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 29.
* Asterisks after a name indicate the number of preceding consecutive years in the top-performing "A" group.
§ All yields are adjusted to 13% moisture.
‖ Lodging was evaluated on a 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-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 29.
§ 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-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)		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	
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 29.
§ 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.