

2020 Maryland State Soybean Variety Trials

<http://www.psla.umd.edu/extension/md-crops>

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Test Procedures

The University of Maryland offers a fee-based, soybean variety performance testing program to local and national seed companies. The results from these replicated trials provide agronomic performance information about soybean varieties tested at four locations in Maryland considered representative of the state's geography and weather conditions. Table 1 summarizes the agronomic and production information for each test site.

Varieties tested in 2020 were entered by participating seed companies, listed in Table 2, that were solicited for submission of varieties. These varieties represented those currently available for purchase to experimental lines still under evaluation. Select Pioneer and Syngenta varieties were identified for use as checks in the test. The inclusion of the performance data for check varieties that are proven performers in the Mid-Atlantic region allows comparisons of newer varieties to proven varieties.

During 2020, 107 varieties were tested using four maturity groups: MG 3 (31 varieties, Table 6), early MG 4 (4.0-4.3, 21 varieties, Table 7), late MG 4 (>4.4, 42 varieties, Table 8) and MG 5 (13 varieties, Table 9). Check varieties were included in each of the tests. All genetic traits and seed treatments are listed in Tables 6-9.

Each variety was replicated three times per location. Planting was done with different equipment at each location, leading to different row spacing at each location. Planting, harvest, and in-season management information is presented in Tables 1 and 2. We aimed for a seeding rate of 6-7 seeds/foot where row spacing was 24 inches, 3-4 seeds/foot was used for tests planted with a drill. At the Wye Research and Education Center location only, a full-season "plus" test was conducted in 2020. All full-season varieties were planted in a separate field and treated with other in-season products to potentially enhance yields. Plot harvest length was approximately 20 feet, but varied across locations. The entire plots were harvested with an Almaco R1 research combine (Almaco Co., Nevada, IA). Grain yield, harvest moisture, and test weight were measured for each plot. These data were collected with a Seed Spector LRX system (Almaco Co., Nevada, IA) and recorded on Microsoft xTablet T1600. Extremely wet conditions delayed harvest of some locations later than desired in 2020. Results presented here for the full season test at Wye Research and Education Center include only two replications, as the third rep was unable to be harvested.

Test Results

The overall performance across the locations for the full season varieties in each maturity group is reported in Tables 10-13 and double crop varieties in Tables 32-35. Variety performance at individual locations can be found in Tables 14-31. The agronomic characteristics reported are yield, in bushels/acre at 13% moisture content, test weight (lb/bu) at 13% moisture, and height in inches.

A least significant difference (LSD) value is reported for each test where statistical significant differences ($P \leq 0.1$) for a variable were observed among varieties. The mean separation value has been calculated at the 10% probability level ($LSD_{0.1}$). The LSD can be used to compare two varieties within the same test. For example, when the yield difference between two varieties is greater than the LSD value,

there is a 90% certainty that the difference in yield is due to variety performance rather than due to random variability.

Relative Yield

The selection of a variety based solely on performance at one location is not recommended. It is better to select variety based upon performance over a number of locations and years, if possible. In order to compare the performance of each variety across the five locations, relative yield tables (Tables 36-39) are included. Relative yield is the ratio of the yield of a variety at a location to the mean yield of all the varieties at that location expressed in percentage. A variety that has a relative yield consistently greater than 100 across all testing locations is considered to have excellent stability.

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Additional Information

The inclusion of varieties in these tests is not an endorsement by the University of Maryland. Advertising statements about a company's varieties can be made as long as they are accurate statements about the data as published. Statements similar to "See the Maryland Soybean Tests Agronomy Facts No. 32" or "Endorsement or recommendation by the University of Maryland is not implied" must accompany any reproduced information.

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Table 1. Production management practices and other information for the full season locations for the 2020 Soybean Variety Trials.

