Table A-1-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Revere 3908XFS*	XFS	108 A	84 A	78 A	8.5 B	11.2 A	11.9 A	40 AB	41 A	40 A	2.0 EF	1.5 B	1.4 A	138 BC	129 A	-
USG 7394XFS	XFS	105 AB			8.8 A			43 A			3.0 BC			139 AB		
Innvictis A3992XF	XF	103 AB			8.4 BC			39 B			2.8 BC			140 A		
Asgrow AG38XF1	XF	99 AB	84 A	77 A	8.4 BC	11.3 A	12.0 A	40 AB	42 A	39 A	2.2 D-F	1.6 B	1.4 A	139 AB	130 A	-
Dyna-Gro S38XF22S*	XF	99 AB	79 A		8.3 BC	11.2 A		44 A	41 A		2.5 C-E	1.9 A		139 AB	130 A	-
Xitavo 3803E	E3	93 BC			8.4 BC			39 B			2.7 CD			138 A-C		
AsGrow AG39XF3	XF	83 C			8.5 B			41 AB			3.3 AB			138 BC		-
Perdue Agribusiness P30ILO22	Conv	63 D			8.2 C			31 C			1.7 F			134 D		
Perdue Agribusiness P29ILO22	Conv	50 E			7.7 D			34 C			3.7 A			137 C		
Average		89	82	77	8.4	11.3	11.9	39	41	40	2.6	1.7	1.4	138	129	-
Standard Error		4	20	13	0.1	2.8	1.8	1	2	2	0.2	0.6	0.4	1	9	-
L.S.D..05		12	N.S.	N.S.	0.3	N.S.	N.S.	4	N.S.	N.S.	0.6	0.3	N.S.	2	N.S.	-
C.V.		7	13	15	2	3	3	5	9	8	-	-	-	1	0	

† 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 signficant 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 30.
* 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 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 A-1-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr	Leaf Holding[ǁ] (1-5) 1 yr
Revere 3908XFS*	XFS	108 A	0.0	1.0	0.0	1.3 A	1.7
USG 7394XFS	XFS	93 BC	3.3	1.0	0.4	1.3 A	1.5
Innvictis A3992XF	XF	83 C	0.0	1.0	0.0	2.0 A	1.5
Asgrow AG38XF1	XF	99 AB	0.0	1.0	0.0	1.0 A	1.5
Dyna-Gro S38XF22S*	XF	105 AB	0.0	1.0	0.0	1.3 A	1.5
Xitavo 3803E	E3	63 D	0.0	1.0	0.0	2.0 A	1.5
AsGrow AG39XF3	XF	99 AB	0.0	1.0	0.0	1.7 A	1.5
Perdue Agribusiness P30ILO22	Conv	50 E	0.0	1.0	0.0	2.0 A	1.5
Perdue Agribusiness P29ILO22	Conv	103 AB	0.0	1.0	0.0	1.0 A	1.5
Average		89	0	1.0	0	1.5	2
Standard Error		4	0	0.0	0	0.4	0
L.S.D..05		12	N.E.	N.E.	N.E.	N.S.	N.E.
C.V.		7	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

ǁ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-2-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG39XF3	XF	88 A			13.4 A			36 BC			2.5 A			137 AB		
USG 7394XFS	XFS	85 AB			13.5 A			39 A			2.3 AB			136 A-C		
Xitavo 3803E	E3	83 AB			13.7 A			36 A-C			2.5 A			134 CD		
Dyna-Gro S38XF22S*	XF	82 AB	80 A		13.3 A	14.4 A		38 AB	42 A		1.8 B-D	1.8 A		136 A-C	133 A	
Revere 3908XFS*	XFS	77 A-C	80 A	79 A	13.6 A	14.4 A	14.9 A	37 A-C	43 A	39 A	2.0 A-C	1.8 A	1.7 A	135 B-D	134 A	133 B
Asgrow AG38XF1	XF	75 BC	74 A	72 B	13.2 A	14.3 A	14.8 A	35 BC	40 A	37 B	1.5 CD	1.3 B	1.3 B	135 BC	134 A	135 A
Innvictis A3992XF	XF	65 CD			13.2 A			34 C			1.8 B-D			138 A		
Perdue Agribusiness P30ILO22	Conv	56 D			13.4 A			28 D			1.3 D			133 D		
Perdue Agribusiness P29ILO22	Conv	53 D			13.8 A			28 D			1.5 CD			129 E		
Average		74	78	76	13.5	14.4	14.9	34	41	38	1.9	1.7	1.5	135	134	134
Standard Error		4	2	2	0.1	1.0	0.8	1	5	4	0.2	0.2	0.2	1	2	1
L.S.D..05		12	N.S.	5	N.S.	N.S.	N.S.	3	N.S.	2	0.6	0.4	0.3	2	N.S.	1
C.V.		10	6	6	2	4	2	5	5	5	19	19	16	1	1	1

† 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 signficant 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 30.

* 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 A-2-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Protein[¶] (%)			Oil[¶] (%)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG39XF3	XF	88 A			34.8 AB			22.4 EF		
USG 7394XFS	XFS	85 AB			34.4 BC			23.6 C		
Xitavo 3803E	E3	83 AB			31.6 F			25.9 A		
Dyna-Gro S38XF22S*	XF	82 AB	80 A		33.1 E	33.4 C		24.8 B	24.9 A	
Revere 3908XFS*	XFS	77 A-C	80 A	79 A	35.0 A	35.3 A	35.8 A	23.1 D	22.9 C	22.6 B
Asgrow AG38XF1	XF	75 BC	74 A	72 B	33.9 CD	34.2 B	34.8 B	23.4 C	23.3 B	23.1 A
Innvictis A3992XF	XF	65 CD			33.3 E			23.4 CD		
Perdue Agribusiness P30ILO22	Conv	56 D			33.7 D			22.5 E		
Perdue Agribusiness P29ILO22	Conv	53 D			33.2 E			22.1 F		
Average		74	78	76	33.7	34.3	35.3	23.5	23.7	22.9
Standard Error		4	2	2	0.2	0.3	0.6	0.1	0.1	0.3
L.S.D..05		12	N.S.	5	0.5	0.5	0.3	0.3	0.3	0.1
C.V.		10	6	6	1	1	1	1	1	0

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

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

Table A-2-c. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Seed Quality[§§] (1-5)	Purple Stain[¶¶] (1-5)	Leaf Holding[||] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
AsGrow AG39XF3	XF	88 A	20 A-C	3.3 B	8 BC	3.0 A	1.3 B	1.3 A	1.3 A-C
USG 7394XFS	XFS	85 AB	20 A-C	3.7 B	8 BC	2.7 A	1.7 AB	1.5 A	1.7 A
Xitavo 3803E	E3	83 AB	18 BC	1.3 CD	2 C	1.7 A	2.2 A	1.5 A	1.3 A-C
Dyna-Gro S38XF22S*	XF	82 AB	0 C	1.0 D	0 C	2.7 A	1.3 B	1.2 A	1.2 BC
Revere 3908XFS*	XFS	77 A-C	45 A	5.3 A	26 A	1.7 A	1.5 B	1.5 A	1.5 AB
Asgrow AG38XF1	XF	75 BC	43 AB	3.3 B	16 B	1.7 A	1.2 B	1.3 A	1.5 AB
Innvictis A3992XF	XF	65 CD	5 C	2.7 BC	1 C	3.3 A	1.5 B	1.2 A	1.5 AB
Perdue Agribusiness P30ILO22	Conv	56 D	15 C	2.7 BC	4 C	2.0 A	1.2 B	1.2 A	1.0 C
Perdue Agribusiness P29ILO22	Conv	53 D	25 A-C	2.7 BC	8 BC	3.0 A	1.5 B	1.5 A	1.0 C
Average		74	21	2.9	8	2.4	1.5	1.4	1.3
Standard Error		4	9	0.5	3	0.7	0.2	0.1	0.1
L.S.D..05		12	26	1.4	10	N.S.	0.6	N.S.	0.4
C.V.		10	-	-	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

Ŧ 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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

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

Table A-3-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Xitavo 3803E	E3	83 A			14 A			35 A-C			1.0			135 A		
Dyna-Gro S38XF22S*	XF	75 AB	49 A		14 A	12 A		38 AB	32 A		1.0	1.0	1.0	135 A	135 A	
AsGrow AG39XF3	XF	74 AB			13 A			34 BC			1.0	1.0		135 A		
Asgrow AG38XF1	XF	72 AB	47 A	52 A	13 A	12 B	12 A	36 A-C	31 A	31 A	1.0	1.0	1.0	136 A	134 AB	134 A
USG 7394XFS	XFS	68 B			14 A			38 AB			1.0			136 A		
Revere 3908XFS*	XFS	64 BC	48 A	55 A	13 A	12 AB	13 A	40 A	33 A	33 A	1.0	1.0	1.0	133 B	133 B	133 A
Invictis A3992XF	XF	62 BC			13 A			35 A-C			1.0			134 B		
Perdue Agribusiness P30ILO22	Conv	54 CD			13 A			28 D			1.0			130 C		
Perdue Agribusiness P29ILO22	Conv	46 D			14 A			31 CD			1.0			126 D		
Average		67	48	54	13.5	12.2	12.4	35	32	32	1.0	1.0	1.0	133	134	134
Standard Error		5	22	13	0.1	1.2	0.8	3	6	3	0.0	0.0	0.0	0	1	1
L.S.D..05		13	N.S.	N.S.	N.S.	0.3	N.S.	5	N.S.	N.S.	N.E	N.E.	N.E.	1	1	N.S.
C.V.		12	14	15	2	2	2	9	10	10	-	-	-	0	1	1

† 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 signficant 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 30.

* 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 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 A-3-b. Mean† yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)	SDS DI†† (%)	SDS DS†† (1-9)	SDS DX†† (DI x DS/9)	Frogeye‡‡ (%)	Leaf Holding‖ (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
Xitavo 3803E	E3	83 A	10 CD	2.7 AB	3 BC	1.7 A	1.0
Dyna-Gro S38XF22S*	XF	75 AB	0 D	1.0 C	0 C	5.0 A	1.0
AsGrow AG39XF3	XF	74 AB	13 BC	2.3 AB	4 BC	5.3 A	1.0
Asgrow AG38XF1	XF	72 AB	23 B	2.7 AB	7 B	3.0 A	1.0
USG 7394XFS	XFS	68 B	8 CD	2.7 AB	2 C	3.3 A	1.0
Revere 3908XFS*	XFS	64 BC	47 A	3.3 A	22 A	4.0 A	1.0
Innvictis A3992XF	XF	62 BC	8 CD	1.7 BC	2 C	5.0 A	1.0
Perdue Agribusiness P30ILO22	Conv	54 CD	7 CD	1.7 BC	1 C	2.7 A	1.0
Perdue Agribusiness P29ILO22	Conv	46 D	7 CD	1.0 C	1 C	3.3 A	1.0
Average		67	14	2.1	5	3.7	1.0
Standard Error		5	5	0.4	1	1.1	0.0
L.S.D..05		13	13	1.3	4	N.S.	N.E.
C.V.		12	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-4-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[∥] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG39XF3	XF	91 A			13 AB			38 A			1.0			134 A		
Revere 3908XFS*	XFS	85 AB	57 A	49 A	13 B-D	12 A	12 A	37 A	31 AB	29 A	1.0	1.0	1.0	133 A	133 A	131 A
Asgrow AG38XF1	XF	84 AB	57 A	47 A	13 A-C	12 A	12 A	36 A	32 A	28 A	1.0	1.0	1.0	131 A	131 A	130 A
Xitavo 3803E	E3	81 BC			13 A			35 A			1.0			135 A		
USG 7394XFS	XFS	76 CD			13 B-D			37 A			1.0	1.0	1.0	133 A		
Innvictis A3992XF	XF	71 DE			13 B-D			33 A			1.0			133 A		
Dyna-Gro S38XF22S*	XF	69 EF	47 B		13 D	12 A		34 A	29 B		1.0	1.0		134 A	132 A	
Perdue Agribusiness P29ILO22	Conv	65 EF			13 CD			33 A			1.0			125 B		
Perdue Agribusiness P30ILO22	Conv	63 F			13 AB			30 A			1.0			127 B		
Average		76	54	48	13.0	11.7	12.4	35	31	29	1.0	1.0	1.0	132	132	131
Standard Error		2	26	18	0.1	1.2	1.0	2	5	4	0.0	0.0	0.0	1	1	1
L.S.D..05		7	8	N.S.	0.2	N.S.	N.S.	N.S.	2	N.S.	N.E.	N.E.	N.E.	4	N.S.	N.S.
C.V.		5	12	18	1	1	1	8	6	10	-	-	-	2	2	1

† 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 signficant 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 30.

* 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 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 A-4-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡,T] (%)	Leaf Holding[ǁ] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
AsGrow AG39XF3	XF	91 A	8 A	1.3 A	1 A	1.3 A	1.0
Revere 3908XFS*	XFS	85 AB	3 A	1.0 A	0 A	1.0 A	1.0
Asgrow AG38XF1	XF	84 AB	5 A	1.3 A	1 A	1.0 A	1.0
Xitavo 3803E	E3	81 BC	2 A	1.0 A	0 A	1.3 A	1.0
USG 7394XFS	XFS	76 CD	2 A	1.0 A	0 A	1.3 A	1.0
Innvictis A3992XF	XF	71 DE	7 A	1.7 A	1 A	3.0 A	1.0
Dyna-Gro S38XF22S*	XF	69 EF	12 A	1.3 A	2 A	2.7 A	1.0
Perdue Agribusiness P29ILO22	Conv	65 EF	0 A	1.0 A	0 A	1.0 A	1.0
Perdue Agribusiness P30ILO22	Conv	63 F	0 A	1.0 A	0 A	1.0 A	1.0
Average		76	4	1.2	1	1.5	1.0
Standard Error		2	4	0.2	1	0.1	0.0
L.S.D..05		7	N.S.	N.S.	N.S.	N.S.	N.E.
C.V.		5	-	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
ǁ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-5-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Xitavo 3803E	E3	76 A			13 A			32 B-D			1.0			136 AB		
Revere 3908XFS*	XFS	72 A	56 A	53 A	13 B	14 A	14 A	34 AB	30 A	29 A	1.0	1.0	1.0	138 A	136 A	139 A
USG 7394XFS	XFS	71 AB			13 AB			36 A			1.0	1.0	1.0	137 A		
Asgrow AG38XF1	XF	67 A-C	47 B	47 A	13 C	13 B	14 A	30 CD	28 B	27 B	1.0	1.0	1.0	137 A	135 A	137 A
Dyna-Gro S38XF22S*	XF	66 A-C	47 B		13 C	13 AB		33 BC	29 AB		1.0	1.0		136 A	135 A	
Innvictis A3992XF	XF	62 BC			13 B			29 D			1.0			138 A		
AsGrow AG39XF3	XF	61 C			13 BC			30 CD			1.0			136 A		
Perdue Agribusiness P30ILO22	Conv	45 D			13 BC			23 E			1.0			133 BC		
Perdue Agribusiness P29ILO22	Conv	39 D			13 BC			22 E			1.0			133 C		
Average		62	50	50	12.9	13.2	13.9	30	29	28	1.0	1.0	1.0	136	136	138
Standard Error		3	19	11	0.1	0.5	0.8	1	4	2	0.0	0.0	0.0	1	2	3
L.S.D.$_{.05}$		10	7	N.S.	0.3	0.7	N.S.	3	2	1	N.E.	N.E.	N.E.	3	N.S.	N.S.
C.V.		9	11	14	1	4	4	6	5	5	-	-	-	1	2	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.

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

L.S.D. values are given for ANOVA that were signficant 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 30.

* 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 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 A-5-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
Xitavo 3803E	E3	76 A	2	1.0	1	1.7 C	1.0
Revere 3908XFS*	XFS	72 A	0	0.0	0	2.7 BC	1.2
USG 7394XFS	XFS	71 AB	0	0.0	0	2.7 BC	1.0
Asgrow AG38XF1	XF	67 A-C	0	0.0	0	1.0 C	1.0
Dyna-Gro S38XF22S*	XF	66 A-C	0	0.0	0	6.0 A	1.0
Innvictis A3992XF	XF	62 BC	0	0.0	0	4.7 AB	1.0
AsGrow AG39XF3	XF	61 C	0	0.0	0	2.3 BC	1.0
Perdue Agribusiness P30ILO22	Conv	45 D	0	0.0	0	2.3 BC	1.0
Perdue Agribusiness P29ILO22	Conv	39 D	0	0.0	0	1.7 C	2.0
Average		62	0	0.1	0	2.8	1
Standard Error		3	0	0.0	0	0.9	0
L.S.D._.05		10	N.E.	N.E.	N.E.	2.4	N.E.
C.V.		9	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-6-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Dyna-Gro S38XF22S*	XF	76 A	72 A		12 A	12 B		44 BC	45 B		1.0 D	1.0 A		133 AB	133 A	
Revere 3908XFS*	XFS	72 AB	65 A	65 A	14 A	14 A	14 A	46 B	47 A	45 A	2.3 BC	1.7 A	1.4 A	132 A-C	133 A	134 A
Innvictis A3992XF	XF	69 AB			13 A			42 C-E			1.3 CD			134 AB		
Asgrow AG38XF1	XF	69 AB	66 A	66 A	13 A	13 B	13 B	43 CD	44 B	42 B	1.7 CD	1.3 A	1.2 A	130 C	131 A	132 B
USG 7394XFS	XFS	66 AB			13 A			49 A			3.0 AB			135 A		
Xitavo 3803E	E3	65 AB			14 A			40 E			3.0 AB			132 A-C		
AsGrow AG39XF3	XF	63 B			13 A			41 DE			2.3 BC			131 BC		
Perdue Agribusiness P30ILO22	Conv	41 C			13 A			32 F			3.7 A			130 C		
Perdue Agribusiness P29ILO22	Conv	36 C			14 A			34 F			3.3 AB			121 D		
Average		62	68	66	13.2	12.9	13.4	41	45	44	2.4	1.3	1.3	131	132	133
Standard Error		7	5	3	0.4	0.2	0.2	1	1	2	0.5	0.4	0.3	1	1	1
L.S.D.₀₅		12	N.S.	N.S.	N.S.	0.7	0.7	2	2	2	1.1	N.S.	N.S.	3	N.S.	2
C.V.		11	7	9	5	4	5	3	4	5	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-6-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
Dyna-Gro S38XF22S*	XF	76 A	3 BC	2.0 A	1 B	1.3 A
Revere 3908XFS*	XFS	72 AB	8 A	2.3 A	3 A	1.0 A
Innvictis A3992XF	XF	69 AB	0 C	1.0 A	0 B	1.7 A
Asgrow AG38XF1	XF	69 AB	3 BC	2.0 A	1 B	1.0 A
USG 7394XFS	XFS	66 AB	0 C	1.0 A	0 B	1.0 A
Xitavo 3803E	E3	65 AB	2 C	1.3 A	0 B	1.3 A
AsGrow AG39XF3	XF	63 B	2 C	1.3 A	0 B	1.3 A
Perdue Agribusiness P30ILO22	Conv	41 C	3 BC	1.0 A	0 B	1.7 A
Perdue Agribusiness P29ILO22	Conv	36 C	7 AB	1.7 A	1 AB	1.3 A
Average		62	3	1.5	1	1.3
Standard Error		7	2	0.4	1	0.3
L.S.D..05		12	5	N.S.	2	N.S.
C.V.		11	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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

Table A-7-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Dyna-Gro S38XF22S*	XF	75 A	69 A		13 C	12 A		43 BC	39 B		1.3 A	1.2 A		127 BC	128 B	
Asgrow AG38XF1	XF	74 AB	65 A	64 A	13 C	12 A	12 A	41 CD	38 B	38 B	1.0 A	1.0 A	1.0 A	126 C	128 B	129 B
Innvictis A3992XF	XF	72 AB			13 BC			43 BC			1.3 A			130 AB		
Revere 3908XFS*	XFS	70 AB	64 A	65 A	14 AB	12 A	13 A	44 AB	41 A	41 A	1.0 A	1.0 A	1.1 A	129 AB	131 A	132 A
AsGrow AG39XF3	XF	67 A-C			13 C			41 CD			1.3 A			129 AB		
USG 7394XFS	XFS	67 BC			13 A-C			46 A			1.7 A			131 A		
Xitavo 3803E	E3	61 C			14 A			39 D			2.0 A			130 AB		
Perdue Agribusiness P29ILO22	Conv	46 D			14 AB			32 E			1.3 A			121 D		
Perdue Agribusiness P30ILO22	Conv	42 D			13 C			32 E			1.0 A			123 D		
Average		64	66	64	13.0	12.3	12.4	40	39	40	1.3	1.1	1.1	127	129	130
Standard Error		3	7	4	0.2	0.7	0.5	1	4	2	0.3	0.1	0.1	1	2	2
L.S.D.$_{.05}$		8	N.S.	N.S.	0.7	N.S.	N.S.	2	2	2	N.S.	N.S.	N.S.	3	2	1
C.V.		7	7	6	3	3	4	4	4	4	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-7-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
Dyna-Gro S38XF22S*	XF	75 A	2 C	1.0 A	0 B	2.0 A
Asgrow AG38XF1	XF	74 AB	7 BC	1.3 A	1 B	1.0 A
Innvictis A3992XF	XF	72 AB	0 C	1.3 A	0 B	1.3 A
Revere 3908XFS*	XFS	70 AB	7 BC	2.0 A	1 B	1.3 A
AsGrow AG39XF3	XF	67 A-C	5 C	1.0 A	1 B	1.3 A
USG 7394XFS	XFS	67 BC	5 C	2.0 A	1 B	1.3 A
Xitavo 3803E	E3	61 C	5 C	1.0 A	1 B	1.3 A
Perdue Agribusiness P29ILO22	Conv	46 D	15 A	2.7 A	5 A	1.0 A
Perdue Agribusiness P30ILO22	Conv	42 D	13 AB	1.3 A	2 B	1.3 A
Average		64	6	1.5	1	1.3
Standard Error		3	3	0.4	1	0.3
L.S.D..05		8	8	N.S.	3	N.S.
C.V.		7	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-8-a. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Asgrow AG38XF1	XF	66 A	55 A	59 A	11 A	11 A	11 B	39 A	34 A	34 B	2.0 A	1.5 A	1.3 A	128 A	128 A	126 B
AsGrow AG39XF3	XF	64 A			11 A			40 A			1.7 A			131 A		
USG 7394XFS	XFS	63 A			11 A			41 A			1.3 A			129 A		
Perdue Agribusiness P30ILO22	Conv	58 A			11 A			35 A			1.0 A			123 B		
Dyna-Gro S38XF22S*	XF	54 A	54 A		11 A	11 A		39 A	35 A		1.0 A	1.0 A		130 A	130 A	
Xitavo 3803E	E3	52 A			11 A			38 A			1.7 A			129 A		
Invictis A3992XF	XF	50 A			11 A			40 A			2.3 A			128 A		
Revere 3908XFS*	XFS	50 A	49 A	55 A	12 A	12 A	12 A	41 A	37 A	39 A	1.3 A	1.2 A	1.1 A	129 A	129 A	128 A
Perdue Agribusiness P29ILO22	Conv	50 A			11 A			31 A			2.0 A			117 C		
Average		56	53	57	11.2	11.4	11.3	38	36	36	1.6	1.2	1.2	127	129	127
Standard Error		6	5	6	0.3	0.2	0.3	3	4	2	0.6	0.3	0.2	1	1	2
L.S.D..05		N.S.	N.S.	N.S.	N.S.	N.S.	1.0	N.S.	N.S.	2	N.S.	N.S.	N.S.	4	N.S.	2
C.V.		17	17	13	5	4	9	11	6	6	-	-	-	2	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.

