Table 5-a. Mean† yield and agronomic traits of nine Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials at eight AgResearch and Education Center locations in Tennessee during 2023. Analysis included variety performance over a 1 yr, 2 yr, and 3 yr period.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)			Moisture at Harvest (%)			Plant Height (in.)			Lodging‖ (1-5)		
		1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr	1 yr	2 yr	3 yr
Asgrow AG38XF1	XF	76 A	62 A	60 A	12.1 C	12.2 B	12.6 B	38 CD	36 B	35 B	1.4 C	1.2 A	1.2 A
USG 7394XFS	XFS	75 A			12.4 AB			41 A			1.8 A		
Revere 3908XFS*	XFS	75 AB	63 A	62 A	12.5 A	12.7 A	13.0 A	40 AB	38 A	37 A	1.5 BC	1.3 A	1.2 A
Dyna-Gro S38XF22S*	XF	75 AB	62 A		12.1 C	12.3 B		39 BC	36 B		1.3 C	1.2 A	
Xitavo 3803E	E3	74 AB			12.6 A			37 D			1.9 A		
Asgrow AG39XF3	XF	74 AB			12.2 BC			37 D			1.8 AB		
Innvictis A3992XF	XF	69 B			12.2 BC			37 D			1.6 A-C		
Perdue Agribusiness P30ILO22	Conv	53 C			12.2 BC			30 E			1.5 BC		
Perdue Agribusiness P29ILO22	Conv	48 C			12.5 A			31 E			1.9 A		
Average		**69**	**62**	**61**	**12.3**	**12.4**	**12.8**	**37**	**37**	**36**	**1.6**	**1.2**	**1.2**
Standard Error		**4**	**13**	**8**	**0.6**	**0.4**	**0.5**	**1**	**3**	**2**	**0.3**	**0.2**	**0.1**
L.S.D.$_{.05}$		**5**	**N.S.**	**N.S.**	**0.2**	**0.2**	**0.2**	**1**	**1**	**1**	**0.3**	**N.S.**	**N.S.**
C.V.		**14**	**12**	**12**	**3**	**4**	**5**	**7**	**6**	**7**	**-**	**-**	**-**
Site-Years		**8**	**16**	**24**	**8**	**16**	**24**	**8**	**16**	**24**	**8**	**16**	**24**

† Varieties that have any MS letter in common are not significantly different at the 5% level of probability. Values highlighted in light orange are above average for a given trait, MS letters highlighted in dark orange are in the "A group", indicating no statistical difference from the top-performing variety, for a given trait.
C.V. is only reported for variables evaluated on a ratio scale.
L.S.D. values are given for ANOVA that were 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 5-b. Mean† yield and quality traits of nine Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials at eight AgResearch and Education Center locations in Tennessee during 2023. Analysis included variety performance over a 1 yr, 2 yr, and 3 yr period.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)			Maturity (DAP)			Protein¶ (%)			Oil¶ (%)		
		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	76 A	62 A	60 A	133 C	131 A	132 B	33.9 CD	34.2 B	34.8 B	23.4 C	23.3 B	23.1 A
USG 7394XFS	XFS	75 A			135 A			34.4 BC			23.6 C		
Revere 3908XFS*	XFS	75 AB	63 A	62 A	133 BC	132 A	133 A	35.0 A	35.3 A	35.8 A	23.1 D	22.9 C	22.6 B
Dyna-Gro S38XF22S*	XF	75 AB	62 A		134 AB	132 A		33.1 E	33.4 C		24.8 B	24.9 A	
Xitavo 3803E	E3	74 AB			134 A-C			31.6 F			25.9 A		
Asgrow AG39XF3	XF	74 AB			134 A-C			34.8 AB			22.4 EF		
Innvictis A3992XF	XF	69 B			134 AB			33.3 E			23.4 CD		
Perdue Agribusiness P30ILO22	Conv	53 C			129 D			33.7 D			22.5 E		
Perdue Agribusiness P29ILO22	Conv	48 C			126 E			33.2 E			22.1 F		
Average		**69**	**62**	**61**	**132**	**132**	**132**	**33.7**	**34.3**	**35.3**	**23.5**	**23.7**	**22.9**
Standard Error		**4**	**13**	**8**	**1**	**2**	**1**	**0.2**	**0.3**	**0.6**	**0.1**	**0.1**	**0.3**
L.S.D.$_{.05}$		**5**	**N.S.**	**N.S.**	**1**	**N.S.**	**1**	**0.5**	**0.5**	**0.3**	**0.3**	**0.3**	**0.1**
C.V.		**14**	**12**	**12**	**2**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**0**
Site-Years		**8**	**16**	**24**	**8**	**16**	**24**	**1**	**2**	**3**	**1**	**2**	**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.
* 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. Evaluated at Knoxville location only.