Location	Soil Type and Previous Crop	Fertilizer	Pesticides	Tillage	Plant and Harvest Dates	Farm Staff
Wye R&E Center Queenstown, MD	<u>Full season</u> Mattapex- Butlertown silt loam Corn then wheat	<u>20 April</u> 415 lb/a 4-21-29 <u>Total:</u> 17-87-120	<u>21 April</u> Gly Star Plus @ 1 qt/a <u>04 June</u> Fierce XLT @ 4.5 oz/a Gly Start Plus @ 1 qt/a Metribuzin 75 @ 4 oz/a Scanner @ 2pt/100gal <u>27 July</u> FirstRate @ 0.5 oz/ac <u>23 August</u> Intensity one @ 32 oz/a	Conventional John Deere 71 Flex Planter at 24" row spacing	<u>Plant</u> 04 June <u>Harvest</u> 20 November 03 December	John Draper Joseph Streett Thomas Eason
	<u>Full season plus</u> Nassawango silt loam Rye cover crop	<u>20 April</u> 415 lb/a 4-21-29 <u>Total:</u> 17-87-120	<u>27 July</u> FirstRate @ 0.5 oz/a <u>03 Aug</u> Miravis Top @ 13.7 oz/a Warrior II with Zeon @ 1.5 oz/a <u>23 Aug</u> Intensity One @ 32 oz/a	Conventional John Deere 71 Flex Planter at 24" row spacing	<u>Plant</u> 04 June <u>Harvest</u> 19 November	
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Nassawango silt loam Wheat cover crop	<u>21 May</u> 400 lb/a 5.25-0-30-6(S)- 0.3(B) <u>Total</u> 21-0-120-24(S)-1(B)	<u>26 May</u> Gramoxone @ 24 oz/a 2,4-D @ 1qt/a Scanner 80/20 @ 6 fl oz/a <u>2 July</u> Reflex @ 20 fl oz/a Intensity @ 1.5 pt/a	No tillage 20" row spacing	<u>Plant</u> 05 June <u>Harvest</u> 24 November	David Armentrout Jordan Miller Fred Senkbeil
Central Maryland R&E Center Clarksville Facility Clarksville, MD	Glenville silt loam Rye cover crop	<u>3 April</u> 250 lb/a 0-0-60 <u>Total</u> 0-0-150	<u>9 June</u> Canopy @ 1.1 oz/a Gramoxone @ 1 qt/a <u>16 July</u> Basagran @ 1 pt/a Poast Plus @ 1 qt/a MSO @ 1 pt/a	Conventional John Deere 71 Flex Planter at 24" row spacing	<u>Plant</u> 10 June <u>Harvest</u> 19 November	Michael Dwyer David Justice Michael Gray
Western Maryland R&E Center Keedysville, MD	Swanpond- Funkstown silt loam Field corn	<u>31 March</u> 312 lb/a 3.5-16.7-32- 4.8(S)-0.32(B) <u>Total</u> 11-52-100-15(S)-1(B)	<u>6 April</u> Powermax @ 1.5 qt/a 2,4-D Weedone LV4 @ 1 qt/a <u>4 June</u> Gramoxone @ 1 qt/a Brawl II @ 1.33 pt/a 2,4-D Weedone LV4 @ 1 pt/a <u>14 July</u> Dakota @ 1pt/a Butyrac 200 @ 0.5 pt/ac Pinnacle @ 0.25 oz/a	Conventional John Deere 71 Flex Planter at 24" row spacing	<u>Plant</u> 09 June <u>Harvest</u> 4 November	Ryan McDonald Kenny Frey Douglas Price David Wyand

Table 2. Production management practices and other information for the double crop locations for the 2020 Soybean Variety Trials.

Location	Soil Type and Previous Crop	Fertilizer	Pesticides	Tillage	Plant and Harvest Dates	Farm Staff
Wye R&E Center Queenstown, MD	Mattapex- Butlertown sil loam Wheat	<u>03 July</u> 20 lb/a N as 30% UAN	<u>03 July</u> Fierce XLT @ 4.5 oz/a Metribuzin 75 @ 4 oz/a Gly Star Plus @ 1 qt/a <u>23 Aug</u> Intensity One @ 32 oz/a	No Tillage Great Plains Drill at 7.5” row spacing	<u>Plant</u> 02 July <u>Harvest</u> 18 November	John Draper Joseph Streett Thomas Eason
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Mattapex silt loam Wheat	-	<u>6 July</u> RoundUp @ 1pt/a ValorXLT @ 4 oz/a <u>3 August</u> Reflex @ 20 oz/a Intensity @ 1.5 pt/a	No Tillage 20” row spacing	<u>Plant</u> 06 July <u>Harvest</u> 24 November	David Armentrout Jordan Miller Fred Senkbeil

Table 3. Brands and companies in the 2020 Maryland soybean variety trials

Brand	Address
Asgrow	800 N. Lindbergh Blvd., St. Louis, MO 63167 www.dekalbasgrowdeltapine.com
Credenz	BASF, 544 Loop Road, Clayton, NC 27527 agriculture.basf.us
Dyna-Gro	Nutrien Ag Solution, 396 Washington St., Boydton, VA 23917 www.dynagroseed.com
Local Seed Company	802 Rozelle St., Memphis, TN 38104 www.localseed.com
Southern Harvest	Meherrin, 1725 Windward Concourse, Suite 410, Alpharetta, GA 30005 www.meherrinag.com
Mid-Atlantic Seeds	Mid-Atlantic Seeds, 316 N Albemarle St., York, PA 17402 www.midatlanticseeds.com
Pioneer	DuPont-Pioneer, PO Box 1000, Johnston, IA 50131 www.pioneer.com
Seed Consultants	648 Miami Trace Rd SW, Washington Court House, OH 43160 www.seedconsultants.com
NK	Syngenta Seeds, 4013 Fairmount Pike, Signal Mountain, TN 37377 www.syngenta-us.com
MorSoy	SeedKoz, 1725 Windward Concourse, Suite 410, Alpharetta, GA 30005 www.meherrinag.com
UniSouth Genetics	3205C Highway 46S, Dickson, TN 37055 https://www.usgseed.com/
University of Missouri	Missouri Soybean Center, 110 Water Hall, University of Missouri, Columbia, MO 65211 https://soybeancenter.missouri.edu/center/
Virginia Tech	College of Agriculture and Life Sciences, Crop and Soil Environmental Sciences https://cropgenetics.cses.vt.edu/soybean-breeding.html

Table 4. Precipitation received in 2020 at Maryland locations of soybean variety trials

	Wye	Poplar Hill	Keedysville	Clarksville
Month	inches			
June	4.35	4.14	2.07	3.30
July	4.15	5.26	1.06	3.08
August	17.46	11.12	1.77	n/a
September	7.98	4.58	1.03	2.69
October	6.54	6.88	0.24	n/a
2020 Total (5 mos.)	40.48	31.98	6.17	n/a
Long Term Average²	24.15	20.85	16.55	21.35 (2019)

¹The number in parenthesis following precipitation for each month indicates the amount of supplemental irrigation applied.