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

L.S.D. values are given for ANOVA that were signficant 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 30.

* 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 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 A-8-b. Mean[†] yield and agronomic traits of 9 Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
Asgrow AG38XF1	XF	66 A	0	1.0	0	3.3 A
AsGrow AG39XF3	XF	64 A	0	1.0	0	4.0 A
USG 7394XFS	XFS	63 A	0	1.0	0	3.3 A
Perdue Agribusiness P30ILO22	Conv	58 A	2	1.0	0	1.7 A
Dyna-Gro S38XF22S*	XF	54 A	0	1.0	0	4.3 A
Xitavo 3803E	E3	52 A	0	1.0	0	4.3 A
Innvictis A3992XF	XF	50 A	0	1.0	0	3.7 A
Revere 3908XFS*	XFS	50 A	0	1.0	0	5.0 A
Perdue Agribusiness P29ILO22	Conv	50 A	0	1.0	0	3.0 A
Average		56	1	1.0	1	3.6
Standard Error		6	0	0	0	1.2
L.S.D..05		N.S.	N.E.	N.E.	N.E.	N.S.
C.V.		17	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-9-a. Mean[†] yield, agronomic traits, and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	120 A			8 E-G			45 C-H			2.3 C-F			147 AB		
Revere 4299XS	R2XS	112 AB	94 A	91 A	8 F-H	11 BC	11 A	46 B-E	46 A	44 A	2.3 C-F	1.9 A	1.8 A	145 B-F	136 A	-
Revere 4526XFS	XFS	111 A-C	90 AB		9 B-D	11 B		47 B-D	46 A		2.2 D-F	1.8 A		147 A-C	137 A	
AsGrow AG45XF3	XF	107 A-D			8 C-E			47 BC			2.2 D-F			147 A-C		
Xitavo 4522E	E3	106 A-D			8 D-G			43 D-I			2.0 EF			146 A-D		
Innvictis A4503XF	XF	104 B-E			8 F-H			40 IJ			2.5 C-F			145 C-F		
Revere 4237XFS	XFS	97 B-F			8 E-G			44 C-H			2.8 B-E			146 B-E		
Dyna-Gro S45XF02	XF	96 C-F	82 BC		9 A	12 A		45 C-G	44 AB		2.5 C-F	2.0 A		147 A-C	137 A	
Asgrow AG43XF2	XF	96 D-G	84 A-C		8 C-F	11 B		42 E-J	43 BC		1.7 F	1.3 A		146 B-E	137 A	
Innvictis A4411XF	XF	93 D-H			8 C-F			42 F-J			2.2 D-F			146 B-E		
Don Mario DM45F23	XF	93 D-H			9 A-C			44 C-H			3.2 A-C			146 A-D		
NK 44-Q5E3S	E3	92 D-H	74 C		8 G-I	11 BC		39 J	38 D		2.7 C-E	1.8 A		148 A	138 A	
Dyna-Gro S41EN72	E3	89 E-I	77 C	75 B	8 J	11 C	11 A	41 G-J	41 C	40 B	2.5 C-F	1.9 A	1.8 A	145 B-F	136 A	-
Innvictis B5013E	E3	84 F-J			8 C-E			45 C-F			2.0 EF			146 A-D		
Perdue Agribusiness P41MO21	Conv	82 F-K			8 H-J			45 C-F			2.7 C-E			145 D-F		
Xitavo 4364E	E3	80 G-K			8 GH			40 IJ			3.0 B-D			146 B-F		
Xitavo 4084E	E3	79 H-K			8 IJ			40 IJ			2.8 B-E			144 EF		
MO S19-10701	Conv	76 I-K			8 C-F			55 A			4.0 A			147 A-C		
Perdue Agribusiness P41IL022	Conv	71 JK			8 F-H			41 H-J			3.7 AB			144 F		
Perdue Agribusiness P45XP421	Conv	68 K			9 AB			50 B			4.0 A			148 A		
Average		93	83	83	8.2	11.0	11.4	44	43	42	2.7	1.8	1.8	146	137	-
Standard Error		5	16	9	0.1	2.8	1.8	1	1	1	0.3	0.5	0.3	1	10	-
L.S.D._.05		16	11	8	0.3	0.3	N.S.	4	2	3	0.9	N.S.	N.S.	2	N.S.	-
C.V.		10	11	8	2	3	2	5	5	6	-	-	-	1	1	-

† 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 signficant 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 30.

* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.
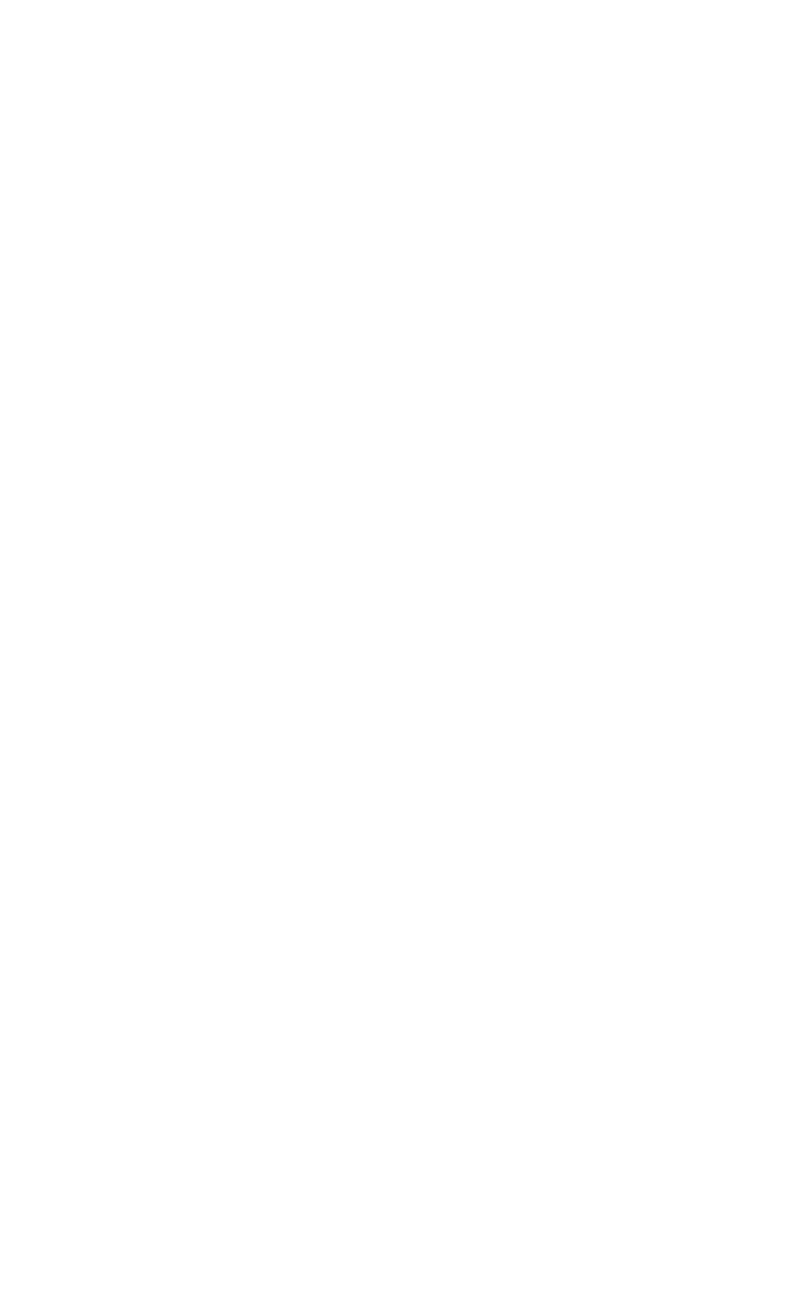
§ All yields are adjusted to 13% moisture.

‖ Lodging was evaluated on a 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 A-9-b. Mean[†] yield, agronomic traits, and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[ǁ] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 42-A6E3S	E3	120 A	0	1.0	0.0	1.0	1.5 B
Revere 4299XS	R2XS	112 AB	0	1.0	0.0	1.3	1.7 B
Revere 4526XFS	XFS	111 A-C	0	1.0	0.0	1.3	1.5 B
AsGrow AG45XF3	XF	107 A-D	0	1.0	0.0	1.3	1.5 B
Xitavo 4522E	E3	106 A-D	0	1.0	0.0	1.0	1.5 B
Innvictis A4503XF	XF	104 B-E	0	1.0	0.0	1.0	1.5 B
Revere 4237XFS	XFS	97 B-F	0	1.0	0.0	1.3	1.5 B
Dyna-Gro S45XF02	XF	96 C-F	0	1.0	0.0	1.0	1.5 B
Asgrow AG43XF2	XF	96 D-G	0	1.0	0.0	1.0	1.5 B
Innvictis A4411XF	XF	93 D-H	2	1.0	0.6	1.0	1.5 B
Don Mario DM45F23	XF	93 D-H	0	1.0	0.0	1.0	2.0 A
NK 44-Q5E3S	E3	92 D-H	0	1.0	0.0	1.3	1.5 B
Dyna-Gro S41EN72	E3	89 E-I	0	1.0	0.0	1.0	1.5 B
Innvictis B5013E	E3	84 F-J	0	1.0	0.0	1.3	1.7 B
Perdue Agribusiness P41MO21	Conv	82 F-K	0	1.0	0.0	1.3	1.7 B
Xitavo 4364E	E3	80 G-K	2	1.7	1.7	1.0	1.5 B
Xitavo 4084E	E3	79 H-K	0	1.0	0.0	1.0	1.5 B
MO S19-10701	Conv	76 I-K	0	1.0	0.0	1.0	2.0 A
Perdue Agribusiness P41IL022	Conv	71 JK	0	1.0	0.0	1.3	1.5 B
Perdue Agribusiness P45XP421	Conv	68 K	0	1.0	0.0	1.3	2.2 A
Average		93	0	1.0	0	1.1	1.6
Standard Error		5	0	0.0	0	0.0	0.1
L.S.D.$_{.05}$		16	N.E.	N.E.	N.E.	N.E.	0.2
C.V.		10	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

Table A-10-a. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	105 A			16 B-E			37 B-E			1.5 D			142 A-E		
NK 44-Q5E3S	E3	81 B	76 A		15 F	14 C		32 F	36 D		1.5 D	2.0 AB		144 A-C	140 AB	
Innvictis B5013E	E3	80 BC			15 C-F			40 AB			1.7 CD			144 AB		
AsGrow AG45XF3	XF	78 B-D			16 B-E			40 AB			1.5 D			141 D-H		
Xitavo 4364E	E3	77 B-D			16 AB			37 B-E			2.5 AB			137 I		
Revere 4526XFS	XFS	77 B-E	73 A		16 A-C	15 A		43 A	47 A		2.3 BC	2.0 AB		142 B-F	139 BC	
Revere 4299XS	R2XS	77 B-E	76 A	79 A	16 A-C	15 AB	15 A	39 A-C	44 B	41 A	1.3 D	1.3 B	1.4 A	139 E-I	137 C	138 A
Xitavo 4084E	E3	74 B-E			16 B-E			34 EF			1.7 CD			137 I		
Revere 4237XFS	XFS	74 B-E			16 C-F			37 B-E			1.3 D			137 I		
Innvictis A4503XF	XF	73 B-F			15 D-F			36 C-E			1.3 D			138 HI		
Dyna-Gro S45XF02	XF	71 B-F	73 A		16 A-D	15 AB		38 B-D	42 BC		2.3 BC	2.3 A		145 A	142 A	
Dyna-Gro S41EN72	E3	69 B-G	72 A	72 A	15 D-F	14 BC	14 B	36 C-E	40 C	38 B	1.8 B-D	2.3 A	2.0 A	142 B-F	137 C	137 A
Perdue Agribusiness P41IL022	Conv	68 C-G			15 EF			36 C-F			1.3 D			139 G-I		
Innvictis A4411XF	XF	67 C-G			16 B-E			35 D-F			1.8 B-D			138 I		
Don Mario DM45F23	XF	66 D-H			16 A			35 D-F			1.5 D			139 F-I		
Asgrow AG43XF2	XF	64 E-H	67 A		16 B-E	15 AB		37 B-E	41 C		1.2 D	1.3 B		143 A-D	140 AB	
Xitavo 4522E	E3	61 F-H			15 EF			32 F			1.3 D			145 A		
Perdue Agribusiness P41MO21	Conv	56 GH			15 D-F			36 C-F			3.2 A			137 I		
MO S19-10701	Conv	53 HI			15 D-F			36 B-E			2.3 BC			141 C-G		
Perdue Agribusiness P45XP421	Conv	42 I			16 A			32 F			1.8 B-D			144 A-C		
Average		71	73	76	15.6	14.4	14.5	36	42	39	1.8	1.8	1.7	141	139	138
Standard Error		5	4	4	0.2	1.2	0.8	1	4	4	0.3	0.3	0.2	1	3	2
L.S.D.$_{.05}$		13	N.S.	N.S.	0.7	0.6	0.4	4	2	2	0.8	0.8	N.S.	3	2	N.S.
C.V.		11	11	14	3	3	3	6	5	5	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-10-b. Mean[†] yield and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Protein[¶] (%)			Oil[¶] (%)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
NK 42-A6E3S	E3	105 A			33 G-J			25 CD		
NK 44-Q5E3S	E3	81 B	76 A		35 C	35 A		23 H	23 E	
Innvictis B5013E	E3	80 BC			35 C			24 E		
AsGrow AG45XF3	XF	78 B-D			34 E-H			24 EF		
Xitavo 4364E	E3	77 B-D			33 H-J			25 C		
Revere 4526XFS	XFS	77 B-E	73 A		33 J	33 D		25 D	24 B	
Revere 4299XS	R2XS	77 B-E	76 A	79 A	34 DE	35 B	35 A	24 EF	24 C	23 B
Xitavo 4084E	E3	74 B-E			32 K			26 A		
Revere 4237XFS	XFS	74 B-E			34 EF			25 D		
Innvictis A4503XF	XF	73 B-F			33 IJ			25 B		
Dyna-Gro S45XF02	XF	71 B-F	73 A		35 CD	35 A		23 G	23 D	
Dyna-Gro S41EN72	E3	69 B-G	72 A	72 A	33 J	33 D	33 B	25 BC	25 A	25 A
Perdue Agribusiness P41IL022	Conv	68 C-G			34 E-G			22 J		
Innvictis A4411XF	XF	67 C-G			34 EF			24 E		
Don Mario DM45F23	XF	66 D-H			34 EF			24 FG		
Asgrow AG43XF2	XF	64 E-H	67 A		33 F-I	34 C		25 CD	25 A	
Xitavo 4522E	E3	61 F-H			35 C			24 EF		
Perdue Agribusiness P41MO21	Conv	56 GH			35 CD			21 J		
MO S19-10701	Conv	53 HI			37 B			22 I		
Perdue Agribusiness P45XP421	Conv	42 I			38 A			23 HI		
Average		71	73	76	34.2	34.0	33.9	23.8	23.8	24.1
Standard Error		5	4	4	0.3	0.2	0.3	0.1	0.3	0.2
L.S.D..05		13	N.S.	N.S.	0.7	0.4	0.6	0.4	0.2	0.4
C.V.		11	11	14	1	1	2	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.

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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

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

Table A-10-c. Mean[†] yield and quality of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Seed Quality[§§, T] (1-5)	Purple Stain[¶¶] (1-5)	Leaf Holding[||] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 42-A6E3S	E3	105 A	2 G	1.3 FG	0 E	1.7 EF	2.2 A	1.5 A	1.2 A
NK 44-Q5E3S	E3	81 B	3 FG	1.7 E-G	1 E	2.7 D-F	1.7 A-C	1.2 AB	1.0 A
Innvictis B5013E	E3	80 BC	5 FG	2.3 C-G	1 E	3.0 C-F	1.5 A-C	1.2 AB	1.0 A
AsGrow AG45XF3	XF	78 B-D	13 E-G	3.0 B-E	4 DE	5.3 B	1.0 D	1.0 B	1.2 A
Xitavo 4364E	E3	77 B-D	2 G	2.3 C-G	1 E	7.3 A	1.7 A-C	1.2 AB	1.3 A
Revere 4526XFS	XFS	77 B-E	20 C-F	3.3 B-D	8 DE	4.3 B-D	1.3 B-D	1.2 AB	1.0 A
Revere 4299XS	R2XS	77 B-E	23 C-E	3.0 B-E	9 DE	2.7 D-F	1.7 A-C	1.5 A	1.3 A
Xitavo 4084E	E3	74 B-E	7 E-G	2.0 D-G	1 E	1.7 EF	1.7 A-C	1.5 A	1.0 A
Revere 4237XFS	XFS	74 B-E	37 BC	3.7 BC	15 B-D	7.3 A	1.5 A-C	1.5 A	1.3 A
Innvictis A4503XF	XF	73 B-F	43 AB	4.3 AB	23 BC	4.7 BC	1.0 D	1.5 A	1.2 A
Dyna-Gro S45XF02	XF	71 B-F	5 FG	2.7 C-F	1 E	3.7 B-D	1.7 A-D	1.2 AB	1.2 A
Dyna-Gro S41EN72	E3	69 B-G	8 E-G	1.0 G	1 E	2.7 D-F	1.3 B-D	1.0 B	1.0 A
Perdue Agribusiness P41IL022	Conv	68 C-G	7 E-G	2.0 D-G	1 E	3.0 C-F	1.2 CD	1.5 A	1.2 A
Innvictis A4411XF	XF	67 C-G	58 A	3.7 BC	24 AB	4.3 B-D	1.3 B-D	1.3 AB	1.5 A
Don Mario DM45F23	XF	66 D-H	20 C-F	4.3 AB	10 DE	1.3 F	1.0 D	1.2 AB	1.2 A
Asgrow AG43XF2	XF	64 E-H	13 E-G	3.0 B-E	5 DE	7.3 A	1.7 A-C	1.3 AB	1.0 A
Xitavo 4522E	E3	61 F-H	2 G	1.3 FG	0 E	4.0 B-D	2.0 AB	1.2 AB	1.0 A
Perdue Agribusiness P41MO21	Conv	56 GH	33 B-D	3.0 B-E	11 C-E	3.3 C-E	1.2 CD	1.3 AB	1.0 A
MO S19-10701	Conv	53 HI	17 D-G	4.3 AB	8 DE	2.7 D-F	1.0 D	1.0 B	1.5 A
Perdue Agribusiness P45XP421	Conv	42 I	58 A	5.3 A	35 A	1.7 EF	1.7 A-C	1.0 B	1.8 A
Average		71	19	2.9	8	3.7	1.5	1.3	1.2
Standard Error		5	6	0.6	4	0.7	0.2	0.1	0.2
L.S.D.₀₅		13	18	1.6	12	2.0	Sig.	0.3	N.S.
C.V.		11	-	-	-	-	-	-	-

† 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
§§ Seed quality was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no shriveled or damaged seed.

Table A-11-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[∥] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	93 A			13 BC			39 B-D			1.2 BC			141 A-C		
Dyna-Gro S41EN72	E3	81 B	65 A	65 A	13 C	12 A	13 A	40 A-D	34 BC	33 A	1.0 C	1.0 A	1.1 A	139 D-F	138 B	137 B
Dyna-Gro S45XF02	XF	76 BC	62 A		13 BC	12 A		38 C-E	33 C		1.0 C	1.0 A		140 B-D	140 A	
Xitavo 4522E	E3	74 B-D			13 C			35 E-G			1.0 C			141 A-C		
NK 44-Q5E3S	E3	72 B-D	58 AB		13 C	12 A		35 E-G	30 D		1.2 BC	1.1 A		141 A-C	139 A	
AsGrow AG45XF3	XF	72 B-D			13 C			43 A			1.0 C			141 A-C		
Revere 4526XFS	XFS	71 B-D	61 A		14 B	12 A		42 AB	38 A		1.0 C	1.0 A		141 A-C	140 A	
Revere 4237XFS	XFS	70 C-E			13 BC			37 D-F			1.0 C			138 FG		
Perdue Agribusiness P41IL022	Conv	69 C-E			13 BC			37 D-F			1.3 A-C			139 EF		
Xitavo 4364E	E3	69 C-E			13 BC			37 D-F			1.2 BC			137 G		
Asgrow AG43XF2	XF	68 C-E	52 B		13 BC	12 A		41 A-C	36 A-C		1.0 C	1.0 A		141 A-C	140 A	
Innvictis B5013E	E3	67 C-E			13 BC			41 A-C			1.2 BC			141 A-C		
Innvictis A4503XF	XF	66 C-E			13 C			38 C-E			1.0 C			138 FG		
Revere 4299XS	R2XS	66 C-E	59 AB	61 A	13 C	12 A	13 A	40 A-D	36 AB	35 A	1.0 C	1.0 A	1.0 A	140 C-E	140 A	139 A
Don Mario DM45F23	XF	65 DE			13 BC			38 C-E			1.3 A-C			141 A-C		
Xitavo 4084E	E3	64 DE			13 BC			38 C-E			1.5 A-C			137 G		
Innvictis A4411XF	XF	60 EF			13 BC			38 C-F			1.5 A-C			138 F		
Perdue Agribusiness P41MO21	Conv	52 FG			13 C			33 G			1.8 A			137 G		
MO S19-10701	Conv	49 G			13 C			43 A			1.7 AB			142 A		
Perdue Agribusiness P45XP421	Conv	37 H			14 A			34 FG			1.5 A-C			142 AB		
Average		67	60	63	13.1	12.3	13.0	38	35	34	1.2	1.0	1.0	140	139	138
Standard Error		4	13	7	0.2	0.8	0.9	3	5	3	0.2	0.0	0.0	1	1	1
L.S.D..05		11	8	N.S.	0.5	N.S.	N.S.	4	2	N.S.	0.5	N.S.	N.S.	2	2	1
C.V.		9	11	11	2	2	4	6	6	7	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-11-b. Mean[†] yield and agronomic traits of 30 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (1-9) 1 yr	Leaf Holding[ǁ] (1-5) 1 yr
NK 42-A6E3S	E3	93 A	3 D	1.0 E	0 D	1.0 F	1.0
Dyna-Gro S41EN72	E3	81 B	17 CD	1.7 DE	4 CD	2.3 C-F	1.0
Dyna-Gro S45XF02	XF	76 BC	3 D	1.0 E	0 D	1.3 EF	1.0
Xitavo 4522E	E3	74 B-D	8 D	1.0 E	1 CD	3.7 B-D	1.0
NK 44-Q5E3S	E3	72 B-D	0 D	1.0 E	0 D	1.0 F	1.0
AsGrow AG45XF3	XF	72 B-D	5 D	2.3 C-E	2 CD	6.3 A	1.0
Revere 4526XFS	XFS	71 B-D	7 D	2.7 B-D	3 CD	6.7 A	1.0
Revere 4237XFS	XFS	70 C-E	18 B-D	2.3 C-E	8 B-D	6.0 A	1.0
Perdue Agribusiness P41IL022	Conv	69 C-E	3 D	1.0 E	0 D	2.7 C-F	1.0
Xitavo 4364E	E3	69 C-E	0 D	1.0 E	0 D	5.3 AB	1.0
Asgrow AG43XF2	XF	68 C-E	7 D	2.0 DE	2 CD	5.0 AB	1.0
Innvictis B5013E	E3	67 C-E	12 D	1.0 E	1 CD	4.0 BC	1.0
Innvictis A4503XF	XF	66 C-E	37 A-C	3.7 A-C	15 BC	2.7 C-F	1.0
Revere 4299XS	R2XS	66 C-E	5 D	1.7 DE	1 CD	3.0 C-E	1.0
Don Mario DM45F23	XF	65 DE	45 A	3.7 A-C	20 AB	1.3 EF	1.0
Xitavo 4084E	E3	64 DE	2 D	1.3 DE	0 D	1.0 F	1.0
Innvictis A4411XF	XF	60 EF	38 A-C	4.3 A	21 AB	4.0 BC	1.0
Perdue Agribusiness P41MO21	Conv	52 FG	12 D	1.3 DE	2 CD	2.7 C-F	1.0
MO S19-10701	Conv	49 G	42 AB	4.0 AB	21 AB	2.0 D-F	1.0
Perdue Agribusiness P45XP421	Conv	37 H	58 A	4.3 A	30 A	1.0 F	1.0
Average		67	16	2.1	7	3.2	1.0
Standard Error		4	10	0.5	5	0.6	0.0
L.S.D.₀₅		11	25	1.3	14	1.8	N.E.
C.V.		9	-	-	-	-	-

