

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 significant at P<0.05. Variables in which minimal variation was observed were not subjected to ANOVA and are reported as N.E.

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

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

[§] All yields are adjusted to 13% moisture.

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

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

Table 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§	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
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 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.