5E3S	E3	74 B-E	62 BC		141 CD	138 AB		35.3 C	35.4 A		22.7 H	22.6 E	
Dyna-Gro S41EN72	E3	73 B-F	64 A-C	64 B	139 E-G	136 C	135 B	32.7 J	32.7 D	32.8 B	25.1 BC	24.7 A	24.9 A
Revere 4237XFS	XFS	73 C-G			136 IJ			34.1 EF			24.5 D		
Dyna-Gro S45XF02	XF	73 C-G	65 AB		141 A-D	139 A		34.9 CD	35.1 A		23.3 G	23.0 D	
Asgrow AG43XF2	XF	71 D-H	61 C		140 D-F	138 B		33.5 F-I	33.6 C		24.9 CD	24.7 A	
Innvictis B5013E	E3	70 D-H			143 A			35.3 C			24.0 E		
Xitavo 4364E	E3	69 E-H			138 G-I			33.1 H-J			25.0 C		
Don Mario DM45F23	XF	69 F-H			142 A-C			34.0 EF			23.6 FG		
Innvictis A4411XF	XF	69 GH			140 D-F			34.1 EF			24.0 E		
Xitavo 4084E	E3	68 H			135 J			32.0 K			25.9 A		
Perdue Agribusiness P4 Conv		62 I			138 G-I			33.9 E-G			21.6 J		
MO S19-10701	Conv	58 J			143 A			36.6 B			22.3 I		
Perdue Agribusiness P4 Conv		57 J			137 H-J			35.0 CD			21.2 J		
Perdue Agribusiness P4 Conv		48 K			143 AB			38.3 A			22.7 HI		
Average		70	64	65	140	138	136	34.2	34.0	33.9	23.8	23.8	24.1
Standard Error		4	10	6	1	3	2	0.3	0.2	0.3	0.1	0.3	0.2
L.S.D. <sub>.05</sub>		4	3	3	2	1	1	0.7	0.4	0.6	0.4	0.2	0.4
C.V.		11	12	13	2	2	2	1	1	2	1	1	2
Site-Years		8	16	24	8	16	24	1	2	3	1	2	3

<sup>†</sup> Varieties that have any MS letter in common are not significantly different at the 5% level of probability. Values highlighted in light orange are above average for a given trait, MS letters highlighted in dark orange are in the "A group", indicating no statistical difference from the top-performing variety, for a given trait.

C.V. is only reported for variables evaluated on a ratio scale.

L.S.D. values are given for ANOVA that were significant at P<0.05. Variables in which minimal variation was observed were not subjected to ANOVA and are reported as N.E.

\* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.

<sup>‡</sup> For a full description of abbreviated biotech traits, see table 29.

<sup>§</sup> All yields are adjusted to 13% moisture.

<sup>¶</sup> Protein and oil were measured post-harvest using NIRS and are reported on a dry weight basis.

**Table 10-c. Mean<sup>†</sup> yield, agronomic traits, and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials at nine REC locations in Tennessee during 2023. Sudden death syndrome (SDS) and frogeye disease ratings were taken in mid-September. Leaf holding was taken at harvest. Seed quality and purple stain ratings were taken post-harvest.**