† 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

ǁ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-12-a. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	89 A			13 B-G			37 D-G			1.0			141 A-D		
Dyna-Gro S41EN72	E3	84 AB	65 A	55 A	12 FG	12 A	13 A	41 A-E	34 B	30 A	1.0	1.0	1.0	141 B-E	138 A	135 A
Revere 4299XS	R2XS	81 A-C	61 A	55 A	13 B-G	12 A	13 A	42 AB	37 A	32 A	1.0	1.0	1.0	141 A-D	138 A	136 A
NK 44-Q5E3S	E3	79 A-C	57 A		13 B	12 A		32 H	27 C		1.0	1.0		141 B-E	140 A	
Xitavo 4522E	E3	79 A-D			13 E-G			37 D-G			1.0			141 A-D		
Dyna-Gro S45XF02	XF	79 A-D	65 A		13 B-E	13 A		39 B-F	34 B		1.0	1.0		140 C-E	140 A	
Innvictis B5013E	E3	79 A-D			13 C-G			42 AB			1.0			142 A-C		
Innvictis A4411XF	XF	77 B-D			13 B-D			38 C-G			1.0			141 A-D		
Innvictis A4503XF	XF	77 B-D			12 G			36 FG			1.0			140 DE		
Asgrow AG43XF2	XF	76 B-D	57 A		13 B-F	12 A		40 B-E	35 AB		1.0	1.0		141 B-E	138 A	
Xitavo 4084E	E3	76 B-D			13 B			36 FG			1.0			137 G		
Perdue Agribusiness P41IL022	Conv	76 B-E			13 D-G			37 E-G			1.0			139 EF		
AsGrow AG45XF3	XF	75 B-E			13 B-D			41 A-C			1.0			141 B-E		
Xitavo 4364E	E3	75 B-E			13 B-G			35 GH			1.0			138 FG		
Don Mario DM45F23	XF	74 B-E			13 B			38 C-G			1.0			141 A-D		
Revere 4237XFS	XFS	71 C-F			13 B-G			35 F-H			1.0			136 G		
Revere 4526XFS	XFS	69 D-F	58 A		13 BC	12 A		41 A-D	36 AB		1.0	1.0		140 DE	140 A	
MO S19-10701	Conv	66 E-G			13 B-G			44 A			1.5			142 AB		
Perdue Agribusiness P41MO21	Conv	63 FG			13 B-G			40 B-E			1.3			136 G		
Perdue Agribusiness P45XP421	Conv	58 G			14 A			42 AB			1.2			143 A		
Average		75	61	55	12.7	12.3	12.7	39	34	31	1.1	1.0	1.0	140	139	136
Standard Error		3	18	14	0.1	0.4	0.6	1	5	6	0.0	0.0	0.0	1	2	3
L.S.D..05		10	N.S.	N.S.	0.2	N.S.	N.S.	4	2	N.S.	N.E.	N.E.	N.E.	2	N.S.	N.S.
C.V.		8	10	12	1	2	3	6	6	10	-	-	-	1	1	0

† 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 signficant 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 30.

* 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 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 A-12-b. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac) 1 yr	SDS DI[††,T] (%) 1 yr	SDS DS[††,T] (1-9) 1 yr	SDS DX[††,T] (DI x DS/9) 1 yr	Frogeye[‡‡,T] (%) 1 yr	Leaf Holding[||] (1-5) 1 yr
NK 42-A6E3S	E3	89 A	5 A	5.0 E	1 A-C	1.3 FG	1.0
Dyna-Gro S41EN72	E3	84 AB	8 A	8.3 E	1 AB	1.0 G	1.0
Revere 4299XS	R2XS	81 A-C	3 A	c B-E	1 A-C	3.0 B-E	1.0
NK 44-Q5E3S	E3	79 A-C	5 A	5.0 E	1 AB	1.0 G	1.0
Xitavo 4522E	E3	79 A-D	10 A	10.0 DE	2 BC	1.3 FG	1.0
Dyna-Gro S45XF02	XF	79 A-D	5 A	5.0 E	1 AB	1.3 FG	1.0
Innvictis B5013E	E3	79 A-D	0 A	0.0 E	0 C	4.0 A-C	1.0
Innvictis A4411XF	XF	77 B-D	8 A	8.3 A-D	2 A-C	3.7 A-D	1.0
Innvictis A4503XF	XF	77 B-D	43 A	43.3 A	14 A	2.0 D-G	1.0
Asgrow AG43XF2	XF	76 B-D	2 A	1.7 DE	0 BC	3.7 A-D	1.0
Xitavo 4084E	E3	76 B-D	2 A	1.7 E	0 BC	2.7 D-G	1.0
Perdue Agribusiness P41IL022	Conv	76 B-E	3 A	3.3 E	0 BC	2.7 C-F	1.0
AsGrow AG45XF3	XF	75 B-E	2 A	1.7 C-E	1 BC	5.3 AB	1.0
Xitavo 4364E	E3	75 B-E	0 A	0.0 E	0 C	5.3 A-C	1.0
Don Mario DM45F23	XF	74 B-E	27 A	26.7 AB	9 A	1.7 E-G	1.0
Revere 4237XFS	XFS	71 C-F	10 A	10.0 B-E	2 A-C	5.3 AB	1.0
Revere 4526XFS	XFS	69 D-F	2 A	1.7 E	0 BC	6.0 A	1.0
MO S19-10701	Conv	66 E-G	10 A	10.0 DE	2 A-C	1.3 FG	1.0
Perdue Agribusiness P41MO21	Conv	63 FG	8 A	8.3 C-E	2 AB	1.7 E-G	1.0
Perdue Agribusiness P45XP421	Conv	58 G	30 A	30.0 A-C	15 AB	1.3 FG	1.0
Average		75	9	1.5	3	2.8	1.0
Standard Error		3	7	0.4	3	0.7	0.0
L.S.D..05		10	N.S.	Sig.	Sig.	Sig.	N.E.
C.V.		8	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-13-a. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	83 A			13 BC			34 A-F			1.0			144 AB		
Xitavo 4084E	E3	71 B			12 E-G			33 A-F			1.0			138 FG		
AsGrow AG45XF3	XF	70 B			13 BC			35 A-C			1.0			144 AB		
Revere 4237XFS	XFS	70 BC			13 B-E			34 A-D			1.0			138 FG		
Dyna-Gro S41EN72	E3	70 B-D	56 A	58 A	12 G	13 A	13 A	31 C-G	28 CD	29 B	1.0	1.0	1.2	141 CD	137 C	139 B
Revere 4299XS	R2XS	70 B-D	55 A	59 A	12 B-F	13 A	13 A	34 A-F	31 AB	31 A	1.0	1.0	1.2	143 A-C	141 B	143 A
NK 44-Q5E3S	E3	70 B-D	56 A		12 FG	13 A		30 E-G	27 D		1.0	1.0		144 AB	142 AB	
Innvictis A4503XF	XF	69 B-D			12 D-G			34 A-F			1.0			140 DE		
Xitavo 4522E	E3	69 B-D			12 B-F			31 D-G			1.0			143 BC		
Xitavo 4364E	E3	68 B-D			12 B-F			32 B-G			1.0			139 EF		
Innvictis B5013E	E3	67 B-D			13 BC			37 A			1.0			143 AB		
Asgrow AG43XF2	XF	67 B-D	52 A		13 B-D	13 A		32 B-F	29 BC		1.0	1.0		144 AB	142 AB	
Don Mario DM45F23	XF	66 B-D			12 C-F			33 A-F			1.0			141 DE		
Innvictis A4411XF	XF	66 B-D			12 B-F			34 A-E			1.0		1.0	141 DE		
Perdue Agribusiness P41IL022	Conv	64 B-D			13 B			30 FG			1.0			139 EF		
Revere 4526XFS	XFS	63 CD	59 A		12 C-F	13 A		36 AB	33 A		1.0	1.0		144 AB	142 AB	
Dyna-Gro S45XF02	XF	63 D	53 A		13 BC	13 A		34 A-F	30 BC		1.0	1.0		145 A	143 A	
Perdue Agribusiness P41MO21	Conv	56 E			12 B-F			31 C-G			1.0			137 G		
MO S19-10701	Conv	52 E			12 B-F			32 B-G			1.3			143 A-C		
Perdue Agribusiness P45XP421	Conv	50 E			15 A			28 G			1.0			143 BC		
Average		66	55	58	12.5	13.0	13.4	33	30	30	1.0	1.0	1.1	142	141	141
Standard Error		3	12	9	0.1	0.7	0.6	2	3	2	0.0	0.0	0.0	1	3	3
L.S.D..05		7	N.S.	N.S.	0.4	N.S.	N.S.	4	2	1	N.E.	N.E.	N.E.	2	2	2
C.V.		6	11	11	2	4	4	8	6	4	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-13-b. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 42-A6E3S	E3	83 A	0	1.0	0	1.0 F	1.0 C
Xitavo 4084E	E3	71 B	0	1.0	0	1.0 F	1.2 BC
AsGrow AG45XF3	XF	70 B	0	1.0	0	5.7 A	1.0 C
Revere 4237XFS	XFS	70 BC	0	1.0	0	4.0 BC	1.0 C
Dyna-Gro S41EN72	E3	70 B-D	0	1.0	0	1.0 F	1.2 BC
Revere 4299XS	R2XS	70 B-D	0	1.0	0	1.7 EF	1.0 C
NK 44-Q5E3S	E3	70 B-D	0	1.0	0	1.0 F	1.0 C
Innvictis A4503XF	XF	69 B-D	0	1.0	0	2.0 D-F	1.0 C
Xitavo 4522E	E3	69 B-D	0	1.0	0	3.3 B-D	1.2 BC
Xitavo 4364E	E3	68 B-D	0	1.0	0	3.3 B-D	1.0 C
Innvictis B5013E	E3	67 B-D	0	1.0	0	4.7 AB	1.0 C
Asgrow AG43XF2	XF	67 B-D	0	1.0	0	4.0 BC	1.0 C
Don Mario DM45F23	XF	66 B-D	0	1.0	0	1.3 EF	1.2 BC
Innvictis A4411XF	XF	66 B-D	0	1.0	0	3.7 BC	1.5 AB
Perdue Agribusiness P41IL022	Conv	64 B-D	0	1.0	0	2.7 C-E	1.0 C
Revere 4526XFS	XFS	63 CD	0	1.0	0	5.7 A	1.0 C
Dyna-Gro S45XF02	XF	63 D	0	1.0	0	2.0 D-F	1.0 C
Perdue Agribusiness P41MO21	Conv	56 E	0	1.0	0	2.7 C-E	1.0 C
MO S19-10701	Conv	52 E	0	1.0	0	2.0 D-F	1.7 A
Perdue Agribusiness P45XP421	Conv	50 E	0	1.0	0	1.0 F	1.2 BC
Average		66	0	1.0	0	2.7	1.1
Standard Error		3	0	0.0	0	0.6	0.1
L.S.D.₀₅		7	N.E.	N.E.	N.E.	1.6	0.4
C.V.		6	-	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-14-a. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG45XF3	XF	84 A			12 A			46 A-C			1.0 E			138 C-E		
NK 42-A6E3S	E3	74 B			12 A			46 A-D			1.0 E			137 C-E		
Revere 4526XFS	XFS	73 BC	72 A		13 A	11 A		48 AB	48 A		1.3 DE	1.5 B		142 A-E	140 A	
Revere 4299XS	R2XS	73 B-D	70 AB	68 A	13 A	11 A	12 A	49 A	47 A	44 A	1.7 C-E	1.3 B	1.3 B	141 A-E	140 A	138 A
Innvictis A4503XF	XF	69 B-E			12 A			43 C-G			1.3 DE			140 A-E		
Xitavo 4522E	E3	68 B-E			13 A			42 D-G			1.0 E			140 A-E		
Revere 4237XFS	XFS	68 B-E			12 A			47 AB			1.0 E			135 E		
Asgrow AG43XF2	XF	67 B-E	65 BC		12 A	11 A		45 A-E	44 BC		1.3 DE	1.2 B		135 E	135 BC	
Innvictis B5013E	E3	66 B-E			14 A			48 AB			1.3 DE			143 A-E		
Innvictis A4411XF	XF	65 B-F			13 A			46 A-D			2.3 B-D			144 A-D		
NK 44-Q5E3S	E3	65 C-F	67 A-C		13 A	11 A		41 G	39 D		1.7 C-E	1.8 AB		136 DE	136 BC	
Dyna-Gro S45XF02	XF	64 D-G	62 C		13 A	11 A		45 B-F	46 AB		1.7 C-E	1.8 AB		141 A-E	138 AB	
Xitavo 4364E	E3	64 E-G			12 A			41 FG			2.7 A-C			139 B-E		
Don Mario DM45F23	XF	63 E-G			13 A			45 A-E			1.7 C-E			148 A		
Dyna-Gro S41EN72	E3	61 E-H	61 C	63 A	13 A	11 A	12 A	42 E-G	43 C	41 A	2.3 B-D	2.3 A	2.6 A	135 E	134 C	135 B
MO S19-10701	Conv	57 F-I			13 A			45 A-E			2.0 B-E			145 A-C		
Perdue Agribusiness P41MO21	Conv	57 G-J			13 A			46 A-D			3.0 AB			135 E		
Xitavo 4084E	E3	54 H-J			14 A			41 FG			2.7 A-C			135 E		
Perdue Agribusiness P45XP421	Conv	51 IJ			14 A			39 G			2.7 A-C			147 AB		
Perdue Agribusiness P41IL022	Conv	48 J			12 A			40 G			3.7 A			135 E		
Average		65	66	66	12.8	11.1	11.6	44	44	43	1.9	1.7	1.9	140	137	137
Standard Error		4	2	2	0.4	1.8	1.1	1	1	2	0.6	0.3	0.2	3	2	1
L.S.D..05		9	6	N.S.	N.S.	N.S.	N.S.	4	3	N.S.	1.2	0.7	0.5	8	3	3
C.V.		8	8	9	5	7	8	5	5	6	40	34	24	3	2	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.
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 30.
* 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 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 A-14-b. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††, T] (%) 1 yr	SDS DS[††, T] (1-9) 1 yr	SDS DX[††, T] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
AsGrow AG45XF3	XF	84 A	0 C	1.0 C	0 D	1.7 A
NK 42-A6E3S	E3	74 B	2 BC	1.0 C	0 CD	1.0 A
Revere 4526XFS	XFS	73 BC	0 C	1.0 C	0 D	3.0 A
Revere 4299XS	R2XS	73 B-D	5 A-C	1.3 BC	1 A-D	1.3 A
Innvictis A4503XF	XF	69 B-E	7 BC	1.3 BC	1 B-D	1.7 A
Xitavo 4522E	E3	68 B-E	5 A-C	1.0 C	1 A-D	1.0 A
Revere 4237XFS	XFS	68 B-E	7 AB	1.7 BC	1 A-C	1.3 A
Asgrow AG43XF2	XF	67 B-E	3 A-C	2.0 BC	1 A-D	2.0 A
Innvictis B5013E	E3	66 B-E	2 BC	1.3 BC	0 CD	1.7 A
Innvictis A4411XF	XF	65 B-F	8 AB	2.0 B	2 AB	1.3 A
NK 44-Q5E3S	E3	65 C-F	3 BC	1.0 C	0 CD	1.7 A
Dyna-Gro S45XF02	XF	64 D-G	0 C	1.0 C	0 D	1.0 A
Xitavo 4364E	E3	64 E-G	2 BC	1.3 BC	0 CD	2.3 A
Don Mario DM45F23	XF	63 E-G	7 A-C	1.7 BC	1 A-D	1.7 A
Dyna-Gro S41EN72	E3	61 E-H	0 C	1.0 C	0 D	1.0 A
MO S19-10701	Conv	57 F-I	25 AB	2.7 AB	11 A-C	2.0 A
Perdue Agribusiness P41MO21	Conv	57 G-J	3 A-C	1.7 BC	1 A-D	1.3 A
Xitavo 4084E	E3	54 H-J	0 C	1.0 C	0 D	1.0 A
Perdue Agribusiness P45XP421	Conv	51 IJ	20 A	4.0 A	9 A	1.0 A
Perdue Agribusiness P41IL022	Conv	48 J	2 BC	2.0 BC	1 B-D	1.3 A
Average		65	5	1.6	2	1.5
Standard Error		4	6	0.4	2	0.5
L.S.D..05		9	Sig.	Sig.	Sig.	N.S.
C.V.		8	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-15-a. Mean† yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Revere 4237XFS	XFS	74 A			13 BC			46 B			1.0 E			134 E		
NK 42-A6E3S	E3	74 AB			13 B			44 B-D			1.2 E			134 E		
AsGrow AG45XF3	XF	72 A-C			13 CD			44 B-D			1.0 E			138 B-E		
Xitavo 4522E	E3	70 A-D			13 B-D			39 G-I			1.0 E			138 B-E		
Innvictis A4503XF	XF	69 A-D			12 D			42 C-F			1.0 E			134 E		
Asgrow AG43XF2	XF	69 A-D	60 A		13 BC	11 A		44 B-D	38 CD		1.0 E	1.0 A		135 DE	134 A	
Revere 4299XS	R2XS	68 A-D	59 A	62 A	13 B-D	11 A	11 A	49 A	42 A	42 A	1.0 E	1.0 A	1.1 A	138 B-E	137 A	136 A
NK 44-Q5E3S	E3	68 A-D	57 A		12 CD	11 A		38 HI	34 E		1.0 E	1.0 A		134 E	134 A	
Revere 4526XFS	XFS	67 A-D	66 A		12 CD	11 A		46 B	41 AB		1.0 E	1.0 A		136 C-E	136 A	
Dyna-Gro S45XF02	XF	66 A-D	62 A		13 BC	11 A		43 C-E	40 BC		1.0 E	1.0 A		134 E	134 A	
Dyna-Gro S41EN72	E3	66 A-D	59 A	59 A	12 D	11 A	11 A	42 C-F	37 D	37 B	1.3 DE	1.2 A	1.6 A	138 B-E	135 A	135 B
Xitavo 4084E	E3	65 B-D			12 CD			40 E-H			1.3 DE			133 E		
Xitavo 4364E	E3	65 B-D			12 CD			39 F-H			1.0 E			134 E		
Innvictis A4411XF	XF	64 CD			13 B-D			45 BC			1.7 CD			141 BC		
Innvictis B5013E	E3	62 DE			12 CD			46 B			1.0 E			141 B-D		
Don Mario DM45F23	XF	62 DE			13 BC			42 D-G			2.0 BC			143 AB		
MO S19-10701	Conv	55 E			13 BC			49 A			2.3 AB			148 A		
Perdue Agribusiness P41MO21	Conv	54 E			13 B-D			39 F-H			2.7 A			136 C-E		
Perdue Agribusiness P41IL022	Conv	54 E			12 CD			38 HI			1.0 E			136 C-E		
Perdue Agribusiness P45XP421	Conv	39 F			14 A			36 I			1.0 E			135 DE		
Average		64	60	61	12.7	10.8	11.2	43	39	40	1.3	1.0	1.3	137	135	136
Standard Error		3	7	5	0.2	1.7	1.0	1	5	3	0.2	0.1	0.3	2	1	1
L.S.D..05		9	N.S.	N.S.	0.6	N.S.	N.S.	3	2	2	0.5	N.S.	N.S.	6	N.S.	1
C.V.		8	12	9	3	4	6	4	5	5	-	-	-	3	2	1

† 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 signficant 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 30.
* 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 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 A-15-b. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
Revere 4237XFS	XFS	74 A	20 C	1.7 CD	4 C	2.0 A
NK 42-A6E3S	E3	74 AB	7 C-E	1.0 D	1 C	1.0 A
AsGrow AG45XF3	XF	72 A-C	3 E	1.3 D	1 C	1.3 A
Xitavo 4522E	E3	70 A-D	5 DE	1.3 D	1 C	1.0 A
Innvictis A4503XF	XF	69 A-D	43 B	2.7 BC	14 B	1.7 A
Asgrow AG43XF2	XF	69 A-D	8 C-E	1.3 D	1 C	1.0 A
Revere 4299XS	R2XS	68 A-D	7 C-E	1.0 D	1 C	1.0 A
NK 44-Q5E3S	E3	68 A-D	5 DE	1.3 D	1 C	1.0 A
Revere 4526XFS	XFS	67 A-D	8 C-E	2.0 B-D	2 C	2.0 A
Dyna-Gro S45XF02	XF	66 A-D	18 CD	2.0 B-D	5 C	1.3 A
Dyna-Gro S41EN72	E3	66 A-D	13 C-E	1.3 D	2 C	1.0 A
Xitavo 4084E	E3	65 B-D	3 E	1.7 CD	1 C	2.0 A
Xitavo 4364E	E3	65 B-D	7 C-E	1.7 CD	2 C	2.3 A
Innvictis A4411XF	XF	64 CD	13 C-E	1.3 D	2 C	1.7 A
Innvictis B5013E	E3	62 DE	0 E	1.0 D	0 C	1.7 A
Don Mario DM45F23	XF	62 DE	10 C-E	1.7 CD	2 C	1.0 A
MO S19-10701	Conv	55 E	47 B	3.0 B	16 B	1.0 A
Perdue Agribusiness P41MO21	Conv	54 E	2 E	1.0 D	0 C	1.3 A
Perdue Agribusiness P41IL022	Conv	54 E	18 CD	2.0 B-D	5 C	1.3 A
Perdue Agribusiness P45XP421	Conv	39 F	87 A	5.0 A	48 A	1.0 A
Average		64	16	1.8	5	1.4
Standard Error		3	6	0.4	2	0.3
L.S.D.₀₅		9	15	1.1	6	N.S.
C.V.		8	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-16-a. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	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	81 A			15 A-E			42 A-D			1.0 D			137 A-C		
Dyna-Gro S45XF02	XF	69 B	62 A		16 A-C	14 A		42 A-E	37 BC		1.0 D	1.0 B		140 A	139 A	
Dyna-Gro S41EN72	E3	68 B	57 A	60 A	14 EF	14 A	13 B	40 C-F	36 CD	36 A	2.3 B	1.8 A	1.6 A	131 G	130 B	129 A
Revere 4299XS	R2XS	65 BC	59 A	62 A	16 A-C	15 A	14 A	40 C-G	39 AB	38 A	1.0 D	1.2 B	1.2 A	133 D-G	135 A	133 A
Don Mario DM45F23	XF	65 BC			16 AB			40 C-G			2.3 B			140 A		
Innvictis A4503XF	XF	65 BC			14 EF			38 F-H			1.0 D			133 E-G		
Xitavo 4522E	E3	64 B-D			15 A-F			40 C-G			1.0 D			134 D-F		
Asgrow AG43XF2	XF	63 B-D	53 A		14 D-F	14 A		41 B-F	38 BC		1.0 D	1.0 B		135 C-E	136 A	
NK 44-Q5E3S	E3	62 B-E	55 A		15 A-F	14 A		35 H	33 D		1.0 D	1.0 B		140 A	137 A	
AsGrow AG45XF3	XF	62 B-E			14 D-F			43 A-C			1.0 D			138 AB		
Revere 4237XFS	XFS	60 B-E			15 A-E			39 D-G			1.3 CD			127 H		
Revere 4526XFS	XFS	59 C-E	57 A		15 A-D	14 A		45 A	41 A		1.0 D	1.0 B		136 B-D	136 A	
Innvictis A4411XF	XF	58 C-E			15 A-E			38 F-H			1.0 D			132 FG		
Xitavo 4084E	E3	57 C-E			16 A			38 E-H			3.7 A			123 I		
Xitavo 4364E	E3	57 C-E			15 A-D			39 C-G			1.0 D			132 FG		
Innvictis B5013E	E3	56 D-F			14 D-F			44 AB			1.3 CD			140 A		
MO S19-10701	Conv	54 EF			15 B-F			41 B-F			2.0 BC			134 D-F		
Perdue Agribusiness P41IL022	Conv	48 FG			14 F			37 GH			3.7 A			133 E-G		
Perdue Agribusiness P45XP421	Conv	43 GH			15 A-F			30 I			1.7 B-D			140 A		
Perdue Agribusiness P41MO21	Conv	38 H			15 C-F			38 F-H			4.3 A			133 D-G		
Average		60	57	61	14.9	14.1	13.5	39	37	37	1.7	1.2	1.4	135	136	131
Standard Error		4	8	6	0.4	1.0	1.0	1	3	2	0.4	0.2	0.3	1	1	2
L.S.D..05		9	N.S.	N.S.	1.2	N.S.	0.7	3	3	N.S.	0.9	0.6	N.S.	3	4	N.S.
C.V.		9	12	9	5	5	5	5	6	7	-	-	-	1	3	3

† 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 signficant 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 30.