²Long term average precipitation is for the follow number of years at each location: Wye=21; Poplar Hill = 20; Keedysville = 40; Clarksville =11

Table 5. Glossary of abbreviations for variety genetic traits and description of seed treatments

Abbreviation	Description
Ballcious subtilis Ballcious pumis	Biofungicide used as seed treatment to control <i>Sclerotinia sclerotiorum</i>
CruiserMaxx	Seed treatment to protect against insect, seedborne and seedling diseases
Enlist E3	Soybeans modified to be tolerant to use of 2,4-D choline, glyphosate, and glufosinate herbicides for weed control
ILeVO	Seed treatment to protect against sudden death syndrome and nematodes
LibertyLink GT27 LLGT27	Refers to glufosinate (Liberty) herbicide tolerance
LumiGEN	Fungicide seed treatment to protect against common seedborne diseases
RR2X (Xtend)	Soybeans which have dicamba and glyphosate herbicide resistance
RR2Y (Yield)	Soybeans which have glyphosate herbicide resistance
Saltro	Seed treatment for protection against sudden death syndrome
STS	Sulfonylurea-tolerant soybeans
Vibrance	Seed treatment effective against certain smut diseases and provide protection against seed/soil-borne pathogens Vibrance is effective against certain smut diseases in cereal grains and seed and seedling blight or damping-off caused by seed- and soilborne pathogens including <i>Rhizoctonia</i>
Xtend	Soybeans which have dicamba herbicide resistance

Table 6. Group 3 soybean entries and their resistance to soybean cyst nematode (SCN), traits, and seed treatments. Check varieties are bolded.

Brand	Variety	Maturity	SCN Resistant	Traits	Seed Treatment
Asgrow	AG36X6	3.6	Y	RR2X	
Asgrow	AG37X0	3.7	Y	RR2X	
Asgrow	AG38X8	3.8	Y	RR2X	
Asgrow	AG38X8	3.8	N	R3	untreated
Credenz	CZ3750GTLL	3.7	N	Liberty Link GT27	
Credenz	CZ4701GTLL	3.7	N	Liberty Link GT27	
Credenz	CZ3840GTLL	3.8	N	Liberty Link GT27	
Credenz	CZ3930GTLL	3.9	N	Liberty Link GT27	
Dyna-Gro	S39EN19	3.9	Y	Enlist E3	
Dyna-Gro	S39GL11	3.9	Y	LLGT27	
Local Seed	ZS3496GL	3.4	Y	LLGT27	
Local Seed	LS3606GL	3.6		LLGT27	
Local Seed	ZS3898E3S	3.8	Y	Enlist	
Local Seed	LS3976X	3.9	Y	Xtend	
Local Seed	LS3906GL	3.9		LLGT27	
Mid-Atlantic	MAS3220E3	3.2		E3	
Mid-Atlantic	MAS3600E3/STS	3.6		E3	
Mid-Atlantic	MAS3720E3/STS	3.7		E3	
MorSoy	MS 3907	3.9	Y	RXT	
NK Brand	S37-A4X	3.7	Y	RR2,EXTEND	
NK Brand	S39-G2X	3.9	Y	RR2,EXTEND	
Pioneer	P25A82L	2.5		Liberty Link	Ballcuis subtilis & ballcuis pumis
Pioneer	P31A95X	3.1		RR2 Xtend	LumiGEN, Ileva
Pioneer	P33A24X	3.3		RR2 Xtend	LumiGEN, Ileva
Seed Consultants	SC 7361E	3.6	Y		
Seed Consultants	SC 7381E	3.8	Y		
Seed Consultants	SC 7390E	3.9	Y		
Southern Harvest	SH 3814 LL	3.8	N	LL	
Syngenta	S37-A4X	3.7		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
Syngenta	S39-G2X	3.9		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
USG	7381ETS	3.8		Enlist/STS	

Table 7. Early Group 4 soybean entries (\leq MG4.4) and their resistance to soybean cyst nematode (SCN), traits, and seed treatments. Check varieties are bolded.

