

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 P48MO21Conv	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 29.

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

§ All yields are adjusted to 13% moisture.

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

T Indicate data that were log transformations 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§	SDS DI††, †	SDS DS††, †	SDS DX††, †	Frogeye††, †	Leaf Holding‡
		(bu/ac)	(%)	(1-9)	(DI x DS/9)	(%)	(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
Innictis 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
Innictis 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
Innictis 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 P48MO21Conv	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 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 29.

§ 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.

† 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.