* 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 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 A-16-b. Mean[†] yield and agronomic traits of 20 Maturity Group IV Early (4.0 - 4.4) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††, T] (%)	SDS DS[††] (1-9)	SDS DX[††, T] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 42-A6E3S	E3	81 A	17 A	1.7 A	5 A	4.0 C-F	1.3
Dyna-Gro S45XF02	XF	69 B	18 A	3.3 A	6 A	3.7 D-F	1.0
Dyna-Gro S41EN72	E3	68 B	20 A	1.3 A	3 A	2.7 F	1.0
Revere 4299XS	R2XS	65 BC	22 A	1.7 A	4 A	3.3 EF	1.0
Don Mario DM45F23	XF	65 BC	35 A	2.7 A	11 A	2.7 F	1.0
Innvictis A4503XF	XF	65 BC	42 A	3.3 A	14 A	5.0 B-F	1.0
Xitavo 4522E	E3	64 B-D	17 A	2.0 A	5 A	3.0 F	1.0
Asgrow AG43XF2	XF	63 B-D	27 A	2.0 A	6 A	5.7 B-E	1.0
NK 44-Q5E3S	E3	62 B-E	3 A	1.7 A	1 A	2.7 F	1.0
AsGrow AG45XF3	XF	62 B-E	2 A	2.0 A	1 A	6.7 AB	1.0
Revere 4237XFS	XFS	60 B-E	12 A	2.0 A	3 A	5.7 B-E	1.0
Revere 4526XFS	XFS	59 C-E	2 A	2.3 A	1 A	8.3 A	1.0
Innvictis A4411XF	XF	58 C-E	28 A	2.3 A	9 A	5.0 B-F	1.0
Xitavo 4084E	E3	57 C-E	20 A	1.7 A	5 A	2.7 F	1.7
Xitavo 4364E	E3	57 C-E	23 A	1.7 A	5 A	6.0 A-D	1.0
Innvictis B5013E	E3	56 D-F	0 A	1.0 A	0 A	6.3 A-C	1.3
MO S19-10701	Conv	54 EF	17 A	2.3 A	6 A	2.7 F	1.7
Perdue Agribusiness P41IL022	Conv	48 FG	22 A	1.3 A	4 A	4.3 B-F	1.0
Perdue Agribusiness P45XP421	Conv	43 GH	52 A	4.7 A	29 A	2.7 F	2.3
Perdue Agribusiness P41MO21	Conv	38 H	25 A	1.3 A	6 A	5.0 B-F	1.3
Average		60	20	2.1	6	4.4	1.2
Standard Error		4	12	0.7	6	0.9	0.0
L.S.D.₀₅		9	N.S.	N.S.	N.S.	2.5	N.E.
C.V.		9	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-17-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG49XF3	XF	119 A			8.1 B-E			49 A			2.3 E-G			152 A		
Progeny 4691XFS*	XFS	118 AB	89 A		8.1 B-E	10.8 AB		48 AB	46 AB		2.3 E-G	1.7 B-D		152 A	143 A	
USG 7461XFS**	XFS	116 A-C	87 A	88 A	7.8 F-I	10.5 CD	10.8 C	48 A-D	45 A-D	44 A	2.5 EF	2.0 A	2.0 A	151 A	143 A	-
Don Mario DM48F53	XF	111 A-D			7.9 E-I			40 FG			2.3 E-G			153 A		
Revere 4795XS****	R2XS	111 A-E	82 A	82 A	8.0 C-G	10.8 AB	11.0 AB	48 AB	44 A-F	42 AB	2.2 F-H	1.6 CD	1.6 BC	155 A	145 A	-
Progeny 4775E3S	E3S	110 A-F	87 A		8.1 B-F	10.8 AB		48 A-C	46 A		2.5 EF	1.8 A-C		154 A	144 A	
Revere 4826XF*	XF	107 A-G	84 A		8.2 A-D	10.8 AB		45 B-E	43 C-F		2.0 GH	1.6 CD		155 A	144 A	
Revere 4727XF	XF	105 A-H	80 A		7.5 J	10.3 D		44 C-F	42 EF		1.8 H	1.4 D		155 A	144 A	
Progeny 4604XFS**	XFS	105 A-H	85 A	88 A	7.9 E-I	10.5 B-D	10.8 BC	48 A-D	45 A-E	44 A	2.5 EF	1.9 AB	2.0 A	152 A	143 A	-
Dyna-Gro S47XF23S	XFS	103 B-H	80 A		8.3 A-C	10.7 A-C		45 B-E	41 F		2.2 F-H	1.6 CD		157 A	145 A	
USG 7463XF	XF	103 B-H	82 A		8.0 B-G	10.6 A-D		46 A-E	44 A-F		2.2 F-H	1.6 CD		148 A	141 A	
USG 7496XTS**	R2XS	101 C-I	81 A	85 A	8.2 B-E	10.9 A	11.1 A	48 A-D	45 A-C	44 A	2.0 GH	1.7 B-D	1.9 AB	153 A	143 A	
Revere 4934XF	XF	101 C-I			8.2 A-D			40 FG			2.7 DE			157 A		
Progeny 4806XFS	XFS	101 D-I	79 A	79 A	7.7 H-J	10.4 CD	10.7 C	45 A-E	43 B-F	40 B	2.0 GH	1.5 D	1.4 C	151 A	143 A	-
Dyna-Gro S48EN73	E3	100 D-J	76 A		8.3 A-C	10.9 A		44 C-F	41 F		2.0 GH	1.5 D		151 A	142 A	
USG 7494ETS	E3S	100 D-J			8.2 A-D			47 A-D			2.3 E-G			153 A		
Progeny 4798XF	XF	100 D-J	80 A		8.0 D-H	10.5 B-D		43 E-G	41 F		2.7 DE	1.8 A-C		154 A	144 A	
Asgrow AG47XF2	XF	97 D-J	78 A		8.2 A-D	10.6 A-D		46 A-E	43 B-F		2.7 DE	1.8 A-C		154 A	144 A	
USG 7474XFS	XFS	96 E-J			8.2 A-D			44 D-G			2.0 GH			154 A		
AsGrow AG48XF3	XF	95 F-J			8.0 B-G			46 A-E			1.8 H			158 A		
Innvictis A4862XF	XF	95 F-J	76 A		8.1 B-F	10.7 A-C		45 A-E	42 D-F		2.7 DE	1.8 A-C		154 A	144 A	
Xitavo 4653E	E3	92 G-J			7.8 F-I			45 B-E			2.0 GH			151 A		
Innvictis B4903E	E3	92 G-J			7.8 G-J			43 E-G			2.3 E-G			152 A		
Revere 4731XF	XF	91 H-J			8.2 A-D			44 C-F			3.0 CD			154 A		
Dyna-Gro S49XF43S	XFS	91 H-J	78 A		8.0 C-G	10.5 B-D		40 G	38 G		2.0 GH	1.5 D		154 A	144 A	
Xitavo 4894E	E3	87 IJ			8.3 AB			44 B-E			2.2 F-H			150 A		
Innvictis B4603E	E3	85 J			7.7 IJ			45 A-E			3.3 C			155 A		
MO S18-17644	Conv	61 K			8.5 A			49 A			4.3 A			155 A		
Perdue Agribusiness P48MO21	Conv	56 K			8.0 C-G			46 A-E			3.8 B			159 A		
TN Exp TN18-4110b	Conv.	54 K			7.7 IJ			47 A-D			4.2 AB			159 A		
Average		97	81	84	8.0	10.6	10.9	45	43	43	2.5	1.7	1.8	154	143	-
Standard Error		5	23	14	0.1	2.6	1.6	1	3	2	0.2	0.6	0.3	3	10	-
L.S.D..05		16	N.S.	N.S.	0.3	0.3	0.2	4	3	3	0.5	0.3	0.3	N.S.	N.S.	-
C.V.		10	12	12	2	3	2	5	6	6	-	-	-	3	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.
C.V. is only reported for variables evaluated on a ratio scale.
L.S.D. values are given for ANOVA that were signficant 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 30.
* 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 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 A-17-b. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
AsGrow AG49XF3	XF	119 A	0	1.0	0	1.0	1.5
Progeny 4691XFS*	XFS	118 AB	0	1.0	0	1.3	1.5
USG 7461XFS**	XFS	116 A-C	0	1.0	0	1.0	1.5
Don Mario DM48F53	XF	111 A-D	0	1.0	0	1.0	1.5
Revere 4795XS****	R2XS	111 A-E	0	1.0	0	1.7	1.5
Progeny 4775E3S	E3S	110 A-F	3	1.3	1	1.0	1.7
Revere 4826XF*	XF	107 A-G	0	1.0	0	1.0	1.5
Revere 4727XF	XF	105 A-H	0	1.0	0	1.7	1.8
Progeny 4604XFS**	XFS	105 A-H	0	1.0	0	1.0	1.5
Dyna-Gro S47XF23S	XFS	103 B-H	0	1.0	0	1.7	1.5
USG 7463XF	XF	103 B-H	0	1.0	0	1.0	1.5
USG 7496XTS**	R2XS	101 C-I	0	1.0	0	1.0	1.5
Revere 4934XF	XF	101 C-I	0	1.0	0	1.0	1.5
Progeny 4806XFS	XFS	101 D-I	0	1.0	0	1.0	1.5
Dyna-Gro S48EN73	E3	100 D-J	0	1.0	0	1.0	1.5
USG 7494ETS	E3S	100 D-J	0	1.0	0	1.0	1.5
Progeny 4798XF	XF	100 D-J	2	1.3	0	1.0	1.5
Asgrow AG47XF2	XF	97 D-J	0	1.0	0	1.7	1.7
USG 7474XFS	XFS	96 E-J	0	1.0	0	1.0	1.5
AsGrow AG48XF3	XF	95 F-J	3	1.3	1	1.7	1.5
Innvictis A4862XF	XF	95 F-J	0	1.0	0	1.0	1.5
Xitavo 4653E	E3	92 G-J	0	1.0	0	1.0	1.7
Innvictis B4903E	E3	92 G-J	2	1.0	0	1.0	1.5
Revere 4731XF	XF	91 H-J	0	1.0	0	1.0	1.7
Dyna-Gro S49XF43S	XFS	91 H-J	0	1.0	0	1.0	1.5
Xitavo 4894E	E3	87 IJ	0	1.0	0	1.0	1.8
Innvictis B4603E	E3	85 J	0	1.0	0	1.0	1.7
MO S18-17644	Conv	61 K	0	1.0	0	1.0	1.5
Perdue Agribusiness P48MO21	Conv	56 K	0	1.0	0	2.0	1.8
TN Exp TN18-4110b	Conv.	54 K	2	1.0	0	1.0	2.0
Average		97	0	1.0	0	1.2	1.6
Standard Error		5	0	0.0	0	0.0	0.0
L.S.D.₀₅		16	N.E.	N.E.	N.E.	N.E.	N.E.
C.V.		10	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-18-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
USG 7474XFS	XFS	84 A			14 E-G			41 A-F			2.0 C-H			147 B-H		
AsGrow AG48XF3	XF	83 AB			14 B-G			43 A-D			2.7 A-F			147 A-G		
Revere 4727XF	XF	83 A-C	75 A		13 GH	12 FG		39 B-G	42 D-F		1.3 GH	1.4 E		142 IJ	143 C-E	
Dyna-Gro S47XF23S	XFS	83 A-C	73 AB		14 B-G	13 C-E		42 A-E	43 B-E		1.7 E-H	1.6 DE		147 A-G	143 B-D	
Revere 4795XS****	R2XS	78 A-D	73 AB	78 A	14 D-G	13 E-G	13 B	39 B-G	41 D-F	38 B	2.2 B-H	1.8 B-E	1.7 B	148 A-E	143 B-D	143 BC
USG 7496XTS**	R2XS	77 A-E	73 AB	77 A	14 B-F	14 A	14 A	45 A	47 A	43 A	2.2 B-H	2.2 A-E	1.9 AB	148 A-F	147 A	146 A
Progeny 4604XFS**	XFS	75 A-F	73 AB	74 A	14 E-G	13 D-F	13 AB	43 A-C	46 AB	43 A	3.2 A-C	2.5 A-C	2.3 A	146 C-H	142 D-F	141 C
USG 7461XFS**	XFS	75 A-F	70 A-D	75 A	14 D-G	13 D-F	13 B	37 F-H	42 D-F	39 B	2.2 B-H	1.9 A-E	1.8 B	144 F-J	143 C-E	141 BC
Xitavo 4894E	E3	75 A-F			14 B-G			42 A-E			1.8 D-H			146 C-H		
Revere 4826XF*	XF	74 A-G	72 A-C		14 B-G	13 DE		37 F-H	42 D-F		1.8 D-H	1.7 DE		147 B-G	142 D-F	
Dyna-Gro S48EN73	E3	73 B-H	67 B-E		14 B-G	13 DE		38 C-H	39 F		3.2 A-C	2.6 AB		151 A	146 AB	
USG 7494ETS	E3S	72 C-H			14 A-F			42 A-E			1.7 E-H			144 F-J		
Revere 4731XF	XF	71 D-H			15 A-C			38 C-H			2.8 A-E			141 J		
Dyna-Gro S49XF43S	XFS	69 D-I	67 B-E		14 A-F	13 B-D		38 E-H	39 F		3.5 A	2.7 A		149 A-D	146 A-C	
AsGrow AG49XF3	XF	68 D-I			14 B-G			43 A-D			1.7 E-H			150 AB		
Xitavo 4653E	E3	68 D-I			14 B-G			40 B-G			1.4 GH			141 J		
Revere 4934XF	XF	68 D-I			14 A-E			38 D-H			3.3 AB			145 D-I		
Asgrow AG47XF2	XF	68 D-I	67 B-E		15 A	14 AB		41 A-F	42 D-F		1.2 H	1.7 DE		141 J	139 G	
Progeny 4691XFS*	XFS	68 D-I	67 B-E		15 A-D	14 AB		43 AB	46 A		2.2 B-H	1.8 B-E		142 IJ	139 FG	
Progeny 4798XF	XF	66 E-J	67 B-E		13 H	12 G		36 G-I	40 EF		2.0 C-H	1.8 B-E		148 A-F	143 B-D	
Progeny 4775E3S	E3S	66 F-J	64 C-E		15 A-C	14 A-C		41 A-F	46 A-C		3.0 A-D	2.3 A-D		145 E-I	142 D-F	
Progeny 4806XFS	XFS	66 F-J	62 E	68 B	14 A-F	13 C-E	13 B	39 B-H	40 EF	38 B	2.2 B-H	1.7 DE	1.6 B	147 B-H	144 B-D	144 AB
USG 7463XF	XF	64 F-K	64 C-E		14 A-F	13 B-D		43 A-D	44 A-D		1.5 F-H	1.8 C-E		142 IJ	139 E-G	
Innvictis A4862XF	XF	63 G-K	63 DE		14 E-G	13 DE		41 A-F	43 C-E		1.5 F-H	1.7 DE		148 A-F	143 B-D	
Don Mario DM48F53	XF	62 H-K			14 B-G			38 C-H			2.2 B-H			143 H-J		
MO S18-17644	Conv	59 I-K			14 A-F			28 J			2.0 C-H			149 A-C		
Innvictis B4603E	E3	56 JK			14 C-G			34 HI			2.5 A-G			144 G-J		
Innvictis B4903E	E3	55 JK			14 B-G			39 B-G			2.3 A-G			149 A-E		
Perdue Agribusiness P48MO21	Conv	54 K			14 B-G			32 IJ			3.0 A-D			150 AB		
TN Exp TN18-4110b	Conv.	36 L			14 F-H			22 K			1.2 H			151 A		
Average		69	69	74	14.1	13.0	13.2	39	43	40	2.2	1.9	1.9	146	143	143
Standard Error		4	4	5	0.3	1.0	0.6	2	3	4	0.4	0.3	0.3	2	3	2
L.S.D..05		11	8	6	0.7	0.5	0.6	5	3	3	1.2	0.8	0.4	4	3	3
C.V.		10	10	8	3	3	5	8	7	7	-	-	-	2	2	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.
C.V. is only reported for variables evaluated on a ratio scale.
L.S.D. values are given for ANOVA that were signficant 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 30.
* 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 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 A-18-b. Mean[†] yield and quality of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Protein[¶] (%)			Oil[¶] (%)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
USG 7474XFS	XFS	84 A			34.2 A-G			24.0 B-H		
AsGrow AG48XF3	XF	83 AB			33.6 D-I			24.7 A-C		
Revere 4727XF	XF	83 A-C	75 A		33.7 C-H	33.5 DE		24.1 B-G	23.9 BC	
Dyna-Gro S47XF23S	XFS	83 A-C	73 AB		32.8 H-J	32.8 F		24.2 A-E	23.9 BC	
Revere 4795XS****	R2XS	78 A-D	73 AB	78 A	34.6 A-E	34.2 BC	34.2 B	23.6 D-J	23.5 D-F	23.6 AB
USG 7496XTS**	R2XS	77 A-E	73 AB	77 A	34.2 A-G	34.8 AB	35.1 A	23.5 E-J	23.0 G	23.1 C
Progeny 4604XFS**	XFS	75 A-F	73 AB	74 A	32.6 I-K	33.0 EF	33.1 CD	23.8 C-J	23.6 C-E	23.7 AB
USG 7461XFS**	XFS	75 A-F	70 A-D	75 A	33.6 C-I	33.5 DE	33.6 BC	23.7 D-J	23.6 C-F	23.5 B
Xitavo 4894E	E3	75 A-F			35.1 A			23.6 D-J		
Revere 4826XF*	XF	74 A-G	72 A-C		33.5 E-I	33.7 CD		23.8 D-J	23.7 CD	
Dyna-Gro S48EN73	E3	73 B-H	67 B-E		34.8 A-C	34.7 AB		23.3 F-J	23.2 E-G	
USG 7494ETS	E3S	72 C-H			34.3 A-G			23.8 D-J		
Revere 4731XF	XF	71 D-H			34.3 A-G			23.5 E-J		
Dyna-Gro S49XF43S	XFS	69 D-I	67 B-E		34.5 A-E	33.9 CD		24.4 A-D	24.5 A	
AsGrow AG49XF3	XF	68 D-I			33.8 C-H			23.2 IJ		
Xitavo 4653E	E3	68 D-I			33.8 C-H			23.8 D-J		
Revere 4934XF	XF	68 D-I			32.1 JK			24.8 AB		
Asgrow AG47XF2	XF	68 D-I	67 B-E		33.9 B-H	33.8 CD		23.9 B-I	23.9 BC	
Progeny 4691XFS*	XFS	68 D-I	67 B-E		34.5 A-F	34.3 BC		23.4 F-J	23.2 E-G	
Progeny 4798XF	XF	66 E-J	67 B-E		32.6 I-K	32.5 F		24.0 B-I	23.9 BC	
Progeny 4775E3S	E3S	66 F-J	64 C-E		35.1 A	35.2 A		23.2 H-J	22.9 G	
Progeny 4806XFS	XFS	66 F-J	62 E	68 B	32.0 JK	32.5 F	33.0 D	24.7 A-C	24.2 AB	24.0 A
USG 7463XF	XF	64 F-K	64 C-E		35.0 AB	34.7 AB		23.2 G-J	23.2 FG	
Innvictis A4862XF	XF	63 G-K	63 DE		33.4 F-I	33.9 CD		24.1 B-F	23.8 CD	
Don Mario DM48F53	XF	62 H-K			31.5 K			25.0 A		
MO S18-17644	Conv	59 I-K			33.1 G-J			23.2 F-J		
Innvictis B4603E	E3	56 JK			34.6 A-D			23.7 D-J		
Innvictis B4903E	E3	55 JK			35.2 A			23.0 J		
Perdue Agribusiness P48MO21	Conv	54 K			35.0 AB			21.1 K		
TN Exp TN18-4110b	Conv.	36 L			34.0 B-G			20.2 K		
Average		69	69	74	33.9	33.8	33.8	23.6	23.6	23.6
Standard Error		4	4	5	0.4	0.2	0.3	0.3	0.2	0.2
L.S.D..05		11	8	6	1.1	0.7	0.6	0.8	0.4	0.4
C.V.		10	10	8	2	2	2	2	2	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.