Brand	Variety	Maturity	SCN Resistant	Traits	Seed Treatment
Asgrow	AG42X9	4.2	Y	RR2X	
Asgrow	AG43X0	4.3	Y	RR2X/SR	
Asgrow	AG43X8	4.3	Y	RR2X	
Credenz	CZ4240GTLL	4.2	N	Liberty Link GT27	
Credenz	CZ4410GTLL	4.4	N	Liberty Link GT27	
Dyna-Gro	S41ES80	4.1	Y	Enlist E3	
Dyna-Gro	S41XS98	4.1	Y	Xtend/STS	
Dyna-Gro	S43EN61	4.3	Y	Enlist E3	
Dyna-Gro	S43EN70	4.3	Y	Xtend/STS	
Dyna-Gro	S44EN40	4.4	Y	Enlist E3	
Local Seed	LS4299XS	4.2	Y	Xtend/STS	
Local Seed	ZS4295GLS	4.2	Y	LLGT27	
Local Seed	LS4407X	4.4	Y	Xtend	
Mid-Atlantic	MAS4077GT/STS	4		GT	
NK Brand	S42-B9XS	4	Y	RR2,EXTEND	
Pioneer	P42A96X	4.2		RR2 Xtend	LumiGEN, Ileva
Seed Consultants	SC 7421E	4.2	Y		
Southern Harvest	SH 4020 E3	4	Y	Enlist E3	
Southern Harvest	SH 4019 LLGT	4	N	LLGT27	
Syngenta	S42-B9XS	4.2		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
USG	7431ET	4.3		Enlist	

Table 8. Late Group 4 soybean entries (> MG4.4) and their resistance to soybean cyst nematode (SCN), traits, and seed treatments. Check varieties are bolded.

Brand	Variety	Maturity	SCN Resistant	Traits	Seed Treatment
Asgrow	AG46X0	4.6	Y	RR2X/SR	
Asgrow	AG46X6	4.6	Y	RR2X	
Asgrow	AG47X9	4.7	Y	RR2X	
Asgrow	AG48X7	4.8	Y	RR2X/SR	
Asgrow	AG48X9	4.8	Y	RR2X/SR	
Dyna-Gro	S45ES10	4.5	Y	Enlist E3	
Dyna-Gro	S46EN91	4.6	Y	Enlist E3	
Dyna-Gro	S46XS60	4.6	Y	Xtend/STS	
Dyna-Gro	S48XT90	4.8	N	Xtend	
Local Seed	LS4583X	4.5		Xtend	
Local Seed	ZS4694E3S	4.6	Y	Enlist/STS	
Local Seed	LS4607XS	4.6		Enlist/STS	
Local Seed	LS4706GL	4.7		LLGT27	
Local Seed	LS4795XS	4.7	Y	Enlist/STS	
Local Seed	LS4798X	4.7	Y	Xtend	
Local Seed	LS4889XS	4.8	Y	Xtend/STS	
Local Seed	LS4999X	4.9	Y	Xtend	
Mid-Atlantic	MAS4675E3/STS	4.6		E3	
Mid-Atlantic	MAS4666GT	4.6		GT	
Mid-Atlantic	MAS4811/E3/STS	4.8		E3	
Mid-Atlantic	MAS4820E3/STS	4.8		E3	
MorSoy	MS 4616	4.6	Y	RXT	
MorSoy	MS 4800	4.8	Y	Enlist	
MorSoy	MS 4846	4.8	Y	RXT	
Pioneer	P46A57X	4.6		RR2 Xtend	LumiGEN, Ileva
Pioneer	P48A60X	4.8		RR2 Xtend	LumiGEN, Ileva
Seed Consultants	SC 8459X	4.5	Y		
Seed Consultants	SC 7461E	4.6	Y		
Southern Harvest	SH 4619 LLGT	4.6	N	LLGT27	
Southern Harvest	SH 4820 E3	4.8	N	Enlist E3	
Southern Harvest	SH 4920 E3	4.9	N	Enlist E3	
Syngenta	S45-K5X	4.5		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
Uni. of Missouri	S15-5904RY	4.5			
Uni. of Missouri	S15-3847R	4.6	Y	RR	
Uni. of Missouri	S16-5540R	4.6	Unknown	RR	

Table 8. continued

Brand	Variety	Maturity	SCN Resistant	Traits	Seed Treatment
Uni. of Missouri	S15-3772RY	4.8	N	RR2Y	Uni. of Missouri
USG	7451ET	4.5		Enlist	USG
USG	7480ET	4.8		Enlist	USG
USG	7447XTS	4.8		RR2X/STS	USG
USG	7491ETS	4.9		Enlist STS	USG
Virginia Tech	V16-0293	4.8	NA	Conv	Virginia Tech
Virginia Tech	V17-0437	4.9	NA	Conv	Virginia Tech

Table 9. Group 5 soybean entries and their resistance to soybean cyst nematode (SCN), traits, and seed treatments. Check varieties are bolded.