Variety	Herbicide Pkg <sup>†</sup>	Avg. Yield <sup>§</sup>	SDS DI <sup>††, T</sup>	SDS DS <sup>††, T</sup>	SDS DX <sup>††, T</sup>	Frogeye <sup>‡‡</sup>	Seed Quality <sup>§§, T</sup>	Purple Stain <sup>¶¶</sup>	Leaf Holding <sup>  </sup>
		(bu/ac)	(%)	(1-9)	(DI x DS/9)	(1-9)	(1-5)	(1-5)	(1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 42-A6E3S	E3	90 A	4 D-G	1.1 I	1 EF	1.5 HI	2.2 A	1.5 A	1.1 B
Asgrow AG45XF3	XF	77 B	3 FG	1.7 D-F	1 EF	4.2 AB	1.0 D	1.0 B	1.1 B
Revere 4299XS	R2XS	76 BC	8 A-C	1.5 D-H	2 B-D	2.2 E-H	1.7 A-C	1.5 A	1.2 B
Innvictis A4503XF	XF	74 B-D	27 A-C	2.5 B	10 A-C	2.6 DE	1.0 D	1.5 A	1.1 B
Revere 4526XFS	XFS	74 B-D	5 E-G	1.8 C-E	2 EF	4.7 A	1.3 B-D	1.2 AB	1.0 B
Xitavo 4522E	E3	74 B-D	6 E-G	1.3 F-I	1 EF	2.3 E-G	2.0 AB	1.2 AB	1.1 B
NK 44-Q5E3S	E3	74 B-E	3 E-G	1.2 G-I	0 EF	1.5 HI	1.7 A-C	1.2 AB	1.0 B
Dyna-Gro S41EN72	E3	73 B-F	8 B-E	1.2 HI	1 C-E	1.6 G-I	1.3 B-D	1.0 B	1.1 B
Revere 4237XFS	XFS	73 C-G	13 A-C	1.9 CD	4 A-D	4.1 AB	1.5 A-C	1.5 A	1.2 B
Dyna-Gro S45XF02	XF	73 C-G	6 C-F	1.6 D-G	2 C-E	1.9 E-I	1.7 A-D	1.2 AB	1.1 B
Asgrow AG43XF2	XF	71 D-H	8 A-D	1.7 C-E	2 B-D	3.7 BC	1.7 A-C	1.3 AB	1.0 B
Innvictis B5013E	E3	70 D-H	2 G	1.2 G-I	0 F	3.3 C	1.5 A-C	1.2 AB	1.0 B
Xitavo 4364E	E3	69 E-H	4 G	1.5 D-I	1 F	4.1 AB	1.7 A-C	1.2 AB	1.2 B
Don Mario DM45F23	XF	69 F-H	18 AB	2.3 B	7 AB	1.5 HI	1.0 D	1.2 AB	1.2 B
Innvictis A4411XF	XF	69 GH	20 A-C	2.2 BC	8 A-C	3.1 CD	1.3 B-D	1.3 AB	1.5 A
Xitavo 4084E	E3	68 H	4 E-G	1.3 E-I	1 EF	1.6 G-I	1.7 A-C	1.5 A	1.1 B
Perdue Agribusiness P411L022 Conv	Conv	62 I	7 C-F	1.4 D-I	2 DE	2.4 D-F	1.2 CD	1.5 A	1.1 B
MO S19-10701	Conv	58 J	20 A-C	2.5 B	8 A-C	1.8 F-I	1.0 D	1.0 B	1.6 A
Perdue Agribusiness P41MO2' Conv	Conv	57 J	10 C-F	1.5 D-I	3 DE	2.4 D-F	1.2 CD	1.3 AB	1.0 B
Perdue Agribusiness P45XP42 Conv	Conv	48 K	38 A	3.5 A	21 A	1.4 I	1.7 A-C	1.0 B	1.5 A
Average		70	11	1.7	4	2.6	1.5	1.3	1.1
Standard Error		4	4	0.3	2	0.5	0.2	0.1	0.1
L.S.D. <sub>.05</sub>		4	Sig.	Sig.	2	0.7	Sig.	0.3	0.3
Site-Years		8	8	8	8	8	1	1	2

† Varieties that have any MS letter in common are not significantly different at the 5% level of probability. Values highlighted in light orange are above average for a given trait, MS letters highlighted in dark orange are in the "A group", indicating no statistical difference from the top-performing variety, for a given trait.

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T Indicate data that were log transformed to meet assumptions of normality, raw means are reported and mean separation letters are given. L.S.D values are not reported as these would be relative to transformed mean values.

†† SDS was evaluated as disease incidence (percentage), disease severity (1 to 9, with 1 indicating no disease), and disease index (DI x DS/9). Evaluated in mid-September at all locations.

‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September at all locations.

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity. Evaluated at all locations except Milan Irr and Milan Non-Irr.

§§ Seed quality was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no shriveled or damaged seed. Evaluated at Knoxville location only.

¶¶ Purple stain was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no purple stain. Evaluated at Knoxville location only.