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

L.S.D. values are given for ANOVA that were signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

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

Table A-18-c. Mean[†] yield and quality of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††,T] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr	Seed Quality[§§,T] (1-5) 1 yr	Purple Stain[¶¶] (1-5) 1 yr	Leaf Holding[||] (1-5) 1 yr
USG 7474XFS	XFS	84 A	2 E	1.0 D	0.2 CD	2.7 B-F	1.3 C-E	1.2 BC	2.0 B-E
AsGrow AG48XF3	XF	83 AB	3 DE	2.0 A-D	0.9 A-D	4.0 A-C	1.2 DE	1.3 AB	1.7 C-F
Revere 4727XF	XF	83 A-C	13 C-E	1.7 B-D	3.0 A-C	3.7 A-D	1.5 CD	1.5 A	1.0 F
Dyna-Gro S47XF23S	XFS	83 A-C	0 E	1.0 D	0.0 D	3.0 A-F	1.0 E	1.2 BC	1.2 EF
Revere 4795XS****	R2XS	78 A-D	7 DE	2.3 A-C	2.6 A-C	3.3 A-E	1.3 C-E	1.0 C	1.5 D-F
USG 7496XTS**	R2XS	77 A-E	8 C-E	2.7 AB	3.1 A-C	2.7 B-F	1.3 C-E	1.5 A	2.3 A-D
Progeny 4604XFS**	XFS	75 A-F	8 C-E	1.7 B-D	1.9 A-D	2.3 B-F	1.3 C-E	1.0 C	1.8 B-F
USG 7461XFS**	XFS	75 A-F	7 DE	2.0 A-D	2.0 A-C	1.7 D-F	1.3 C-E	1.5 A	1.8 B-F
Xitavo 4894E	E3	75 A-F	0 E	1.0 D	0.0 D	3.0 A-F	1.7 BC	1.2 BC	1.3 EF
Revere 4826XF*	XF	74 A-G	0 E	1.0 D	0.0 D	2.0 C-F	1.3 C-E	1.2 BC	1.3 EF
Dyna-Gro S48EN73	E3	73 B-H	2 E	1.0 D	0.2 CD	4.3 AB	1.7 BC	1.3 AB	1.5 D-F
USG 7494ETS	E3S	72 C-H	2 E	1.3 CD	0.4 B-D	3.7 A-D	1.7 BC	1.3 AB	1.0 F
Revere 4731XF	XF	71 D-H	23 A-C	2.7 AB	9.3 A	1.3 EF	1.3 C-E	1.0 C	1.2 EF
Dyna-Gro S49XF43S	XFS	69 D-I	33 AB	2.7 AB	10.2 A	2.3 B-F	1.3 C-E	1.5 A	1.7 C-F
AsGrow AG49XF3	XF	68 D-I	0 E	1.0 D	0.0 D	4.3 AB	1.3 C-E	1.3 AB	1.2 EF
Xitavo 4653E	E3	68 D-I	5 DE	1.3 CD	0.7 A-D	2.3 B-F	1.5 CD	1.0 C	1.3 EF
Revere 4934XF	XF	68 D-I	10 C-E	2.7 AB	3.0 A	1.0 F	1.2 DE	1.0 C	2.0 B-E
Asgrow AG47XF2	XF	68 D-I	5 DE	3.0 A	1.7 AB	2.7 B-F	1.0 E	1.0 C	1.3 EF
Progeny 4691XFS*	XFS	68 D-I	35 A	2.7 AB	13.0 A	2.7 B-F	1.2 DE	1.5 A	1.8 B-F
Progeny 4798XF	XF	66 E-J	3 DE	1.7 B-D	0.7 A-D	3.3 A-E	1.0 E	1.0 C	1.3 EF
Progeny 4775E3S	E3S	66 F-J	5 DE	1.3 CD	0.7 A-D	3.3 A-E	1.5 CD	1.3 AB	1.3 EF
Progeny 4806XFS	XFS	66 F-J	15 C-E	3.0 A	4.8 A	3.3 A-E	1.5 CD	1.2 BC	1.2 EF
USG 7463XF	XF	64 F-K	5 DE	2.0 A-D	1.1 A-C	3.7 A-D	1.2 DE	1.0 C	1.3 EF
Invictis A4862XF	XF	63 G-K	8 C-E	3.0 A	2.8 A	1.3 EF	1.2 DE	1.5 A	1.5 D-F
Don Mario DM48F53	XF	62 H-K	13 C-E	2.7 AB	4.8 A	1.3 EF	1.0 E	1.2 BC	1.2 EF
MO S18-17644	Conv	59 I-K	2 E	1.0 D	0.2 CD	1.7 D-F	1.0 E	1.0 C	2.7 AB
Invictis B4603E	E3	56 JK	3 DE	1.3 CD	0.6 A-D	1.3 EF	2.2 AB	1.5 A	2.0 B-E
Invictis B4903E	E3	55 JK	18 B-D	2.3 A-C	6.1 A-C	5.0 A	2.3 A	1.3 AB	1.7 C-F
Perdue Agribusiness P48MO21	Conv	54 K	3 DE	1.0 D	0.4 A-D	1.3 EF	1.0 E	1.2 BC	3.0 A
TN Exp TN18-4110b	Conv.	36 L	0 E	1.0 D	0.0 D	1.3 EF	1.0 E	1.0 C	2.5 A-C
Average		69	8	1.8	2	2.7	1.3	1.2	1.6
Standard Error		4	6	0.5	2	0.8	0.2	0.1	0.3
L.S.D.[.05]		11	16	1.3	Sig.	2.0	Sig.	0.3	0.9
C.V.		10	-	-	-	-	-	-	-

† 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
§§ Seed quality was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no shriveled or damaged seed.
¶¶ Purple stain was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no purple stain.

Table A-19-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Dyna-Gro S47XF23S	XFS	74 A	65 AB		13.6 CD	12.7 A		38 B-G	36 A-F		1.2 CD	1.1 A		146 C-G	143 CD	
Revere 4826XF*	XF	73 A	65 A-C		13.5 D	12.4 A		37 E-H	35 D-F		1.0 D	1.0 A		147 C-F	145 AB	
USG 7474XFS	XFS	72 A			13.6 CD			37 E-H			1.2 CD			148 BC		
Dyna-Gro S49XF43S	XFS	72 A	65 A		13.7 B-D	13.1 A		39 A-G	34 EF		1.0 D	1.0 A		147 B-E	146 AB	
Revere 4795XS****	R2XS	71 A	64 A-C	67 A	13.5 CD	12.4 A	12.5 B	43 A	37 A-E	37 A	1.2 CD	1.1 A	1.2 A	146 C-F	145 AB	143 AB
Dyna-Gro S48EN73	E3	69 AB	61 A-D		13.6 CD	12.3 A		39 A-G	36 B-F		1.7 AB	1.3 A		147 B-E	145 AB	
AsGrow AG48XF3	XF	67 AB			14.3 B			42 AB			1.2 CD			147 B-D		
Innvictis B4603E	E3	67 AB			13.7 B-D			39 A-G			1.1 CD			145 D-H		
AsGrow AG49XF3	XF	66 AB			15.5 A			42 A-D			1.2 CD			149 AB		
Xitavo 4894E	E3	66 AB			13.3 D			42 A-C			1.2 CD			146 C-G		
USG 7496XTS**	R2XS	66 AB	63 A-D	66 A	13.7 B-D	13.1 A	13.3 A	40 A-F	39 A	38 A	1.0 D	1.0 A	1.0 A	147 B-E	146 A	144 A
Revere 4727XF	XF	66 AB	58 CD		13.2 D	12.0 A		37 D-H	34 F		1.0 D	1.0 A		146 C-G	145 BC	
Progeny 4604XFS**	XFS	66 AB	62 A-D	64 A	13.6 CD	12.5 A	12.8 AB	41 A-E	39 AB	39 A	1.0 D	1.0 A	1.1 A	146 C-G	145 AB	143 AB
Progeny 4691XFS*	XFS	65 AB	60 A-D		14.2 BC	12.6 A		40 A-G	38 A-D		1.0 D	1.0 A		145 E-I	143 D	
Xitavo 4653E	E3	65 AB			13.6 CD			39 A-G			1.0 D			144 HI		
USG 7463XF	XF	64 AB	59 A-D		13.5 CD	12.1 A		39 A-G	36 C-F		1.0 D	1.0 A		144 HI	143 D	
Asgrow AG47XF2	XF	63 A-C	62 A-D		13.6 CD	12.4 A		38 C-H	35 C-F		1.0 D	1.0 A		145 F-I	143 D	
USG 7461XFS**	XFS	62 A-C	60 A-D	64 A	13.4 D	12.4 A	12.7 B	42 A-C	39 A	39 A	1.0 D	1.0 A	1.1 A	146 C-G	145 AB	144 A
Progeny 4798XF	XF	61 A-D	58 A-D		13.4 D	12.8 A		36 GH	34 EF		1.2 CD	1.1 A		146 C-G	145 AB	
Innvictis A4862XF	XF	60 A-E	58 B-D		13.5 CD	12.6 A		42 A-D	36 A-F		1.3 B-D	1.2 A		146 C-F	145 AB	
Progeny 4775E3S	E3S	60 A-E	56 D		13.5 CD	12.5 A		41 A-F	38 A-C		1.2 CD	1.1 A		145 E-I	144 CD	
Don Mario DM48F53	XF	59 A-E			13.2 D			33 H			1.0 D			144 G-I		
Perdue Agribusiness P48MO21	Conv	55 B-F			13.8 B-D			36 GH			1.7 AB			148 BC		
USG 7494ETS	E3S	55 B-F			13.6 CD			40 A-G			1.2 CD			146 C-G		
Revere 4934XF	XF	55 B-F			13.4 D			36 F-H			1.0 D			146 C-G		
Innvictis B4903E	E3	48 C-F			13.6 CD			39 A-G			1.5 BC			143 I		
MO S18-17644	Conv	47 D-F			13.9 B-D			33 H			2.0 A			148 BC		
Revere 4731XF	XF	47 D-F			13.6 CD			40 A-G			1.5 BC			144 G-I		
TN Exp TN18-4110b	Conv.	46 EF			13.8 B-D			23 I			1.2 CD			150 A		
Progeny 4806XFS	XFS	42 F	46 E	52 B	13.5 D	12.7 A	12.9 AB	39 A-G	35 C-F	36 A	1.0 D	1.0 A	1.0 A	144 G-I	144 CD	143 B
Average		62	60	63	13.7	12.5	12.8	38	36	38	1.2	1.1	1.1	146	144	144
Standard Error		5	5	4	0.2	1.1	0.6	3	3	2	0.2	0.1	0.1	1	1	2
L.S.D..05		15	7	5	0.7	N.S.	0.4	4	3	N.S.	0.4	N.S.	N.S.	2	1	1
C.V.		15	10	9	3	5	4	7	7	7	-	-	-	1	1	1

† 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 signficant 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 30.

* 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 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 A-19-b. Mean† yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)	SDS DI†† ᵀ (%)	SDS DS†† ᵀ (1-9)	SDS DX†† ᵀ (DI x DS/9)	Frogeye‡‡ (%)	Leaf Holding‖ (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
Dyna-Gro S47XF23S	XFS	74 A	0 H	1.0 F	0 D	3.3 BC	1.0
Revere 4826XF*	XF	73 A	7 F-H	1.3 EF	1 D	2.7 C	1.0
USG 7474XFS	XFS	72 A	12 F-H	1.7 EF	3 D	2.7 C	1.0
Dyna-Gro S49XF43S	XFS	72 A	17 E-H	2.7 C-F	5 CD	1.3 D	1.0
Revere 4795XS****	R2XS	71 A	17 E-H	3.0 C-F	6 CD	3.3 BC	1.0
Dyna-Gro S48EN73	E3	69 AB	2 H	1.3 EF	0 D	3.3 C	1.0
AsGrow AG48XF3	XF	67 AB	23 D-H	3.0 C-F	10 CD	4.0 BC	1.0
Innvictis B4603E	E3	67 AB	25 D-H	2.3 D-F	10 CD	1.0 D	1.0
AsGrow AG49XF3	XF	66 AB	3 GH	1.0 F	0 D	5.0 AB	1.0
Xitavo 4894E	E3	66 AB	2 H	1.0 F	0 D	4.0 BC	1.0
USG 7496XTS**	R2XS	66 AB	25 D-H	3.0 C-F	13 B-D	3.7 BC	1.0
Revere 4727XF	XF	66 AB	15 E-H	2.7 C-F	5 CD	3.0 C	1.0
Progeny 4604XFS**	XFS	66 AB	37 B-F	2.7 C-F	13 B-D	4.0 BC	1.0
Progeny 4691XFS*	XFS	65 AB	27 D-H	2.7 C-F	11 B-D	4.0 BC	1.0
Xitavo 4653E	E3	65 AB	7 F-H	2.0 D-F	2 D	3.0 C	1.0
USG 7463XF	XF	64 AB	5 GH	1.0 F	1 D	5.3 AB	1.0
Asgrow AG47XF2	XF	63 A-C	7 F-H	2.0 D-F	2 D	1.0 D	1.0
USG 7461XFS**	XFS	62 A-C	23 D-H	3.3 B-E	9 CD	3.0 C	1.0
Progeny 4798XF	XF	61 A-D	10 F-H	1.7 EF	3 D	3.0 C	1.0
Innvictis A4862XF	XF	60 A-E	15 E-H	2.3 D-F	4 CD	1.0 D	1.0
Progeny 4775E3S	E3S	60 A-E	28 D-H	1.7 EF	6 CD	4.0 BC	1.0
Don Mario DM48F53	XF	59 A-E	50 A-D	4.7 A-C	35 AB	1.0 D	1.0
Perdue Agribusiness P48MO21	Conv	55 B-F	12 F-H	2.7 C-F	3 D	1.0 D	1.0
USG 7494ETS	E3S	55 B-F	33 C-G	2.7 C-F	12 B-D	5.0 AB	1.0
Revere 4934XF	XF	55 B-F	45 B-E	4.0 B-D	28 A-C	1.0 D	1.0
Innvictis B4903E	E3	48 C-F	60 A-C	5.3 AB	50 A	3.7 BC	1.0
MO S18-17644	Conv	47 D-F	23 D-H	3.3 B-E	12 B-D	1.0 D	1.0
Revere 4731XF	XF	47 D-F	65 AB	6.3 A	51 A	1.0 D	1.0
TN Exp TN18-4110b	Conv.	46 EF	7 F-H	2.3 D-F	3 D	1.0 D	1.3
Progeny 4806XFS	XFS	42 F	80 A	5.3 AB	50 A	7.0 A	1.0
Average		62	23	2.7	12	2.9	1.2
Standard Error		5	14	0.9	10	0.6	0.0
L.S.D.₀₅		15	31	2.2	24	Sig.	N.E.
C.V.		15	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-20-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG48XF3	XF	88 A			12.3 A			42 B-E			1.0 D			146 F-H		
USG 7496XTS**	R2XS	85 AB	67 A	61 A	12.6 A	13.6 B	13.4 A	45 AB	39 A	35 A	1.0 D	1.0 A	1.0	147 B-F	146 AB	142 A
Don Mario DM48F53	XF	85 AB			12.1 A			37 F-H			1.0 D			146 F-H		
Innvictis B4903E	E3	85 AB			12.0 A			41 B-F			1.0 D			146 D-H		
Revere 4826XF*	XF	83 A-C	66 AB		12.1 A	12.4 B-D		39 C-H	34 C-F		1.2 CD	1.1 A		146 D-H	144 CD	
USG 7461XFS**	XFS	82 A-D	64 A-D	57 AB	12.2 A	12.0 CD	12.4 A	42 B-F	36 BC	33 BC	1.0 D	1.0 A	1.0	147 B-F	145 BC	142 AB
Progeny 4604XFS**	XFS	81 A-E	66 AB	59 A	12.0 A	13.4 BC	13.3 A	44 BC	38 AB	34 AB	1.0 D	1.0 A	1.0	148 B-D	146 AB	142 A
Dyna-Gro S47XF23S	XFS	81 A-E	62 B-E		12.0 A	11.9 D		40 B-G	36 B-D		1.0 D	1.0 A		146 F-H	143 D-F	
Revere 4934XF	XF	80 A-F			12.0 A			38 E-H			1.2 CD			147 B-G		
AsGrow AG49XF3	XF	80 A-G			11.7 A			45 AB			1.0 D			148 B-E		
Revere 4731XF	XF	79 A-G			12.0 A			38 E-H			1.2 CD			146 D-H		
Xitavo 4894E	E3	79 B-G			12.4 A			43 B-D			1.0 D			148 A-C		
Asgrow AG47XF2	XF	78 B-G	60 D-F		12.0 A	11.8 D		38 E-H	32 EF		1.0 D	1.0 A		145 GH	142 G	
Dyna-Gro S48EN73	E3	78 B-G	61 C-E		12.1 A	11.8 D		38 D-H	33 D-F		1.2 CD	1.1 A		147 B-F	145 BC	
Xitavo 4653E	E3	78 B-G			11.9 A			38 E-H			1.2 CD			146 E-H		
Revere 4727XF	XF	78 B-G	62 A-E		12.1 A	11.4 D		40 C-G	35 C-E		1.2 CD	1.1 A		145 H	143 E-G	
USG 7474XFS	XFS	77 B-G			12.1 A			39 D-H			1.0 D			146 E-H		
USG 7463XF	XF	77 B-G	66 A-C		12.2 A	11.8 D		40 C-H	36 B-D		1.0 D	1.0 A		146 F-H	143 D-F	
Revere 4795XS****	R2XS	77 B-G	60 D-F	54 B	12.5 A	12.1 CD	12.4 A	42 B-F	35 CD	31 CD	1.0 D	1.0 A	1.0	148 B-D	144 B-D	141 B
Progeny 4775E3S	E3S	76 B-G	60 DE		12.6 A	12.3 B-D		43 B-D	37 A-C		1.2 CD	1.1 A		147 C-H	144 C-E	
Innvictis B4603E	E3	76 B-G			12.0 A			40 C-G			1.3 C			146 F-H		
Progeny 4691XFS*	XFS	75 C-H	63 A-D		12.3 A	12.0 D		43 B-E	38 AB		1.0 D	1.0 A		146 F-H	142 FG	
Innvictis A4862XF	XF	75 C-H	61 B-E		12.0 A	11.6 D		40 B-G	35 C-E		1.0 D	1.0 A		147 B-F	144 CD	
Dyna-Gro S49XF43S	XFS	73 D-H	57 EF		12.7 A	16.1 A		35 GH	31 F		1.0 D	1.0 A		149 AB	146 A	
USG 7494ETS	E3S	72 E-H			11.8 A			39 D-H			1.0 D			149 AB		
Progeny 4798XF	XF	71 GH	58 EF		12.2 A	12.8 B-D		41 B-F	36 BC		1.2 CD	1.1 A		147 B-F	145 BC	
MO S18-17644	Conv	70 F-I			12.9 A			50 A			2.7 A			148 B-D		
Progeny 4806XFS	XFS	66 HI	55 F	48 C	11.9 A	12.1 CD	12.7 A	40 B-G	35 C-E	30 D	1.0 D	1.0 A	1.0	146 E-H	144 C-E	141 B
TN Exp TN18-4110b	Conv.	60 IJ			12.0 A			35 H			1.2 CD			150 A		
Perdue Agribusiness P48MO21	Conv	57 J			12.2 A			37 F-H			2.3 B			149 AB		
Average		77	62	56	12.2	12.4	12.8	40	35	33	1.2	1.0	1.0	147	144	142
Standard Error		4	15	11	0.2	0.5	0.4	2	5	5	0.1	0.1	0.0	1	3	4
L.S.D.₀₅		9	6	4	N.S.	1.4	N.S.	5	3	3	0.3	N.S.	N.E.	2	1	1
C.V.		7	8	8	3	10	7	8	7	8	16	11	-	1	1	1

† 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 30.
* 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 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 A-20-b. Mean† yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Highland Rim AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)	SDS DI††,T (%)	SDS DS††,T (1-9)	SDS DX††,T (DI x DS/9)	Frogeye‡‡,T (%)	Leaf Holding‖ (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
AsGrow AG48XF3	XF	88 A	8 A	1.3 A	2 A	4.0 B-E	1.0
USG 7496XTS**	R2XS	85 AB	0 A	1.0 A	0 A	1.7 F-H	1.0
Don Mario DM48F53	XF	85 AB	3 A	1.0 A	0 A	1.0 H	1.0
Innvictis B4903E	E3	85 AB	5 A	1.7 A	2 A	3.7 C-E	1.0
Revere 4826XF*	XF	83 A-C	0 A	1.0 A	0 A	4.3 A-D	1.0
USG 7461XFS**	XFS	82 A-D	3 A	1.0 A	0 A	2.3 E-H	1.0
Progeny 4604XFS**	XFS	81 A-E	7 A	1.0 A	1 A	5.0 A-C	1.0
Dyna-Gro S47XF23S	XFS	81 A-E	3 A	1.0 A	0 A	2.7 D-H	1.0
Revere 4934XF	XF	80 A-F	10 A	1.3 A	2 A	1.0 H	1.0
AsGrow AG49XF3	XF	80 A-G	7 A	1.3 A	1 A	5.7 AB	1.0
Revere 4731XF	XF	79 A-G	17 A	1.3 A	3 A	1.3 GH	1.0
Xitavo 4894E	E3	79 B-G	2 A	1.0 A	0 A	2.7 D-H	1.0
Asgrow AG47XF2	XF	78 B-G	8 A	2.0 A	2 A	1.3 GH	1.0
Dyna-Gro S48EN73	E3	78 B-G	13 A	1.0 A	1 A	1.7 F-H	1.0
Xitavo 4653E	E3	78 B-G	7 A	1.0 A	1 A	1.3 GH	1.0
Revere 4727XF	XF	78 B-G	2 A	1.0 A	0 A	1.7 F-H	1.0
USG 7474XFS	XFS	77 B-G	7 A	1.3 A	1 A	4.0 B-E	1.0
USG 7463XF	XF	77 B-G	5 A	1.7 A	1 A	3.3 C-F	1.0
Revere 4795XS****	R2XS	77 B-G	2 A	1.0 A	0 A	3.7 C-E	1.0
Progeny 4775E3S	E3S	76 B-G	0 A	1.0 A	0 A	4.0 B-E	1.0
Innvictis B4603E	E3	76 B-G	8 A	3.0 A	3 A	2.7 D-H	1.0
Progeny 4691XFS*	XFS	75 C-H	5 A	1.0 A	1 A	4.0 B-E	1.0
Innvictis A4862XF	XF	75 C-H	20 A	1.7 A	6 A	1.3 GH	1.0
Dyna-Gro S49XF43S	XFS	73 D-H	17 A	1.7 A	4 A	1.0 H	1.0
USG 7494ETS	E3S	72 E-H	0 A	1.0 A	0 A	6.0 A	1.0
Progeny 4798XF	XF	71 GH	10 A	1.0 A	1 A	2.3 E-H	1.0
MO S18-17644	Conv	70 F-I	3 A	1.3 A	1 A	1.0 H	1.0
Progeny 4806XFS	XFS	66 HI	28 A	1.7 A	6 A	3.0 D-G	1.0
TN Exp TN18-4110b	Conv.	60 IJ	5 A	1.7 A	2 A	1.0 H	1.0
Perdue Agribusiness P48MO21	Conv	57 J	3 A	1.0 A	0 A	1.0 H	1.0
Average		77	7	1.3	1	2.7	1.0
Standard Error		4	7	0.5	2	0.7	0.0
L.S.D..05		9	N.S.	N.S.	N.S.	1.8	N.E.
C.V.		7	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-21-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[ǁ] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
USG 7461XFS**	XFS	71 A	63 B-D	63 A	12.9 E-J	12.9 B	13.1 AB	38 A-E	34 B-E	33 B	1.0	1.0	1.0	144 B-E	144 A-C	146 A
Progeny 4806XFS	XFS	71 A	62 B-D	59 A	13.0 E-J	13.0 B	13.2 AB	37 B-G	32 EF	30 C	1.0	1.0	1.0	145 BC	144 B-D	146 A
Innvictis A4862XF	XF	71 AB	63 B-D		13.1 D-G	12.9 B		35 G-J	31 F		1.0	1.0		144 B-E	142 FG	
USG 7496XTS**	R2XS	70 A-C	66 A-C	66 A	13.1 C-F	13.2 AB	13.7 A	40 A	37 A	36 A	1.0			147 A	146 A	148 A
Revere 4795XS****	R2XS	70 A-C	67 AB	63 A	12.9 F-K	12.8 B	13.2 AB	36 D-I	33 C-F	30 C	1.0	1.0	1.0	145 B	144 B-F	145 A
Dyna-Gro S49XF43S	XFS	69 A-D	71 A		12.9 F-K	13.2 AB		35 E-I	32 EF		1.0	1.0		145 B	145 AB	
Revere 4727XF	XF	68 A-D	63 B-D		12.6 K	12.2 C		33 I-K	32 EF		1.0	1.0		144 B-E	143 B-F	
Progeny 4604XFS**	XFS	68 A-E	62 B-D	61 A	12.7 JK	12.8 B	12.6 B	38 A-D	35 A-C	34 B	1.0	1.0	1.0	144 B-E	144 B-F	146 A
Innvictis B4903E	E3	67 A-E			12.9 F-K			34 H-J			1.0			145 BC		
AsGrow AG48XF3	XF	67 A-E			13.2 B-F			38 A-E			1.0			145 B-D		
Dyna-Gro S47XF23S	XFS	67 A-E	62 B-D		13.0 D-H	12.8 B		35 G-I	32 D-F		1.0	1.0		144 B-E	142 E-G	
Dyna-Gro S48EN73	E3	66 A-E	62 B-D		12.8 G-K	12.8 B		36 C-I	32 EF		1.0	1.0		145 BC	144 B-F	
Revere 4934XF	XF	66 A-F			13.2 B-F			32 J-L			1.0			144 B-E		
USG 7494ETS	E3S	66 A-F			13.3 B-E			39 A-C			1.0			144 C-E		
Revere 4826XF*	XF	65 A-F	64 A-D		12.9 F-K	13.0 B		35 G-I	31 EF		1.0	1.0		144 C-E	142 D-G	
Progeny 4798XF	XF	65 A-F	58 D		12.9 E-J	12.1 C		35 G-J	31 F		1.0	1.0		145 B	144 B-E	
Don Mario DM48F53	XF	65 B-F			13.1 C-F			30 L			1.0			144 B-E		
AsGrow AG49XF3	XF	65 B-F			12.7 H-K			40 AB			1.0			148 A		
USG 7463XF	XF	65 B-F	57 D		13.1 D-G	13.0 B		34 I-K	31 EF		1.0	1.0		139 G	139 I	
Xitavo 4894E	E3	65 B-F			13.1 C-F			38 A-F			1.0			144 B-E		
Progeny 4775E3S	E3S	64 C-F	61 B-D		13.2 C-F	13.6 A		40 AB	36 AB		1.0	1.0		144 B-E	143 C-G	
Innvictis B4603E	E3	64 D-F			12.9 F-K			35 G-J			1.3			143 D-F		
USG 7474XFS	XFS	63 D-F			13.0 D-I			35 F-I			1.0			144 B-E		
Revere 4731XF	XF	63 D-F			13.5 B			35 G-I			1.7			140 G		
Asgrow AG47XF2	XF	62 EF	58 CD		13.5 BC	13.2 AB		34 H-K	31 F		1.0	1.0		143 EF	141 GH	
Progeny 4691XFS*	XFS	62 EF	59 CD		13.1 D-F	13.2 AB		37 C-H	35 A-D		1.0	1.0		142 F	140 HI	
Xitavo 4653E	E3	60 FG			13.0 E-J			35 G-J			1.0			143 D-F		
MO S18-17644	Conv	54 GH			14.0 A			31 KL			1.7			144 B-E		
Perdue Agribusiness P48MO21	Conv	52 H			13.4 B-D			29 L			1.7			144 B-E		
TN Exp TN18-4110b	Conv.	43 I			12.7 I-K			22 M			1.0		1.0	145 B-D		
Average		64	62	62	13.1	12.9	13.2	35	33	33	1.1	1.0	1.0	144	143	146
Standard Error		2	6	4	0.1	0.2	0.3	1	3	3	0.0	0.0	0.0	1	1	2
L.S.D.₀₅		6	8	N.S.	0.4	0.5	0.7	3	2	2	N.E.	N.E.	N.E.	1	2	N.S.
C.V.		6	11	9	2	3	5	5	6	7	-	-	-	1	1	1