Brand	Variety	Maturity	SCN Resistant	Traits	Seed Treatment
Local Seed	LS5087X	5	Y	Xtend	
Local Seed	LS5386X	5.3	Y	Xtend	
Local Seed	ZS5098E3	5	N	Enlist	
MorSoy	MS 5110	5.1	Y	Enlist	
MorSoy	MS 5398	5.3	Y	RXT	
MorSoy	MS 5607	5.6	Y	RXT	
Southern Harvest	SH 5321 E3	5.3	N	Enlist E3	
Syngenta	S51-R3XS	5.1		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
Syngenta	S53-F7X	5.3		RR2,EXTEND	CruiserMaxx, Vibrance, Saltro
University of Missouri	S16-3739RY	5.2	Unknown	RR2Y	
University of Missouri	S16-3747RY	5	Y	RR2Y	
VT	V16-0025	5.4	NA	Conv	
VT	V16-2471R	5.4	NA	RR	

Table 10. Average performance of MG 3 full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville)

Brand	Variety	MG	Yield, bu ac ⁻¹			Test weight (lb/bu)	Height (inches)
			2020	2019	2-yr Avg.		
Asgrow	AG36X6	3.6	60.2	62.3	61.2	52.6	35
Asgrow	AG37X0	3.7	65.1	62.4	63.7	53.6	41
Asgrow	AG38X8*	3.8	62.4	56.8	59.6	53.4	39
Asgrow	AG38X8	3.8	57.4	57.8	57.6	52.7	37
Credenz	CZ3750GTLL	3.7	71.8*	-	-	53.1	37
Credenz	CZ4701GTLL	3.7	75.0*	-	-	53.7	38
Credenz	CZ3840GTLL	3.8	69.0*	-	-	53.9	41
Credenz	CZ3930GTLL	3.9	67.7	-	-	54.0	39
Dyna-Gro	S39EN19	3.9	72.3*	63.5	67.9	51.9	36
Dyna-Gro	S39GL11	3.9	67.4	-	-	53.4	41
Local Seed	ZS3496GL	3.4	67.7	-	-	53.5	38
Local Seed	LS3606GL	3.6	67.2	-	-	53.5	34
Local Seed	ZS3898E3S	3.8	73.0*	-	-	52.7	38
Local Seed	LS3976X	3.9	66.8	-	-	53.5	37
Local Seed	LS3906GL	3.9	67.9	-	-	52.8	38
Mid-Atlantic	MAS3220E3	3.2	73.5*	-	-	53.6	33
Mid-Atlantic	MAS3600E3/STS	3.6	71.9*	56.4	64.1	53.1	39
Mid-Atlantic	MAS3720E3/STS	3.7	73.2*	-	-	53.8	34
MorSoy	MS 3907	3.9	65.7	-	-	54.0	38
NK Brand	S37-A4X	3.7	61.1	-	-	53.2	40
NK Brand	S39-G2X	3.9	66.7	59.2	62.9	52.9	41
Pioneer	P25A82L	2.5	43.8	-	-	50.0	33
Pioneer	P31A95X	3.1	60.2	-	-	52.6	37
Pioneer	P33A24X	3.3	58.8	-	-	52.4	33.7
Seed Consultants	SC 7361E	3.6	70.2*	-	-	52.9	35
Seed Consultants	SC 7381E	3.8	67.0	-	-	52.7	36
Seed Consultants	SC 7390E	3.9	73.1*	-	-	53.8	39
Southern Harvest	SH 3814 LL	3.8	64.2	53.7	58.9	53.8	37
Syngenta	S37-A4X	3.7	64.8	-	-	53.0	40
Syngenta	S39-G2X	3.9	61.8	-	-	52.8	43
USG	7381ETS	3.8	77.1*	-	-	52.9	34
Mean			66.7	-	-	53.1	38
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			8.7	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 11. Average performance of MG 4 (early) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.		
Asgrow	AG42X9	4.2	67.6	63.5	65.5	53.2	44
Asgrow	AG43X0	4.3	69.9	59.1	64.5	52.9	44
Asgrow	AG43X8	4.3	68.2	60.5	64.3	52.4	44
Credenz	CZ4240GTLL	4.2	72.1	-	-	53.4	43
Credenz	CZ4410GTLL	4.4	62.5	-	-	53.9	44
Dyna-Gro	S41ES80	4.1	71.6	-	-	53.3	40
Dyna-Gro	S41XS98	4.1	66.0	60.0	63.0	53.5	40
Dyna-Gro	S43EN61	4.3	68.7	-	-	53.7	42
Dyna-Gro	S43EN70	4.3	66.8	-	-	53.4	44
Dyna-Gro	S44EN40	4.4	72.8	-	-	54.1	38
Local Seed	LS4299XS	4.2	66.8	-	-	52.9	45
Local Seed	ZS4295GLS	4.2	71.5	-	-	53.8	42
Local Seed	LS4407X	4.4	68.6	-	-	53.5	42
Mid-Atlantic	MAS4077GT/STS	4	60.3	-	-	53.4	39
NK Brand	S42-B9XS	4	69.5	-	-	52.4	40
Pioneer	P42A96X	4.2	69.1	-	-	52.7	40
Seed Consultants	SC 7421E	4.2	66.9	-	-	52.7	42
Southern Harvest	SH 4020 E3	4	67.6	-	-	52.1	39
Southern Harvest	SH 4019 LLGT	4	65.5	56.9	61.2	53.2	43
Syngenta	S42-B9XS	4.2	64.9	-	-	51.0	42
USG	7431ET	4.3	69.4	-	-	53.9	42
Mean			68.0	-	-	53.1	42
Probability > F			0.9882	-	-	-	-
LSD_{0.1}			NS**	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 12. Average performance of MG 4 (late) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.		
Asgrow	AG46X0	4.6	72.9*	61.0	66.9	53.5	43
Asgrow	AG46X6	4.6	73.6*	66.9	70.2	53.3	44
Asgrow	AG47X9	4.7	72.4*	-	-	55.7	44
Asgrow	AG48X7	4.8	57.3	-	-	52.7	45
Asgrow	AG48X9	4.8	71.0*	66.1	68.5	53.8	46
Dyna-Gro	S45ES10	4.5	73.4*	-	-	53.7	43
Dyna-Gro	S46EN91	4.6	68.7*	-	-	53.0	44
Dyna-Gro	S46XS60	4.6	72.5*	-	-	53.4	41
Dyna-Gro	S48XT90	4.8	66.2*	-	-	53.7	42
Local Seed	LS4583X	4.5	68.6*	-	-	53.9	46
Local Seed	ZS4694E3S	4.6	71.0*	-	-	53.9	43
Local Seed	LS4607XS	4.6	69.4*	-	-	54.1	44
Local Seed	LS4706GL	4.7	66.3*	-	-	53.2	43
Local Seed	LS4795XS	4.7	70.5*	-	-	54.0	43
Local Seed	LS4798X	4.7	65.6*	-	-	54.0	47
Local Seed	LS4889XS	4.8	68.6*	-	-	53.4	48
Local Seed	LS4999X	4.9	72.3*	-	-	53.3	46
Mid-Atlantic	MAS4675E3/STS	4.6	71.7*	-	-	53.2	43
Mid-Atlantic	MAS4666GT	4.6	58.0	-	-	53.6	44
Mid-Atlantic	MAS4811/E3/STS	4.8	64.1	-	-	53.0	45
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	-	-	-
MorSoy	MS 4616	4.6	68.0*	-	-	53.5	46
MorSoy	MS 4800	4.8	65.8*	-	-	53.7	42
MorSoy	MS 4846	4.8	69.8*	-	-	53.9	41
Pioneer	P46A57X	4.6	69.4*	-	-	53.8	46
Pioneer	P48A60X	4.8	70.7*	-	-	53.5	40
Seed Consultants	SC 8459X	4.5	68.9*	-	-	53.9	43
Seed Consultants	SC 7461E	4.6	68.7*	-	-	53.6	43
Southern Harvest	SH 4619 LLGT	4.6	62.4	55.0	58.7	53.2	44
Southern Harvest	SH 4820 E3	4.8	66.9*	61.5	64.2	53.3	41
Southern Harvest	SH 4920 E3	4.9	69.9*	-	-	53.8	45
Syngenta	S45-K5X	4.5	70.7*	-	-	53.3	42
Uni. of Missouri	S15-5904RY	4.5	62.5	-	-	53.5	44
Uni. of Missouri	S15-3847R	4.6	52.0	-	-	52.2	45
Uni. of Missouri	S16-5540R	4.6	58.6	-	-	54.8	41
Uni. of Missouri	S15-3772RY	4.8	58.9	-	-	53.6	46