Table 5-c. Mean† yield and quality of nine Maturity Group III (3.0 - 3.9) soybean varieties evaluated in small plot replicated trials at eight AgResearch and Education Center locations in Tennessee during 2021. Sudden death syndrome (SDS) and frogeye disease ratings were taken in mid-September. Leaf holding was taken at harvest. Seed quality and purple stain raitings were taken post-harvest.

Variety	Herbicide Pkg†	Avg. Yield§ (bu/ac)	SDS DI††, T (%)	SDS DS††, T (1-9)	SDS DX††, T (DI x DS/9)	Frogeye‡‡ (1-9)	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 AG38XF1	XF	76 A	10 AB	1.7 A	3 AB	1.6 C	1.2 A	1.3 A	1.3 A
USG 7394XFS	XFS	75 A	4 A-C	1.7 A	2 A-C	2.2 BC	1.7 A	1.5 A	1.5 A
Revere 3908XFS*	XFS	75 AB	14 A	2.1 A	7 A	2.3 BC	1.5 A	1.5 A	1.5 A
Dyna-Gro S38XF22S*	XF	75 AB	3 C	1.2 A	0 C	3.2 A	1.3 A	1.2 A	1.2 A
Xitavo 3803E	E3	74 AB	5 A-C	1.3 A	1 A-C	1.9 BC	2.2 A	1.5 A	1.5 A
Asgrow AG39XF3	XF	74 AB	6 AB	1.5 A	2 AB	2.5 AB	1.3 A	1.3 A	1.3 A
Innvictis A3992XF	XF	69 B	3 BC	1.4 A	1 BC	3.0 A	1.5 A	1.2 A	1.2 A
Perdue Agribusiness P30ILO22	Conv	53 C	5 AB	1.3 A	1 AB	1.7 C	1.2 A	1.2 A	1.2 A
Perdue Agribusiness P29ILO22	Conv	48 C	7 A-C	1.5 A	2 A-C	2.0 BC	1.5 A	1.5 A	1.5 A
Average		**69**	**6**	**1.5**	**2**	**1.5**	**1.4**	**1.2**	**1.2**
Standard Error		**4**	**3**	**0.3**	**1**	**0.2**	**0.1**	**0.1**	**0.1**
L.S.D.$_{.05}$		**5**	**Sig.**	**N.S.**	**Sig.**	**0.6**	**N.S.**	**N.S.**	**N.S.**
Site-Years		**8**	**8**	**8**	**8**	**8**	**1**	**1**	**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 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 at all locations.
‡‡ Frogeye was evaluated using a 1 to 9 scale, with 1 indicating no disease. Evaluated in mid-September at all locations.
|| Leaf holding was evaluated visually at harvest using a 1 to 5 scale, with 1 indicating no leaves at maturity. Evaluated at all locations except Milan Irr and Milan Non-Irr.
§§ Seed quality was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no shriveled or damaged seed. Evaluated at Knoxville location only.
¶¶ Purple stain was evaluated visually post-harvest using a 1 to 5 scale, with 1 indicating no purple stain. Evaluated at Knoxville location only.