† 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 signficant 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 30.
* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.
§ All yields are adjusted to 13% moisture.
ǁ Lodging was evaluated on a 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 A-21-b. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the Middle Tennessee AgResearch and Education Center in Spring Hill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
USG 7461XFS**	XFS	71 A	0	1.0	0	2.7 D-F	1.7
Progeny 4806XFS	XFS	71 A	0	1.0	0	3.7 B-D	1.5
Innvictis A4862XF	XF	71 AB	0	1.0	0	1.0 G	1.0
USG 7496XTS**	R2XS	70 A-C	0	1.0	0	3.0 C-E	1.0
Revere 4795XS****	R2XS	70 A-C	0	1.0	0	2.0 E-G	1.0
Dyna-Gro S49XF43S	XFS	69 A-D	0	1.0	0	1.0 G	1.0
Revere 4727XF	XF	68 A-D	0	1.0	0	1.3 FG	1.0
Progeny 4604XFS**	XFS	68 A-E	0	1.0	0	2.7 D-F	1.0
Innvictis B4903E	E3	67 A-E	0	1.0	0	2.0 E-G	1.0
AsGrow AG48XF3	XF	67 A-E	0	1.0	0	3.7 B-D	1.0
Dyna-Gro S47XF23S	XFS	67 A-E	0	1.0	0	3.3 C-E	1.0
Dyna-Gro S48EN73	E3	66 A-E	0	1.0	0	3.0 C-E	1.3
Revere 4934XF	XF	66 A-F	0	1.0	0	1.0 G	1.3
USG 7494ETS	E3S	66 A-F	0	1.0	0	5.3 A	1.0
Revere 4826XF*	XF	65 A-F	0	1.0	0	4.0 A-D	1.0
Progeny 4798XF	XF	65 A-F	0	1.0	0	4.0 A-D	1.0
Don Mario DM48F53	XF	65 B-F	0	1.0	0	1.0 G	1.0
AsGrow AG49XF3	XF	65 B-F	0	1.0	0	5.0 AB	1.0
USG 7463XF	XF	65 B-F	0	1.0	0	2.7 D-F	1.0
Xitavo 4894E	E3	65 B-F	0	1.0	0	3.7 B-D	1.0
Progeny 4775E3S	E3S	64 C-F	0	1.0	0	3.7 B-D	1.0
Innvictis B4603E	E3	64 D-F	0	1.0	0	1.0 G	1.0
USG 7474XFS	XFS	63 D-F	0	1.0	0	2.7 D-F	1.0
Revere 4731XF	XF	63 D-F	0	1.0	0	1.0 G	1.0
Asgrow AG47XF2	XF	62 EF	0	1.0	0	1.0 G	1.0
Progeny 4691XFS*	XFS	62 EF	0	1.0	0	3.3 C-E	1.0
Xitavo 4653E	E3	60 FG	0	1.0	0	4.3 A-C	1.0
MO S18-17644	Conv	54 GH	0	1.0	0	1.0 G	1.2
Perdue Agribusiness P48MO21	Conv	52 H	0	1.0	0	1.0 G	1.3
TN Exp TN18-4110b	Conv.	43 I	0	1.0	0	1.0 G	1.0
Average		64	0	1.0	0	2.5	1.1
Standard Error		2	0	0.0	0	0.6	0.0
L.S.D.₀₅		6	N.E.	N.E.	N.E.	1.5	N.E.
C.V.		6	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-22-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging[‖] (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Revere 4727XF	XF	84 A	75 A-D		10 A	11 A		41 J-L	40 H		1.0 E	1.2 A		136 L	138 E-G	
Revere 4795XS****	R2XS	83 AB	78 A	77 A	10 A	12 A	12 C	45 F-H	45 C-F	43 B	1.0 E	1.2 A	1.1 A	145 B-F	141 C-E	141 B
Revere 4826XF*	XF	80 A-C	78 AB		10 A	12 A		45 F-I	44 D-G		1.0 E	1.2 A		137 KL	137 E-G	
AsGrow AG48XF3	XF	79 A-D			11 A			49 A-D			1.0 E			144 C-H		
USG 7461XFS**	XFS	78 A-D	76 A-C	74 A	10 A	12 A	12 BC	51 A	50 A	47 A	1.3 DE	1.2 A	1.1 A	144 C-G	141 B-E	140 B
Progeny 4691XFS*	XFS	77 A-E	72 A-D		11 A	12 A		49 A-C	48 AB		2.0 B-D	1.8 A		139 G-L	138 E-G	
Progeny 4798XF	XF	77 A-E	73 A-D		10 A	12 A		45 F-H	45 C-E		1.0 E	1.5 A		148 A-D	144 A-C	
Dyna-Gro S47XF23S	XFS	77 A-E	74 A-D		12 A	12 A		44 F-J	43 E-G		1.0 E	1.2 A		137 KL	136 G	
USG 7474XFS	XFS	76 A-E			10 A			46 C-G			1.3 DE			142 E-K		
Progeny 4604XFS**	XFS	75 A-F	73 A-D	73 A	10 A	12 A	12 C	49 A-C	48 AB	46 A	1.3 DE	1.3 A	1.3 A	146 B-F	143 A-D	141 B
Don Mario DM48F53	XF	75 A-F			11 A			41 J-L			1.3 DE			143 C-I		
AsGrow AG49XF3	XF	75 A-F			10 A			50 AB			1.0 E			149 A-C		
Xitavo 4894E	E3	74 A-G			10 A			45 F-H			1.3 DE			143 D-J		
Dyna-Gro S48EN73	E3	73 A-G	72 A-D		10 A	12 A		43 H-K	42 F-H		1.0 E	1.7 A		139 G-L	140 D-F	
Xitavo 4653E	E3	73 A-G			10 A			44 F-J			1.0 E			139 G-L		
USG 7463XF	XF	72 A-H	69 C-E		10 A	12 A		46 D-H	46 B-D		1.0 E	1.2 A		139 G-L	139 E-G	
Progeny 4806XFS	XFS	71 B-H	70 B-D	71 A	10 A	12 A	13 AB	46 E-H	44 D-F	43 B	1.0 E	1.2 A	1.1 A	150 A-D	145 A	144 A
USG 7494ETS	E3S	70 C-I			10 A			46 E-H			1.3 DE			147 A-F		
Revere 4934XF	XF	70 C-I			10 A			42 I-L			1.3 DE			148 A-E		
Dyna-Gro S49XF43S	XFS	69 C-I	68 C-E		10 A	12 A		40 L	40 H		1.3 DE	1.5 A		145 B-F	144 A-D	
Innvictis A4862XF	XF	69 C-I	71 A-D		11 A	12 A		45 E-H	44 D-G		2.0 B-D	1.5 A		148 A-D	145 AB	
USG 7496XTS**	R2XS	69 C-I	70 B-D	69 A	12 A	12 A	13 A	48 A-E	48 AB	46 A	1.7 C-E	1.7 A	1.4 A	148 A-D	146 A	146 A
Innvictis B4903E	E3	67 D-I			10 A			45 F-I			2.3 BC			145 B-F		
Asgrow AG47XF2	XF	65 E-I	67 DE		11 A	12 A		43 H-K	42 GH		1.0 E	1.2 A		141 F-L	138 E-G	
Progeny 4775E3S	E3S	63 F-I	62 E		11 A	12 A		47 B-F	47 BC		1.3 DE	1.3 A		138 H-L	137 FG	
Perdue Agribusiness P48MO21	Conv	62 G-I			11 A			39 LM			1.3 DE			151 AB		
Revere 4731XF	XF	59 H-J			12 A			41 KL			2.7 AB			141 F-L		
Innvictis B4603E	E3	57 IJ			10 A			44 G-K			2.7 AB			137 J-L		
MO S18-17644	Conv	57 IJ			11 A			36 M			3.3 A			138 I-L		
TN Exp TN18-4110b	Conv.	47 J			10 A			32 N			1.3 DE			153 A		
Average		71	72	73	10.6	11.9	12.5	44	45	45	1.4	1.4	1.2	143	141	143
Standard Error		5	3	2	0.5	1.3	1.0	1	1	2	0.3	0.2	0.1	2	2	2
L.S.D.$_{.05}$		13	8	N.S.	N.S.	N.S.	0.7	3	3	2	0.8	N.S.	N.S.	6	4	2
C.V.		11	9	8	8	6	6	4	5	5	-	-	-	2	2	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.
C.V. is only reported for variables evaluated on a ratio scale.
L.S.D. values are given for ANOVA that were signficant 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 30.
* 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 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 A-22-b. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)
		1 yr	1 yr	1 yr	1 yr	1 yr
Revere 4727XF	XF	84 A	7 A	2.0 A	2 A	1.0 D
Revere 4795XS****	R2XS	83 AB	5 A	1.0 A	1 A	1.7 B-D
Revere 4826XF*	XF	80 A-C	2 A	1.7 A	1 A	2.3 B
AsGrow AG48XF3	XF	79 A-D	3 A	1.7 A	1 A	1.3 CD
USG 7461XFS**	XFS	78 A-D	7 A	1.3 A	1 A	1.3 CD
Progeny 4691XFS*	XFS	77 A-E	2 A	2.0 A	1 A	1.7 B-D
Progeny 4798XF	XF	77 A-E	3 A	1.0 A	0 A	1.7 B-D
Dyna-Gro S47XF23S	XFS	77 A-E	0 A	1.0 A	0 A	1.0 D
USG 7474XFS	XFS	76 A-E	2 A	1.0 A	0 A	1.3 CD
Progeny 4604XFS**	XFS	75 A-F	3 A	1.3 A	1 A	1.0 D
Don Mario DM48F53	XF	75 A-F	5 A	2.3 A	2 A	1.3 CD
AsGrow AG49XF3	XF	75 A-F	3 A	1.0 A	0 A	1.3 CD
Xitavo 4894E	E3	74 A-G	3 A	1.0 A	0 A	3.7 A
Dyna-Gro S48EN73	E3	73 A-G	0 A	1.0 A	0 A	1.7 B-D
Xitavo 4653E	E3	73 A-G	5 A	1.3 A	1 A	1.7 B-D
USG 7463XF	XF	72 A-H	10 A	1.0 A	1 A	1.3 CD
Progeny 4806XFS	XFS	71 B-H	3 A	1.0 A	0 A	1.3 CD
USG 7494ETS	E3S	70 C-I	3 A	1.7 A	1 A	1.3 CD
Revere 4934XF	XF	70 C-I	5 A	1.0 A	1 A	1.0 D
Dyna-Gro S49XF43S	XFS	69 C-I	0 A	1.0 A	0 A	2.0 BC
Innvictis A4862XF	XF	69 C-I	5 A	1.7 A	1 A	2.3 B
USG 7496XTS**	R2XS	69 C-I	5 A	1.0 A	1 A	1.0 D
Innvictis B4903E	E3	67 D-I	8 A	2.7 A	4 A	1.0 D
Asgrow AG47XF2	XF	65 E-I	3 A	1.3 A	1 A	1.7 B-D
Progeny 4775E3S	E3S	63 F-I	0 A	1.0 A	0 A	1.0 D
Perdue Agribusiness P48MO21	Conv	62 G-I	7 A	2.3 A	3 A	1.0 D
Revere 4731XF	XF	59 H-J	2 A	1.3 A	0 A	1.3 CD
Innvictis B4603E	E3	57 IJ	3 A	1.3 A	1 A	1.0 D
MO S18-17644	Conv	57 IJ	12 A	1.7 A	4 A	1.7 B-D
TN Exp TN18-4110b	Conv.	47 J	8 A	1.3 A	1 A	1.3 CD
Average		71	4	1.4	1	1.5
Standard Error		5	4	0.5	1	0.3
L.S.D.₀₅		13	N.S.	N.S.	N.S.	1.0
C.V.		11	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-23-a. Mean[†] yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
AsGrow AG49XF3	XF	74 A			11 B-F			49 AB			1.0			145 A-D		
Invvictis A4862XF	XF	70 AB	64 A-C		12 A-C	12 C-F		44 G-L	39 D		1.0	1.0		141 B-H	141 B-D	
Dyna-Gro S47XF23S	XFS	69 A-C	62 A-D		11 E-G	12 E-G		45 F-K	40 D		1.0	1.0		136 G-I	136 E-G	
Revere 4795XS****	R2XS	69 A-C	66 AB	64 A	11 C-G	12 D-G	12 C	45 E-J	40 D	40 B	1.0	1.0	1.0	146 A-C	142 BC	141 B
AsGrow AG48XF3	XF	69 A-C			11 A-F			47 B-G			1.0			142 B-G		
Progeny 4604XFS**	XFS	68 A-D	63 A-D	63 A	11 B-G	12 C-F	12 BC	48 A-D	44 AB	44 A	1.0	1.0	1.0	138 E-I	139 D-F	138 B
Dyna-Gro S48EN73	E3	68 A-D	60 B-D		11 B-F	13 B-E		39 OP	36 G		1.0	1.0		135 HI	139 C-F	
USG 7461XFS**	XFS	68 A-D	67 A	68 A	11 A-D	13 A-C	12 AB	48 A-E	43 AB	44 A	1.0	1.0	1.0	140 D-I	139 C-E	139 B
Revere 4826XF*	XF	68 A-E	67 A		11 B-F	12 C-G		43 I-M	39 DE		1.0	1.0		136 G-I	137 E-G	
Progeny 4806XFS	XFS	66 A-E	59 CD	62 A	11 A-F	13 A-C	13 A	44 G-K	41 CD	41 B	1.0	1.0	1.0	147 AB	145 AB	144 A
Progeny 4691XFS*	XFS	66 A-E	61 A-D		12 A	13 A		50 A	45 A		1.0	1.0		135 I	136 FG	
Dyna-Gro S49XF43S	XFS	66 A-E	61 A-D		12 A-C	12 C-F		40 M-P	37 FG		1.0	1.0		141 C-H	142 BC	
Xitavo 4894E	E3	66 A-E			11 A-D			46 C-H			1.0			138 E-I		
USG 7494ETS	E3S	65 B-E			12 A-D			43 I-M			1.0			144 B-E		
Revere 4727XF	XF	64 B-E	58 CD		11 FG	12 FG		41 L-O	39 D-F		1.0	1.0		135 I	136 E-G	
Don Mario DM48F53	XF	64 B-E			11 A-D			38 P			1.7			142 B-G		
Progeny 4798XF	XF	64 B-E	59 CD		11 C-G	12 G		44 H-L	40 CD		1.0	1.0		147 AB	144 AB	
USG 7474XFS	XFS	64 B-E			11 B-F			44 G-K			1.0			142 B-F		
Revere 4731XF	XF	63 B-F			12 AB			41 M-O			2.7			137 F-I		
Revere 4934XF	XF	63 B-F			11 A-D			42 J-M			1.0			146 A-C		
USG 7463XF	XF	63 B-F	64 A-C		11 A-D	13 B-E		46 D-I	42 BC		1.0	1.0		136 G-I	136 E-G	
Asgrow AG47XF2	XF	61 B-H	57 D		12 AB	13 AB		42 J-M	37 E-G		1.0	1.0		142 B-H	138 E-G	
USG 7496XTS**	R2XS	61 C-G	58 CD	63 A	11 A-D	13 B-D	13 A	49 A-C	44 A	44 A	1.0			147 AB	146 A	145 A
Progeny 4775E3S	E3S	61 D-H	59 CD		12 A-D	13 BC		47 B-F	44 AB		1.0	1.0		134 I	134 G	
Innvictis B4903E	E3	60 E-H			11 C-G			42 K-N			1.3			136 G-I		
Xitavo 4653E	E3	60 E-H			11 A-E			43 I-M			1.0			140 D-I		
Innvictis B4603E	E3	56 F-H			11 D-G			43 J-M			1.3			134 I		
MO S18-17644	Conv	54 GH			12 AB			42 J-M			3.0			145 A-D		
Perdue Agribusiness P48MO21	Conv	53 HI			11 C-G			39 N-P			2.3			150 A		
TN Exp TN18-4110b	Conv.	46 I			10 G			29 Q			1.7		1.0	146 A-C		
Average		64	62	64	11.2	12.5	12.4	43	41	43	1.2	1.0	1.0	141	139	141
Standard Error		3	5	3	0.3	1.3	0.9	1	4	3	0.2	0.0	0.0	2	1	1
L.S.D.₀₅		8	7	N.S.	0.8	0.5	0.4	3	2	2	0.5	N.E.	N.E.	6	3	3
C.V.		8	9	9	4	3	4	4	5	5	26	-	-	2	2	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.

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 30.