Table 12. (cont.)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.		
USG	7451ET	4.5	64.7*	-	-	53.4	45
USG	7480ET	4.8	66.2*	58.3		53.7	44
USG	7447XTS	4.8	69.7*	-	-	53.4	45
USG	7491ETS	4.9	67.9*	-	-	53.6	41
Virginia Tech	V16-0293	4.8	63.3	-	-	53.3	45
Virginia Tech	V17-0437	4.9	59.9	-	-	54.4	42
Mean			67.1	-	-	53.5	44
Probability > F			0.0154	-	-	-	-
LSD_{0.1}			9.5	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 13. Average performance of MG 5 full season soybeans evaluated at two locations (Wye, Poplar Hill)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.		
Local Seed	LS5087X	5	78.2*	-	-	53.2	40
Local Seed	LS5386X	5.3	77.2*	-	-	55.6	41
Local Seed	ZS5098E3	5	57.5	-	-	52.5	40
MorSoy	MS 5110	5.1	74.7*	-	-	54.8	39
MorSoy	MS 5398	5.3	75.7*	-	-	54.2	43
MorSoy	MS 5607	5.6	71.9	-	-	55.5	31
Southern Harvest	SH 5321 E3	5.3	65.5	-	-	54.9	47
Syngenta	S51-R3XS	5.1	67.8	-	-	54.6	41
Syngenta	S53-F7X	5.3	81.8*	-	-	53.4	44
Univ. of Missouri	S16-3739RY	5.2	69.9	-	-	54.8	25
Univ. of Missouri	S16-3747RY	5	59.4	50.0		55.4	27
VT	V16-0025	5.4	73.3	-	-	54.8	33
VT	V16-2471R	5.4	66.6	-	-	54.1	27
Mean			71.5	-	-	54.6	37
Probability > F			0.0002	-	-	-	-
LSD_{0.1}			7.2	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 14. Performance of MG 3 full season soybeans evaluated at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG36X6	3.6	74.2	48.6	61.4	102	54.1	34
Asgrow	AG37X0	3.7	74.1	58.3	66.2	102	55.8	41
Asgrow	AG38X8**	3.8	73.3	45.0	59.2	100	57.0	39
Asgrow	AG38X8	3.8	69.0	51.0	60.0	95	55.6	37
Credenz	CZ3750GTLL	3.7	87.7*	-	-	120	56.3	35
Credenz	CZ4701GTLL	3.7	85.6*	-	-	117	55.6	36
Credenz	CZ3840GTLL	3.8	70.3	-	-	96	56.0	42
Credenz	CZ3930GTLL	3.9	71.9	-	-	99	55.7	37
Dyna-Gro	S39EN19	3.9	74.2	57.5	65.8	102	53.4	36
Dyna-Gro	S39GL11	3.9	75.8	-	-	104	56.0	40
Local Seed	ZS3496GL	3.4	70.9	-	-	97	55.7	33
Local Seed	LS3606GL	3.6	64.2	-	-	88	55.5	33
Local Seed	ZS3898E3S	3.8	71.1	-	-	97	55.3	39
Local Seed	LS3976X	3.9	71.5	-	-	98	56.4	35
Local Seed	LS3906GL	3.9	70.6	-	-	97	55.3	39
Mid-Atlantic	MAS3220E3	3.2	80.2*	-	-	110	58.1	32
Mid-Atlantic	MAS3600E3/STS	3.6	81.9*	56.1	69.0	112	57.2	41
Mid-Atlantic	MAS3720E3/STS	3.7	80.3*	-	-	110	59.3	34
MorSoy	MS 3907	3.9	72.9	-	-	100	58.6	38
NK Brand	S37-A4X	3.7	73.8	-	-	101	55.9	40
NK Brand	S39-G2X	3.9	74.0	53.0	63.5	101	54.9	42
Pioneer	P25A82L	2.5	37.7	-	-	52	52.3	32
Pioneer	P31A95X	3.1	65.3	-	-	89	56.5	36
Pioneer	P33A24X	3.3	56.5	-	-	77	54.2	32
Seed Consultants	SC 7361E	3.6	76.9*	-	-	105	54.6	35
Seed Consultants	SC 7381E	3.8	76.2*	-	-	104	54.8	35
Seed Consultants	SC 7390E	3.9	82.8*	-	-	113	56.7	38
Southern Harvest	SH 3814 LL	3.8	59.9	50.8	55.3	82	57.4	35
Syngenta	S37-A4X	3.7	81.5*	-	-	112	54.8	40
Syngenta	S39-G2X	3.9	73.9	-	-	101	55.0	42
USG	7381ETS	3.8	81.9*	-	-	112	56.3	31
Mean			72.9	-	-	-	55.8	37
Probability > F			<0.0001	-	-	-	-	-
LSD_{0.1}			11.7	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 15. Performance of MG 4 (early) full season soybeans evaluated at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG42X9	4.2	77.0	61.6	69.3	106	55.1	45