* 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 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 A-23-b. Mean[†] yield and quality of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††, T] (%) 1 yr	SDS DS[††, T] (1-9) 1 yr	SDS DX[††, T] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr
AsGrow AG49XF3	XF	74 A	0 A	1.0 D	0 A	1.7 A
Innvictis A4862XF	XF	70 AB	2 A	1.0 D	0 A	1.0 A
Dyna-Gro S47XF23S	XFS	69 A-C	2 A	1.7 B-D	0 A	1.3 A
Revere 4795XS****	R2XS	69 A-C	2 A	1.0 D	0 A	2.3 A
AsGrow AG48XF3	XF	69 A-C	2 A	1.3 CD	0 A	1.7 A
Progeny 4604XFS**	XFS	68 A-D	3 A	1.3 CD	1 A	1.3 A
Dyna-Gro S48EN73	E3	68 A-E	3 A	1.0 D	0 A	1.3 A
USG 7461XFS**	XFS	68 A-D	2 A	1.0 D	0 A	2.0 A
Revere 4826XF*	XF	68 A-E	2 A	1.0 D	0 A	3.3 A
Progeny 4806XFS	XFS	66 A-E	5 A	1.0 D	1 A	3.0 A
Progeny 4691XFS*	XFS	66 A-E	5 A	1.3 CD	1 A	2.0 A
Dyna-Gro S49XF43S	XFS	66 A-E	28 A	2.0 A-C	6 A	1.3 A
Xitavo 4894E	E3	66 A-E	3 A	1.0 D	0 A	1.7 A
USG 7494ETS	E3S	65 B-E	0 A	1.0 D	0 A	1.7 A
Revere 4727XF	XF	64 B-E	5 A	1.3 CD	1 A	1.3 A
Don Mario DM48F53	XF	64 B-E	3 A	1.3 CD	1 A	1.3 A
Progeny 4798XF	XF	64 B-E	2 A	1.0 D	0 A	2.0 A
USG 7474XFS	XFS	64 B-E	3 A	1.3 CD	1 A	1.3 A
Revere 4731XF	XF	63 B-F	38 A	2.7 AB	11 A	1.7 A
Revere 4934XF	XF	63 B-F	0 A	1.0 D	0 A	1.0 A
USG 7463XF	XF	63 B-F	2 A	1.0 D	0 A	1.7 A
Asgrow AG47XF2	XF	61 B-H	0 A	1.0 D	0 A	2.3 A
USG 7496XTS**	R2XS	61 C-G	3 A	2.0 A-C	1 A	1.7 A
Progeny 4775E3S	E3S	61 D-H	3 A	1.0 D	0 A	2.0 A
Innvictis B4903E	E3	60 E-H	7 A	1.3 CD	1 A	2.0 A
Xitavo 4653E	E3	60 E-H	0 A	1.0 D	0 A	1.7 A
Innvictis B4603E	E3	56 F-H	8 A	1.7 B-D	1 A	1.7 A
MO S18-17644	Conv	54 GH	0 A	1.0 D	0 A	1.3 A
Perdue Agribusiness P48MO21	Conv	53 HI	7 A	1.3 CD	1 A	1.3 A
TN Exp TN18-4110b	Conv.	46 I	25 A	2.7 A	8 A	1.3 A
Average		64	6	1.3	1	1.7
Standard Error		3	4	0.3	1	0.6
L.S.D.[.05]		8	N.S.	Sig.	N.S.	N.S.
C.V.		8	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-24-a. Mean† yield and agronomic traits of 30 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)			Maturity (DAP)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yrT	2 yr	3 yr	1 yr	2 yr	3 yr
Dyna-Gro S47XF23S	XFS	69 A	62 A		13.5 A-F	11.8 D-F		40 EF	39 CD		1.0 D	1.0 A		138 EF	137 CD	
Revere 4934XF	XF	68 AB			13.8 A-D			40 EF			1.0 D			141 B-D		
Revere 4826XF*	XF	67 A-C	60 A		13.6 A-E	12.0 C-F		41 D-F	38 D		1.0 D	1.0 A		138 EF	137 CD	
Don Mario DM48F53	XF	67 A-C			13.5 A-F			39 F			1.0 D			137 F		
USG 7496XTS**	R2XS	66 A-D	59 AB	61 A	14.0 A-C	13.2 A	13.3 A	41 D-F	42 A-C	42 AB	1.0 D	1.0 B	1.0 A	142 BC	143 A	141 A
Asgrow AG47XF2	XF	65 A-E	60 A		13.7 A-E	12.9 AB		40 EF	39 CD		1.0 D	1.0 A		138 EF	138 B-D	
USG 7463XF	XF	64 A-F	61 A		13.7 A-E	12.4 A-E		46 A-C	42 A-C		1.0 D	1.0 A		138 EF	136 D	
Innvictis A4862XF	XF	63 A-G	59 AB		13.6 A-E	12.0 B-F		42 C-F	41 A-D		1.0 D	1.0 A		140 C-E	139 B-D	
Dyna-Gro S49XF43S	XFS	62 A-G	56 A-C		13.2 C-H	12.1 B-F		38 FG	37 D		1.0 D	1.0 A		140 C-E	141 AB	
Progeny 4798XF	XF	62 A-G	55 A-D		13.7 A-E	12.0 C-F		45 A-E	41 A-D		1.3 CD	1.5 A		141 B-D	139 B-D	
USG 7474XFS	XFS	62 A-G			13.4 B-G			41 D-F			1.0 D			139 D-F		
USG 7461XFS**	XFS	62 A-H	56 A-D	60 A	13.1 C-H	12.1 B-F	12.2 BC	46 A-C	44 A	44 A	1.0 D	1.0 A	1.0 A	140 C-E	140 A-C	138 B
AsGrow AG48XF3	XF	61 A-H			12.9 D-H			45 A-D			1.0 D			142 BC		
Revere 4731XF	XF	60 A-H			13.4 B-G			39 F			2.3 AB			137 F		
Progeny 4691XFS*	XFS	60 B-H	58 AB		13.7 A-D	12.7 A-D		45 A-E	43 AB		1.3 CD	1.2 A		137 F	137 CD	
Revere 4795XS****	R2XS	60 B-I	61 A	63 A	12.4 H	11.5 F	11.7 C	39 F	40 B-D	39 B	1.0 D	1.0 A	1.1 A	139 D-F	139 B-D	138 B
AsGrow AG49XF3	XF	59 B-I			13.2 C-H			49 A			1.0 D			143 BC		
USG 7494ETS	E3S	59 B-I			14.2 AB			42 C-F			1.0 D			140 C-E		
Innvictis B4903E	E3	58 C-J			13.2 C-H			41 D-F			1.7 BC			140 C-E		
Revere 4727XF	XF	57 D-J	55 A-D		12.5 GH	11.6 EF		42 C-F	40 B-D		2.0 BC	1.5 A		141 B-E	139 B-D	
Progeny 4604XFS**	XFS	56 D-J	52 B-D	57 A	13.3 C-H	12.1 B-F	12.7 AB	44 B-E	43 AB	42 A	1.0 D	1.0 A	1.0 A	139 D-F	138 B-D	137 B
Dyna-Gro S48EN73	E3	56 E-J	55 A-D		13.9 A-C	12.2 B-F		42 C-F	38 D		1.3 CD	1.2 A		139 D-F	138 B-D	
Xitavo 4653E	E3	56 F-J			13.6 A-E			41 D-F			1.0 D			138 EF		
Progeny 4775E3S	E3S	54 G-J	48 D		14.3 A	12.8 A-C		47 AB	44 A		1.0 D	1.0 A		137 F	137 CD	
Innvictis B4603E	E3	53 H-K			12.8 E-H			40 EF			2.7 AB			139 D-F		
Xitavo 4894E	E3	50 I-L			13.7 A-E			44 A-E			1.3 CD			140 C-E		
Progeny 4806XFS	XFS	50 J-L	50 CD	55 A	12.6 F-H	11.9 D-F	12.1 BC	42 C-F	39 B-D	39 B	1.0 D	1.0 A	1.0 A	138 EF	137 CD	136 B
TN Exp TN18-4110b	Conv.	44 KL			13.9 A-C			26 I			1.3 CD			149 A		
MO S18-17644	Conv	44 KL			13.8 A-D			34 GH			3.3 A			147 A		
Perdue Agribusiness P48MO21	Conv	41 L			13.9 A-C			33 H			3.3 A			143 B		
Average		59	57	59	13.5	12.2	12.4	41	40	41	1.4	1.1	1.0	140	138	138
Standard Error		3	5	5	0.3	1.3	0.6	2	3	1	0.4	0.1	0.0	1	1	1
L.S.D..05		9	7	N.S.	0.9	0.9	0.7	5	4	3	Sig.	N.S.	N.S.	3	3	2
C.V.		10	11	10	4	6	6	7	9	7	-	-	-	1	2	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.
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 30.
* 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 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 A-24-b. Mean[†] yield and quality of 56 Maturity Group IV Late (4.5 - 4.9) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr	Leaf Holding[‖] (1-5) 1 yr
Dyna-Gro S47XF23S	XFS	69 A	3 EF	1.3 EF	1 E	5.3 B-F	1.0 C
Revere 4934XF	XF	68 AB	27 B-E	4.0 A-C	12 B-E	1.7 J	1.0 C
Revere 4826XF*	XF	67 A-C	7 EF	2.7 B-F	4 DE	5.0 B-G	1.0 C
Don Mario DM48F53	XF	67 A-C	22 B-F	2.7 B-F	8 B-E	2.3 IJ	1.0 C
USG 7496XTS**	R2XS	66 A-D	17 C-F	3.3 B-E	6 B-E	4.0 E-I	1.0 C
Asgrow AG47XF2	XF	65 A-E	3 EF	1.3 EF	1 E	2.3 IJ	1.0 C
USG 7463XF	XF	64 A-F	12 DF	2.7 B-F	5 C-E	6.0 A-E	1.0 C
Innvictis A4862XF	XF	63 A-G	12 D-F	2.3 C-F	3 DE	3.0 G-J	1.0 C
Dyna-Gro S49XF43S	XFS	62 A-G	37 B-D	3.7 B-D	20 B	3.0 G-J	1.0 C
Progeny 4798XF	XF	62 A-G	15 D-F	2.3 C-F	4 DE	4.3 D-I	2.3 B
USG 7474XFS	XFS	62 A-G	3 EF	2.3 C-F	1 E	5.3 B-F	1.3 C
USG 7461XFS**	XFS	62 A-H	17 C-F	2.7 B-F	4 DE	3.7 F-J	1.3 C
AsGrow AG48XF3	XF	61 A-H	18 C-F	1.7 D-F	4 DE	5.3 B-F	1.0 C
Revere 4731XF	XF	60 A-H	45 AB	3.0 B-F	17 B-D	2.7 H-J	1.0 C
Progeny 4691XFS*	XFS	60 B-H	42 A-C	3.0 B-F	13 B-E	6.3 A-D	1.0 C
Revere 4795XS****	R2XS	60 B-I	8 EF	3.3 B-E	3 DE	5.0 B-G	1.0 C
AsGrow AG49XF3	XF	59 B-I	7 EF	1.7 D-F	2 DE	7.0 AB	1.3 C
USG 7494ETS	E3S	59 B-I	0 F	1.0 F	0 E	6.7 A-C	1.7 B
Innvictis B4903E	E3	58 C-J	18 C-F	3.0 B-F	8 B-E	4.3 D-I	1.7 B
Revere 4727XF	XF	57 D-J	18 C-F	3.0 B-F	7 B-E	4.3 D-I	2.3 B
Progeny 4604XFS**	XFS	56 D-J	2 EF	1.3 EF	0 E	4.3 D-I	1.3 C
Dyna-Gro S48EN73	E3	56 E-J	3 EF	2.7 B-F	1 E	5.3 B-F	1.3 C
Xitavo 4653E	E3	56 F-J	15 D-F	3.0 B-F	6 B-E	4.7 C-H	1.0 C
Progeny 4775E3S	E3S	54 G-J	7 EF	2.0 C-F	2 DE	6.3 A-D	1.3 C
Innvictis B4603E	E3	53 H-K	22 B-F	3.7 B-D	13 B-E	3.7 F-J	1.0 C
Xitavo 4894E	E3	50 I-L	7 EF	1.0 F	1 E	6.0 A-E	1.7 B
Progeny 4806XFS	XFS	50 J-L	63 A	6.0 A	42 A	7.7 A	1.0 C
TN Exp TN18-4110b	Conv.	44 KL	5 EF	1.7 D-F	1 E	1.7 J	4.0 A
MO S18-17644	Conv	44 KL	37 B-D	4.7 AB	20 BC	4.0 E-I	3.7 A
Perdue Agribusiness P48MO21	Conv	41 L	12 D-F	1.7 D-F	4 DE	3.0 G-J	3.7 A
Average		59	17	2.6	7	4.5	1.5
Standard Error		3	10	0.8	5	0.7	0.3
L.S.D.₀₅		9	26	2.2	15	2.0	0.8
C.V.		10	-	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-25-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greenevill, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
USG 7503XF	XF	112 A		8.3 AB		44 D-F		2.5 C-E		163 A	
Innvictis A5503XF	XF	111 AB		8.5 A		49 AB		2.2 DE		160 A	
Revere 5029XF	XF	99 A-C	77 A	8.1 B-D	10.6 A	49 A-C	49 A	2.8 BC	2.4 B	161 A	153 A
USG 7534GT	GT	98 A-C		8.2 A-C		51 A		2.7 B-D		159 A	
NK 52-D6E3*	E3	95 A-C	76 A	7.8 D	10.2 A	43 D-F	42 B	2.0 E	1.5 D	161 A	152 A
Innvictis A5003XF	XF	92 A-C		7.9 CD		42 F		2.5 C-E		159 A	
Asgrow AG53XF2	XF	91 A-C	74 A	8.3 AB	10.4 A	46 C-E	46 A	2.0 E	1.8 CD	160 A	152 A
Progeny 5056XFS	XFS	89 B-D	74 A	8.0 B-D	10.6 A	48 A-C	48 A	2.8 BC	2.3 BC	160 A	152 A
Innvictis A5813XF	XF	79 C-E		8.3 AB		45 D-F		2.7 B-D		160 A	
USG 7543XF	XF	69 DE		8.2 A-C		46 B-D		3.2 B		163 A	
MO S18-6013	Conv	67 DE		8.2 A-C		43 EF		3.8 A		161 A	
MO S18-6328	Conv	64 E	52 B	7.9 CD	10.6 A	42 F	39 B	4.0 A	3.7 A	161 A	153 A
Average		89	70	8.2	10.5	46	45	2.8	2.3	161	152
Standard Error		8	18	0.1	2.4	1	1	0.2	0.4	1	8
L.S.D..05		22	13	0.3	N.S.	3	3	0.5	0.5	N.S.	N.S.
C.V.		15	15	2	3	4	6	-	-	1	1

† 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 signficant 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 30.
* 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 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 A-25-b. Mean yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the Northeast Tennessee AgResearch and Education Center in Greeneville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)	
		1 yr		1 yr	1 yr	1 yr	1 yr	1 yr	
USG 7503XF	XF	112	A	5	2.3	2	1.3	1.5	A
Innvictis A5503XF	XF	111	AB	0	1.0	0	1.0	1.5	A
Revere 5029XF	XF	99	A-C	0	1.0	0	1.0	1.5	A
USG 7534GT	GT	98	A-C	0	1.0	0	1.0	1.5	A
NK 52-D6E3*	E3	95	A-C	0	1.0	0	1.0	1.5	A
Innvictis A5003XF	XF	92	A-C	0	1.0	0	1.0	1.5	A
Asgrow AG53XF2	XF	91	A-C	0	1.0	0	1.0	1.5	A
Progeny 5056XFS	XFS	89	B-D	0	1.0	0	1.0	1.5	A
Innvictis A5813XF	XF	79	C-E	0	1.0	0	1.0	1.5	A
USG 7543XF	XF	69	DE	0	1.0	0	1.0	1.5	A
MO S18-6013	Conv	67	DE	0	1.0	0	1.0	1.7	A
MO S18-6328	Conv	64	E	0	1.0	0	1.0	1.5	A
Average		89		0	1.1	0	1.0	1.5	
Standard Error		8		1	0.0	0	0.0	0.0	
L.S.D.$_{.05}$		22		2	N.E.	N.E.	N.E.	N.S.	
C.V.		15		-	-	-	-	-	

† 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-26-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
Innvictis A5003XF	XF	80 A		17.0 AB		36 C		1.8 CD		151 C	
USG 7503XF	XF	79 A		16.4 C-E		39 BC		2.3 B-D		151 C	
NK 52-D6E3*	E3	77 A	82 A	16.2 DE	14.1 B	40 BC	44 AB	1.7 CD	2.3 BC	151 C	147 A
Progeny 5056XFS	XFS	75 A	74 AB	17.1 A	15.3 A	40 B	47 A	2.7 BC	2.6 AB	151 C	150 A
MO S18-6328	Conv	72 A	61 C	16.0 E	14.2 B	29 D	33 C	3.0 AB	3.3 A	151 C	149 A
Revere 5029XF	XF	71 A	64 BC	16.6 A-D	14.6 B	41 B	46 A	2.5 B-D	2.6 AB	151 C	149 A
MO S18-6013	Conv	71 A		16.1 DE		23 E		1.8 CD		156 B	
USG 7534GT	GT	70 A		16.7 A-D		47 A		4.0 A		151 C	
Asgrow AG53XF2	XF	67 A	62 C	16.8 A-C	14.5 B	37 BC	41 B	1.7 CD	1.6 C	151 C	149 A
Innvictis A5813XF	XF	66 A		16.5 B-D		36 C		1.5 D		160 A	
Innvictis A5503XF	XF	64 A		16.9 A-C		37 BC		1.5 D		151 C	
USG 7543XF	XF	61 A		16.1 DE		46 A		3.2 AB		158 AB	
Average		71	69	16.5	14.5	37	42	2.3	2.5	153	149
Standard Error		6	6	0.2	2.0	2	5	0.4	0.3	1	2
L.S.D..05		N.S.	12	0.5	0.6	4	4	1.1	0.8	2	N.S.
C.V.		14	15	2	3	6	7	-	-	1	1

† 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 signficant 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 30.

* 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 a scale of 1 (no lodging) to 5 (complete lodging).

Table A-26-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Protein[¶] (%)		Oil[¶] (%)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
Innvictis A5003XF	XF	80 A		32.7 F		25.7 A	
USG 7503XF	XF	79 A		32.0 G		24.5 B-D	
NK 52-D6E3*	E3	77 A	82 A	33.5 E	33.6 C	24.4 CD	23.8 AB
Progeny 5056XFS	XFS	75 A	74 AB	33.7 E	34.4 B	24.2 D	23.7 B
MO S18-6328	Conv	72 A	61 C	35.0 C	35.2 A	23.2 E	22.8 C
Revere 5029XF	XF	71 A	64 BC	33.8 DE	34.2 BC	24.5 B-D	24.0 AB
MO S18-6013	Conv	71 A		34.2 DE		24.2 D	
USG 7534GT	GT	70 A		36.7 A		22.2 F	
Asgrow AG53XF2	XF	67 A	62 C	31.6 G	32.3 D	24.9 B	24.2 A
Innvictis A5813XF	XF	66 A		35.9 B		22.0 F	
Innvictis A5503XF	XF	64 A		31.6 G		24.7 BC	
USG 7543XF	XF	61 A		34.4 CD		23.4 E	
Average		71	69	33.8	33.9	24.0	23.7
Standard Error		6	6	0.2	0.5	0.2	0.6
L.S.D..05		N.S.	12	0.6	0.7	0.4	0.5
C.V.		14	15	1	2	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.

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

L.S.D. values are given for ANOVA that were signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

Table A-26-c. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr	Seed Quality§§ (1-5) 1 yr	Purple Stain¶¶ (1-5) 1 yr	Leaf Holding‖ (1-5) 1 yr
Innvictis A5003XF	XF	80 A	13 A	2.3 A	4 A	1.7 B	1.0 C	1.3 A	1.5 E
USG 7503XF	XF	79 A	5 AB	1.0 D	1 A-C	1.3 B	1.3 B	1.0 A	2.2 BC
NK 52-D6E3*	E3	77 A	0 D	1.0 D	0 E	1.0 B	1.8 A	1.0 A	1.8 C-E
Progeny 5056XFS	XFS	75 A	2 CD	1.3 CD	0 DE	1.3 B	1.2 BC	1.2 A	2.0 CD
MO S18-6328	Conv	72 A	0 D	1.0 D	0 E	1.3 B	1.0 C	1.0 A	2.8 A
Revere 5029XF	XF	71 A	0 D	1.0 D	0 E	1.7 B	1.0 C	1.5 A	2.8 A
MO S18-6013	Conv	71 A	0 D	1.0 D	0 E	1.3 B	1.0 C	1.0 A	1.8 C-E
USG 7534GT	GT	70 A	3 A-C	1.3 CD	1 B-D	1.0 B	1.2 BC	1.3 A	2.7 A
Asgrow AG53XF2	XF	67 A	7 AB	1.7 BC	1 AB	1.0 B	1.0 C	1.2 A	1.7 DE
Innvictis A5813XF	XF	66 A	5 AB	1.0 D	1 A-C	4.3 A	1.0 C	1.2 A	2.0 CD
Innvictis A5503XF	XF	64 A	20 A	2.0 AB	4 A	1.3 B	1.0 C	1.2 A	1.7 DE
USG 7543XF	XF	61 A	3 BC	1.0 D	0 CD	1.0 B	1.0 C	1.0 A	2.5 AB
Average		71	5	1.3	1	1.5	1.1	1.2	2.1
Standard Error		6	3	0.2	1	0.5	0.1	0.1	0.2
L.S.D..05		N.S.	Sig.	Sig.	Sig.	Sig.	0.3	N.S.	0.5
C.V.		14	-	-	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

Ŧ 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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

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

Table A-27-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rlm Tennessee AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[ǁ] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
NK 52-D6E3*	E3	83 A	73 A	12 A	13 A	44 A	40 A	1.3 A	1.2 A	152 C	149 BC
MO S18-6013	Conv	66 B		12 A		32 E		1.3 A		155 B	
Revere 5029XF	XF	65 B	62 B	12 A	13 A	42 A-C	40 A	1.3 A	1.2 A	152 C	149 BC
MO S18-6328	Conv	62 BC	60 B	12 A	12 A	40 A-D	36 A	1.5 A	1.3 A	155 B	151 A
Progeny 5056XFS	XFS	60 B-D	58 B	12 A	12 A	42 A-C	39 A	1.2 A	1.1 A	152 C	150 B
Innvictis A5503XF	XF	57 B-E		12 A		38 B-D		1.2 A		151 CD	
USG 7503XF	XF	55 B-F		12 A		40 A-D		1.5 A		151 CD	
Asgrow AG53XF2	XF	52 B-F	55 B	12 A	13 A	36 C-E	37 A	1.0 A	1.0 A	151 CD	149 C
USG 7534GT	GT	51 C-F		12 A		41 A-D		1.3 A		150 D	
USG 7543XF	XF	47 D-F		13 A		42 AB		1.8 A		154 B	
Innvictis A5003XF	XF	44 EF		12 A		36 DE		1.0 A		150 CD	
Innvictis A5813XF	XF	41 F		33.6[a] A		38 B-D		1.5 A		157 A	
Average		57	62	12.1	12.8	39	38	1.3	1.1	152	150
Standard Error		5	4	0.3	0.7	3	3	0.3	0.1	1	3
L.S.D.$_{.05}$		14	7	N.S.	N.S.	6	N.S.	N.S.	N.S.	2	1
C.V.		14	10	3	8	8	7	-	-	1	1

† 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 signficant 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 30.

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

§ All yields are adjusted to 13% moisture.

ǁ Lodging was evaluated on a 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 A-27-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the Highland Rim Tennessee AgResearch and Education Center in Springfield, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡, T] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 52-D6E3*	E3		2 D	1.0 E	0 A	1.0 D	0.0
MO S18-6013	Conv		7 CD	1.3 DE	1 A	1.0 D	0.0
Revere 5029XF	XF		10 B-D	1.7 DE	3 A	1.7 BC	0.5
MO S18-6328	Conv		5 D	1.3 DE	1 A	1.0 D	0.0
Progeny 5056XFS	XFS		8 CD	1.7 DE	2 A	2.3 B	0.8
Innvictis A5503XF	XF		23 A-D	2.3 CD	7 A	1.0 D	0.0
USG 7503XF	XF		32 AB	4.0 AB	19 A	1.3 CD	0.2
Asgrow AG53XF2	XF		28 A-C	4.0 AB	13 A	1.0 D	0.0
USG 7534GT	GT		28 A-C	3.0 BC	12 A	1.0 D	0.0
USG 7543XF	XF		23 A-D	4.3 A	13 A	1.0 D	0.0
Innvictis A5003XF	XF		43 A	3.3 A-C	21 A	1.3 CD	0.2
Innvictis A5813XF	XF		23 A-D	3.3 A-C	9 A	5.0 A	1.5
Average			19	2.6	8	1.6	0.3
Standard Error			13	0.7	7	0.5	0.0
L.S.D..05			23	1.3	N.S.	Sig.	N.E.
C.V.			-	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-28-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
NK 52-D6E3*	E3	91 A	69 A	13 B-D	13 A	41 CD	36 A	1.2 C	1.1 B	152 CD	149 BC
Revere 5029XF	XF	81 B	65 AB	14 A-D	14 A	45 A-C	38 A	1.2 C	1.1 B	152 CD	149 BC
USG 7543XF	XF	81 B		14 AB		46 AB		1.8 BC		157 A	
Innvictis A5003XF	XF	78 BC		14 A-C		40 D		1.7 BC		153 B	
Progeny 5056XFS	XFS	78 BC	62 A-C	15 A	14 A	46 AB	39 A	1.5 BC	1.3 B	154 B	151 A
Innvictis A5503XF	XF	77 B-D		13 B-D		44 A-D		1.0 C		152 CD	
Asgrow AG53XF2	XF	76 B-D	56 C	13 CD	13 A	42 B-D	37 A	1.0 C	1.0 B	151 D	148 C
MO S18-6013	Conv	72 B-D		14 A-D		41 CD		2.2 AB		156 A	
USG 7534GT	GT	71 B-D		13 D		48 A		1.3 BC		151 D	
USG 7503XF	XF	71 CD		13 B-D		42 CD		1.5 BC		153 BC	
MO S18-6328	Conv	67 D	58 BC	13 B-D	13 A	41 D	37 A	3.0 A	2.0 A	154 B	150 AB
Innvictis A5813XF	XF	51 E		39[a]		45 A-C		1.5 BC		157 A	
Average		75	62	13.3	13.3	43	37	1.6	1.3	153	149
Standard Error		3	17	0.4	0.8	1	6	0.4	0.3	1	3
L.S.D.$_{.05}$		10	8	1.2	N.S.	4	N.S.	0.9	0.6	1	1
C.V.		8	11	5	9	6	7	-	-	1	1

† 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 signficant 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 30.