Asgrow	AG43X0	4.3	74.6	49.1	61.8	103	54.1	43
Asgrow	AG43X8	4.3	66.7	50.9	58.8	92	52.4	41
Credenz	CZ4240GTLL	4.2	74.4	-	-	102	56.6	43
Credenz	CZ4410GTLL	4.4	66.8	-	-	92	55.8	43
Dyna-Gro	S41ES80	4.1	74.8	-	-	103	55.0	41
Dyna-Gro	S41XS98	4.1	73.2	51.2	62	101	56.5	39
Dyna-Gro	S43EN61	4.3	77.4	-	-	107	56.8	40
Dyna-Gro	S43EN70	4.3	70.1	-	-	97	55.3	43
Dyna-Gro	S44EN40	4.4	76.5	-	-	105	56.6	36
Local Seed	LS4299XS	4.2	75.8	-	-	104	55.4	43
Local Seed	ZS4295GLS	4.2	75.5	-	-	104	55.8	40
Local Seed	LS4407X	4.4	71.6	-	-	99	55.2	41
Mid-Atlantic	MAS4077GT/STS	4	67.3	-	-	93	55.5	38
NK Brand	S42-B9XS	4	73.5	-	-	101	-	39
Pioneer	P42A96X	4.2	65.8	-	-	91	53.4	39
Seed Consultants	SC 7421E	4.2	76.8	-	-	106	53.6	39
Southern Harvest	SH 4020 E3	4	60.1	-	-	83	55.0	36
Southern Harvest	SH 4019 LLGT	4	80.7	50.9	65.8	111	55.1	43
Syngenta	S42-B9XS	4.2	78.3	-	-	108	55.2	38
USG	7431ET	4.3	70.4	-	-	97	56.2	43
Mean			72.6	-	-	-	55.3	41
Probability > F			0.6289	-	-	-	-	-
LSD_{0.1}			NS*	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 16. Performance of MG 4 (late) full season soybeans evaluated at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.			
Asgrow	AG46X0	4.6	79.8*	45.8	62.8	116	55.5	44
Asgrow	AG46X6	4.6	68.0	51.2	59.6	99	55.4	40
Asgrow	AG47X9	4.7	81.7*	-	-	118	54.8	43
Asgrow	AG48X7	4.8	73.3	-	-	106	54.3	44
Asgrow	AG48X9	4.8	70.3	57.4	63.8	102	55.7	43
Dyna-Gro	S45ES10	4.5	70.7	-	-	102	54.1	39
Dyna-Gro	S46EN91	4.6	61.0	-	-	88	54.3	42
Dyna-Gro	S46XS60	4.6	72.7	-	-	105	55.2	42
Dyna-Gro	S48XT90	4.8	66.4	-	-	96	56.7	41
Local Seed	LS4583X	4.5	72.2	-	-	105	55.4	43
Local Seed	ZS4694E3S	4.6	75.9*	-	-	110	55.0	43
Local Seed	LS4607XS	4.6	72.8	-	-	105	55.6	46
Local Seed	LS4706GL	4.7	74.5	-	-	108	55.1	42
Local Seed	LS4795XS	4.7	75.5*	-	-	109	55.4	38
Local Seed	LS4798X	4.7	69.7	-	-	101	56.1	48
Local Seed	LS4889XS	4.8	61.6	-	-	89	55.1	46
Local Seed	LS4999X	4.9	78.3*	-	-	113	55.2	45
Mid-Atlantic	MAS4675E3/STS	4.6	62.9	-	-	91	55.9	42
Mid-Atlantic	MAS4666GT	4.6	57.2	-	-	83	54.3	42
Mid-Atlantic	MAS4811/E3/STS	4.8	63.9	-	-	93	54.3	44
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	-	-	-	-
MorSoy	MS 4616	4.6	70.5	-	-	102	54.0	45
MorSoy	MS 4800	4.8	74.8*	-	-	108	55.5	41
MorSoy	MS 4846	4.8	85.3*	-	-	124	54.8	41
Pioneer	P46A57X	4.6	74.4	-	-	108	54.8	47
Pioneer	P48A60X	4.8	73.0	-	-	106	55.0	40
Seed Consultants	SC 8459X	4.5	67.5	-	-	98	54.5	41
Seed Consultants	SC 7461E	4.6	71.3	-	-	103	54.3	42
Southern Harvest	SH 4619 LLGT	4.6	68.4	42.7	55.5	99	54.2	45
Southern Harvest	SH 4820 E3	4.8	62.3	59.2	60.7	90	55.4	44
Southern Harvest	SH 4920 E3	4.9	68.2	-	-	99	55.8	42
Syngenta	S45-K5X	4.5	66.5	-	-	96	55.0	40
Uni. of Missouri	S15-5904RY	4.5	63.9	-	-	93	55.1	42
Uni. of Missouri	S15-3847R	4.6	54.5	-	-	79	54.7	44
Uni. of Missouri	S16-5540R	4.6	58.7	-	-	85	56.7	33
Uni. of Missouri	S15-3772RY	4.8	61.0	-	-	88	54.9	40