* 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 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.

a Not included in analysis due to being an extreme outlier. All three reps had similar values, mean is reported here, but was not included in ANOVA.

Table A-28-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡,T] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 52-D6E3*	E3	91 A	0 A	1.0 A	0 A	1.0 B	1.0
Revere 5029XF	XF	81 B	8 A	1.7 A	2 A	1.3 B	1.0
USG 7543XF	XF	81 B	15 A	1.7 A	3 A	1.0 B	1.3
Innvictis A5003XF	XF	78 BC	10 A	1.7 A	2 A	1.0 B	1.0
Progeny 5056XFS	XFS	78 BC	3 A	1.0 A	0 A	3.7 A	1.0
Innvictis A5503XF	XF	77 B-D	7 A	1.3 A	1 A	1.0 B	1.0
Asgrow AG53XF2	XF	76 B-D	3 A	1.0 A	0 A	1.0 B	1.0
MO S18-6013	Conv	72 B-D	3 A	1.0 A	0 A	1.0 B	1.5
USG 7534GT	GT	71 B-D	13 A	1.7 A	3 A	1.3 B	1.0
USG 7503XF	XF	71 CD	3 A	1.7 A	1 A	1.0 B	1.0
MO S18-6328	Conv	67 D	0 A	1.0 A	0 A	1.7 B	1.0
Innvictis A5813XF	XF	51 E	2 A	1.3 A	0 A	4.7 A	3.0
Average		75	6	1.3	1	1.6	1.2
Standard Error		3	4	0.3	1	0.6	0.0
L.S.D.₀₅		10	N.S.	N.S.	N.S.	Sig.	N.E.
C.V.		8	-	-	-	-	-

† 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 signficant 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.
‡ For a full description of abbreviated biotech traits, see table 30.
§ All yields are adjusted to 13% moisture.
†† 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.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September.
‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..
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 A-29-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
NK 52-D6E3*	E3	75 A	75 A	12 CD	12 C	40 B-D	36 A	1.0 A	1.0 A	146 B	145 A
Progeny 5056XFS	XFS	72 AB	73 AB	12 AB	12 AB	43 A	38 A	1.3 A	1.2 A	146 B	147 A
Revere 5029XF	XF	71 A-C	72 AB	12 A-C	12 A	41 A-C	37 A	1.0 A	1.0 A	146 B	146 A
Invictis A5003XF	XF	70 A-C		12 CD		37 DE		1.3 A		147 B	
Innvictis A5503XF	XF	67 B-D		12 B-D		39 B-E		1.0 A		146 B	
Asgrow AG53XF2	XF	67 B-D	64 BC	12 AB	12 B	41 A-C	36 A	1.0 A	1.0 A	146 B	144 A
USG 7503XF	XF	64 CD		12 B-D		38 C-E		1.0 A		144 C	
USG 7534GT	GT	64 C-E		12 A-C		41 A-C		2.0 A		146 B	
USG 7543XF	XF	63 DE		12 D		42 AB		1.3 A		152 A	
MO S18-6013	Conv	62 DE		12 A-C		28 F		1.0 A		151 A	
Innvictis A5813XF	XF	57 EF		12 A-C		36 E		1.0 A		146 B	
MO S18-6328	Conv	52 F	63 C	12 A	12 AB	31 F	31 B	1.7 A	1.4 A	146 B	145 A
Average		65	70	12.0	12.2	38	36	1.2	1.1	147	145
Standard Error		2	3	0.1	0.2	1	4	0.2	0.1	0	1
L.S.D..05		7	9	0.3	0.3	3	4	N.S.	N.S.	1	N.S.
C.V.		6	10	2	2	5	8	-	-	0	1

† 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 signficant 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 30.

* 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 a scale of 1 (no lodging) to 5 (complete lodging).

Table A-29-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)	Leaf Holding[‖] (1-5)
		1 yr	1 yr	1 yr	1 yr	1 yr	1 yr
NK 52-D6E3*	E3	75 A	2	1.0	1	1.0 C	1.0 D
Progeny 5056XFS	XFS	72 AB	0	1.0	0	1.3 BC	1.3 B-D
Revere 5029XF	XF	71 A-C	0	1.0	0	2.0 B	1.7 A-C
Innvictis A5003XF	XF	70 A-C	0	1.0	0	1.0 C	1.0 D
Innvictis A5503XF	XF	67 B-D	0	1.0	0	1.3 BC	1.0 D
Asgrow AG53XF2	XF	67 B-D	0	1.0	0	1.0 C	1.0 D
USG 7503XF	XF	64 CD	0	1.0	0	1.3 BC	1.2 CD
USG 7534GT	GT	64 C-E	0	1.0	0	1.0 C	1.7 A-C
USG 7543XF	XF	63 DE	0	1.0	0	1.3 BC	2.0 AB
MO S18-6013	Conv	62 DE	0	1.0	0	1.0 C	2.0 A
Innvictis A5813XF	XF	57 EF	0	1.0	0	3.7 A	
MO S18-6328	Conv	52 F	0	1.0	0	1.3 BC	1.3 B-D
Average		65	0	1.0	0	1.4	1.4
Standard Error		2	0	0.0	0	0.2	0.2
L.S.D.$_{.05}$		7	N.E.	N.E.	N.E.	0.7	0.6
C.V.		6	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-30-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
Revere 5029XF	XF	83 A	79 A	12 BC	12 AB	49 AB	47 AB	1.3 C	1.5 B	151 B	148 A
NK 52-D6E3*	E3	81 A	73 AB	12 B-D	11 BC	46 CD	45 B	1.7 BC	2.5 A	142 D	143 B
Progeny 5056XFS	XFS	76 AB	73 AB	12 BC	12 A	50 A	48 A	1.0 C	1.3 B	151 B	148 A
MO S18-6013	Conv	76 A-C		12 B		42 EF		1.0 C		157 A	
Innvictis A5503XF	XF	75 A-D		12 B-E		48 A-C		1.0 C		148 BC	
USG 7503XF	XF	73 A-D		12 B-D		47 B-D		1.3 C		144 CD	
USG 7543XF	XF	67 B-E		12 C-E		50 A		1.3 C		150 B	
Asgrow AG53XF2	XF	64 C-E	66 BC	12 B-D	11 C	50 A	48 A	1.0 C	1.0 B	147 BC	145 B
Innvictis A5003XF	XF	64 DE		11 DE		42 F		2.3 AB		147 B-D	
USG 7534GT	GT	61 E		12 A		49 AB		1.3 C		147 BC	
Innvictis A5813XF	XF	61 E		11 E		45 DE		1.0 C		156 A	
MO S18-6328	Conv	61 E	60 C	12 A	12 A	38 G	37 C	2.7 A	2.3 A	151 B	148 A
Average		70	70	11.8	11.6	46	45	1.4	1.7	149	146
Standard Error		4	4	0.1	0.3	1	2	0.3	0.3	2	2
L.S.D..05		12	9	0.4	0.3	3	3	0.8	0.8	5	3
C.V.		10	11	2	2	4	5	-	-	2	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.

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 30.

* 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 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 A-30-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials with irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)
		1 yr	1 yr	1 yr	1 yr	1 yr
Revere 5029XF	XF		5 BC	1.3 B	1 BC	2.0 A
NK 52-D6E3*	E3		2 C	1.0 B	0 C	1.3 A
Progeny 5056XFS	XFS		2 C	1.0 B	0 C	1.0 A
MO S18-6013	Conv		0 C	1.0 B	0 C	1.0 A
Innvictis A5503XF	XF		10 B	1.7 B	2 B	1.7 A
USG 7503XF	XF		7 BC	1.7 B	1 BC	1.3 A
USG 7543XF	XF		22 A	3.0 A	7 A	1.0 A
Asgrow AG53XF2	XF		0 C	1.0 B	0 C	1.0 A
Innvictis A5003XF	XF		5 BC	1.7 B	1 BC	2.0 A
USG 7534GT	GT		3 BC	1.3 B	1 BC	1.0 A
Innvictis A5813XF	XF		2 C	1.3 B	0 C	1.3 A
MO S18-6328	Conv		0 C	1.0 B	0 C	2.0 A
Average			5	1.4	1	1.4
Standard Error			3	0.3	1	0.3
L.S.D..05			8	0.8	2	N.S.
C.V.			-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-31-a. Mean† yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging‖ (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
Revere 5029XF	XF	70 A	68 A	12 A-C	12 A	50 A	44 A	1.0	1.0	148 BC	145 A
Progeny 5056XFS	XFS	70 A	66 AB	12 A-D	12 A	47 A	42 AB	1.0	1.0	148 BC	145 A
USG 7503XF	XF	69 AB		12 A-E		48 A		1.0		141 E	
NK 52-D6E3*	E3	67 A-C	59 BC	12 A-D	11 B	47 A	40 B	1.3	1.3	146 CD	145 A
Innvictis A5503XF	XF	64 A-C		11 E		47 A		1.0		152 AB	
USG 7543XF	XF	63 A-C		11 E		48 A		1.0		148 A-C	
Innvictis A5003XF	XF	62 A-C		12 A-E		45 AB		1.0		142 DE	
Asgrow AG53XF2	XF	61 BC	54 CD	12 C-E	11 B	49 A	43 AB	1.0	1.0	150 A-C	145 A
MO S18-6013	Conv	60 C		12 A		38 CD		1.0		152 AB	
Innvictis A5813XF	XF	59 CD		12 DE		41 BC		1.0		152 AB	
MO S18-6328	Conv	51 DE	48 D	12 B-E	11 AB	36 D	32 C	2.3	1.7	153 A	148 A
USG 7534GT	GT	45 E		12 AB		46 AB		1.0		150 A-C	
Average		62	59	11.9	11.5	45	40	1.1	1.2	148	146
Standard Error		3	5	0.2	0.5	2	6	0.0	0.1	2	3
L.S.D..05		8	8	0.6	0.4	5	3	N.E.	N.E.	5	N.S.
C.V.		8	11	3	3	7	6	-	-	2	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.

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

L.S.D. values are given for ANOVA that were signficant 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 30.

* 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 a scale of 1 (no lodging) to 5 (complete lodging).

Table A-31-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the AgResearch and Education Center at Milan in Milan, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield§ (bu/ac)	SDS DI[††] (%)	SDS DS[††] (1-9)	SDS DX[††] (DI x DS/9)	Frogeye[‡‡] (%)
		1 yr	1 yr	1 yr	1 yr	1 yr
Revere 5029XF	XF		3 D	1.3 BC	1 DE	1.7 A
Progeny 5056XFS	XFS		0 D	1.0 C	0 E	1.7 A
USG 7503XF	XF		22 BC	2.3 AB	5 B-D	1.7 A
NK 52-D6E3*	E3		8 CD	1.7 BC	2 DE	1.0 A
Innvictis A5503XF	XF		12 CD	2.0 A-C	2 DE	1.7 A
USG 7543XF	XF		37 AB	3.0 A	12 A	1.3 A
Innvictis A5003XF	XF		40 A	1.7 BC	8 AB	1.3 A
Asgrow AG53XF2	XF		15 CD	1.7 BC	3 C-E	1.3 A
MO S18-6013	Conv		3 D	1.7 BC	1 DE	1.3 A
Innvictis A5813XF	XF		17 CD	2.0 A-C	4 B-E	1.0 A
MO S18-6328	Conv		2 D	1.0 C	0 E	1.7 A
USG 7534GT	GT		37 AB	1.7 BC	7 BC	1.7 A
Average			16	1.8	4	1.4
Standard Error			6	0.3	2	0.4
L.S.D.$_{.05}$			17	1.0	5	N.S.
C.V.			-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-32-a. Mean[†] yield and agronomic traits of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the East Tennessee AgResearch and Education Center in Knoxville, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac)		Moisture at Harvest (%)		Plant Height (in.)		Lodging[‖] (1-5)		Maturity (DAP)	
		1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr	1 yr	2 yr
NK 52-D6E3*	E3	66 A	62 A	12.5 B	11.9 B	45 A	39 B	1.3 A	1.7 A	145 B	144 A
Progeny 5056XFS	XFS	56 B	58 AB	13.8 A	13.2 A	48 A	46 A	1.3 A	1.2 A	146 B	145 A
MO S18-6013	Conv	55 B		14.0 A		38 B-D		1.0 A		150 A	
Innvictis A5503XF	XF	52 BC		12.5 B		42 AB		1.0 A		145 BC	
Asgrow AG53XF2	XF	51 BC	48 C	13.1 AB	12.3 B	43 AB	41 B	1.0 A	1.0 A	146 B	143 A
USG 7503XF	XF	51 BC		13.1 AB		44 AB		1.0 A		141 C	
Revere 5029XF	XF	51 BC	53 A-C	13.7 A	13.1 A	47 A	44 AB	1.3 A	1.2 A	148 AB	146 A
USG 7534GT	GT	45 CD		13.4 AB		45 A		2.0 A		146 B	
Innvictis A5003XF	XF	44 CD		12.6 B		39 BC		2.7 A		147 AB	
USG 7543XF	XF	42 D		12.5 B		47 A		2.3 A		145 BC	
MO S18-6328	Conv	41 D	51 BC	13.6 A	12.5 AB	33 D	34 C	2.7 A	2.0 A	150 A	147 A
Innvictis A5813XF	XF	39 D		13.7 A		36 CD		1.3 A		148 AB	
Average		49	54	13.2	12.6	42	41	1.6	1.4	146	145
Standard Error		3	3	0.3	0.8	2	3	0.5	0.3	2	2
L.S.D._{.05}		8	9	1.0	0.7	6	5	N.S.	N.S.	4	N.S.
C.V.		9	14	4	5	8	10	-	-	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.

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

L.S.D. values are given for ANOVA that were signficant 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 30.

* 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 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 A-32-b. Mean yield and quality of 12 Maturity Group V Early (5.0 - 5.4) soybean varieties evaluated in small plot replicated trials without irrigation at the West Tennessee AgResearch and Education Center in Jackson, Tennessee during 2023.

Variety	Herbicide Pkg[†]	Avg. Yield[§] (bu/ac) 1 yr	SDS DI[††] (%) 1 yr	SDS DS[††] (1-9) 1 yr	SDS DX[††] (DI x DS/9) 1 yr	Frogeye[‡‡] (%) 1 yr	Leaf Holding[‖] (1-5) 1 yr
NK 52-D6E3*	E3	66 A	2 A	1.3 A	0 A	1.3 B	1.0 D
Progeny 5056XFS	XFS	56 B	3 A	1.3 A	1 A	2.7 B	0.7 D
MO S18-6013	Conv	55 B	17 A	1.3 A	2 A	1.3 B	2.7 AB
Innvictis A5503XF	XF	52 BC	30 A	2.7 A	13 A	2.7 B	1.0 D
Asgrow AG53XF2	XF	51 BC	28 A	4.0 A	14 A	3.0 AB	1.0 D
USG 7503XF	XF	51 BC	22 A	2.7 A	6 A	2.0 B	1.0 D
Revere 5029XF	XF	51 BC	18 A	2.7 A	6 A	2.7 B	1.3 CD
USG 7534GT	GT	45 CD	38 A	2.3 A	10 A	1.3 B	2.0 BC
Innvictis A5003XF	XF	44 CD	38 A	2.7 A	11 A	1.3 B	1.3 CD
USG 7543XF	XF	42 D	33 A	2.7 A	10 A	2.0 B	1.3 CD
MO S18-6328	Conv	41 D	5 A	2.0 A	1 A	1.7 B	3.3 A
Innvictis A5813XF	XF	39 D	22 A	1.7 A	4 A	4.7 A	3.3 A
Average		49	21	2.3	7	2.2	1.7
Standard Error		3	10	0.6	4	0.6	0.3
L.S.D.$_{.05}$		8	N.S.	N.S.	N.S.	1.7	0.9
C.V.		9	-	-	-	-	-

† 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 signficant 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.

‡ For a full description of abbreviated biotech traits, see table 30.

§ All yields are adjusted to 13% moisture.

†† 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.

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

‖ Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity..

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 A-33. Characteristics of soybean varieties evaluated in Tennessee during 2021, as provided by tl

Variety	Rel. Mat.	Herb. Tol.†	SCN‡	SDS‡	Frogeye‡	Seed Treatment
Asgrow AG38XF1	3.8	XF	R3	5	3	Accerleron Fungicide + Insecticide
AsGrow AG39XF3	3.9	XF	R3	S	S	
Asgrow AG43XF2	4.3	XF	R3	S	S	Accerleron Fungicide + Insecticide
AsGrow AG45XF3	4.5	XF	R3	S	S	
Asgrow AG47XF2	4.7	XF	R3	S	S	Accerleron Fungicide + Insecticide
AsGrow AG48XF3	4.8	XF	R3	S	S	
AsGrow AG49XF3	4.9	XF	R3	S	S	
Asgrow AG53XF2	5.3	XF	R3	S	S	Accerleron Fungicide + Insecticide
Don Mario DM45F23	4.5	XF		MR	R	Cruiser Max Vibrance
Don Mario DM48F53	4.8	XF		MR	R	Cruiser Max Vibrance
Dyna-Gro S38XF22S*	3.8	XF	MR3	MR	MR	Equity VIP Saltro & Vayantis
Dyna-Gro S41EN72	4.1	E3	R3, MR14	MR	MR	Equity VIP Saltro & Vayantis
Dyna-Gro S45XF02	4.5	XF	MR3	MR	MR	Equity VIP Saltro & Vayantis
Dyna-Gro S47XF23S	4.7	XFS	R3	MR	MS	Equity VIP Saltro & Vayantis
Dyna-Gro S48EN73	4.8	E3	R3	MS	MS	Equity VIP Saltro & Vayantis
Dyna-Gro S49XF43S	4.9	XFS	MR3	MS	R	Equity VIP Saltro & Vayantis
Innvictis A3992XF	3.9	XF	R	R	R	Insecticide/Fungicude
Innvictis A4411XF	4.4	XF				
Innvictis A4503XF	4.5	XF	R	MR	R	Insecticide/Fungicude
Innvictis A4862XF	4.8	XF	R	R	R	fungicide /insecticide
Innvictis A5003XF	5.0	XF	R	R	R	Insecticide/Fungicude
Innvictis A5503XF	5.5	XF	SR	R	R	Insecticide/Fungicude
Innvictis A5813XF	5.8	XF	R	MR	NA	Insecticide/Fungicude
Innvictis B4603E	4.6	E3	MR	R	R	Insecticide/Fungicude
Innvictis B4903E	4.9	E3	MR	R	R	Insecticide/Fungicude
Innvictis B5013E	4.0	E3	MR	NA	R	Insecticide/Fungicude
MO S18-17644	4.8	Conv	1, 3, 14	R	MR	Warden RTA
MO S18-6013	5.2	Conv	3, 14	R	MR	Warden RTA
MO S18-6328	5.0	Conv	R - 1, 3, 14	R	MR	Warden RTA
MO S19-10701	4.5	Conv	3, 14	R	S	Warden RTA
NK 42-A6E3S	4.2	E3	MR3	R	R	Cruisermaxx APX
NK 44-Q5E3S	4.4	E3	MR3, MR14	R	R	Cruisermaxx APX
NK 52-D6E3*	5.2	E3	MR3, MR14	R	R	Cruisermaxx APX
Perdue Agribusiness P29ILO22	2.9	Conv	R3			

Table A-33. Characteristics of soybean varieties evaluated in Tennessee during 2021, as provided by tl

Variety	Rel. Mat.	Herb. Tol.[†]	SCN[‡]	SDS[‡]	Frogeye[‡]	Seed Treatment
Perdue Agribusiness P30ILO22	3.0	Conv	R3			
Perdue Agribusiness P41IL022	4.1	Conv	R3			
Perdue Agribusiness P41MO21	4.1	Conv	R3, R14	S	S	
Perdue Agribusiness P45XP421	4.5	Conv	S1, S3, S5			
Perdue Agribusiness P48MO21	4.8	Conv	R2	R	R	
Progeny 4604XFS**	4.6	XFS	R	MR/MS	MR	ProServo/S
Progeny 4691XFS*	4.6	XFS	R	S	MR	ProServo/S
Progeny 4775E3S	4.7	E3S	R3, MR14	MR	MR	ProServo/S
Progeny 4798XF	4.7	XF		MR	MR	ProServo/S
Progeny 4806XFS	4.8	XFS		S	MS	ProServo/S
Progeny 5056XFS	5.0	XFS		MS	S	ProServo/S
Revere 3908XFS*	3.9	XFS	MR3	MR/MS	Avg	Radius Premium
Revere 4237XFS	4.2	XFS				Radius Premium
Revere 4299XS	4.2	R2XS	R3, MR14	MR	VG	Radius Premium
Revere 4526XFS	4.5	XFS	R3, MR14	MR	BA	Radius Premium
Revere 4727XF	4.7	XF	R3, MR14	R	Ex	Radius Premium
Revere 4731XF	4.7	XF				Radius Premium
Revere 4795XS****	4.7	R2XS	R3, MR14	R	VG	Radius Premium
Revere 4826XF*	4.8	XF	R3, MR14	MR/MS	BA	Radius Premium
Revere 4934XF	4.9	XF				Radius Premium
Revere 5029XF	5.0	XF	R3, MR14	MR/MS	Avg	Radius Premium
TN Exp TN18-4110b	4.9	Conv.	S	unknow	unknown	tbd
USG 7394XFS	3.9	XFS	HR3, MS14	MR	MR	Ipconazole, Metalaxyl, Imidicloprid
USG 7461XFS**	4.6	XFS	R3, MR14	MR	MR	Ipconazole, Metalaxyl, Imidicloprid
USG 7463XF	4.6	XF	S	MR	MR	Ipconazole, Metalaxyl, Imidicloprid
USG 7474XFS	4.7	XFS	R3, MR14	MR	R	Ipconazole, Metalaxyl, Imidicloprid
USG 7494ETS	4.9	E3S	R3, MR14		MR	Ipconazole, Metalaxyl, Imidicloprid
USG 7496XTS**	4.9	R2XS	R3, MR14	MR	MS	Ipconazole, Metalaxyl, Imidicloprid
USG 7503XF	5	XF	S	MR	MR	Ipconazole, Metalaxyl, Imidicloprid
USG 7534GT	5.4	GT	MS2, MR3, MS5			Ipconazole, Metalaxyl, Imidicloprid
USG 7543XF	5.4	XF	S	MR	MR	Ipconazole, Metalaxyl, Imidicloprid

Table A-33. Characteristics of soybean varieties evaluated in Tennessee during 2021, as provided by tl

Variety	Rel. Mat.	Herb. Tol.[†]	SCN[‡]	SDS[‡]	Frogeye[‡]	Seed Treatment
Xitavo 3803E	3.8	E3	R3	MS	MR	ObviusPlus Poncho Votivo Ilevo
Xitavo 4084E	4	E3	R3	MS	MR	ObviusPlus Poncho Votivo Ilevo
Xitavo 4364E	4.3	E3	R3	MR	MR	ObviusPlus Poncho Votivo Ilevo
Xitavo 4522E	4.5	E3	R3	MR	MD	ObviusPlus Poncho Votivo Ilevo
Xitavo 4653E	4.6	E3	R3	MS	MR	ObviusPlus Poncho Votivo Ilevo
Xitavo 4894E	4.8	E3	R3		MR	ObviusPlus Poncho Votivo Ilevo

† For a full description of abbreviated biotech traits, see table 31.
‡ R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible.
§ Flower colors: P = purple, W = white, S = segregating,
‖ Pubescence colors: T = tawny, LT = light tawny, B = brown, G = gray, S=segregating
* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.