Table 16. (cont.)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.			
USG	7451ET	4.5	69.6	-	-	101	55.1	42
USG	7480ET	4.8	70.4	59.8	65.1	102	54.7	42
USG	7447XTS	4.8	64.9	-	-	94	55.4	44
USG	7491ETS	4.9	71.7	-	-	104	55.4	36
Virginia Tech	V16-0293	4.8	64.5	-	-	93	54.4	42
Virginia Tech	V17-0437	4.9	60.2	-	-	87	54.9	35
Mean			69.0	-	-	-	55.1	42
Probability > F			0.0049	-	-	-	-	-
LSD_{0.1}			10.6	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 17. Performance of MG 5 full season soybeans evaluated at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Local Seed	LS5087X	5	75.6*	-	-	115	55.3	40
Local Seed	LS5386X	5.3	72.2*	-	-	110	54.5	41
Local Seed	ZS5098E3	5	65.4*	-	-	100	53.7	40
MorSoy	MS 5110	5.1	68.5*	-	-	104	54.2	39
MorSoy	MS 5398	5.3	73.7*	-	-	112	54.0	43
MorSoy	MS 5607	5.6	63.5	-	-	97	54.1	31
Southern Harvest	SH 5321 E3	5.3	57.7	-	-	88	55.4	47
Syngenta	S51-R3XS	5.1	63.9	-	-	96	54.7	41
Syngenta	S53-F7X	5.3	68.6*	-	-	104	55.0	44
Univ. of Missouri	S16-3739RY	5.2	63.4	-	-	96	54.8	25
Univ. of Missouri	S16-3747RY	5	52.1	49.1	50.6	79	54.5	27
VT	V16-0025	5.4	66.4*	-	-	101	55.5	33
VT	V16-2471R	5.4	63.5	-	-	97	54.5	27
Mean			65.7	-	-	-	54.6	37
Probability > F			0.0990	-	-	-	-	-
LSD_{0.1}			11.0	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 18. Performance of MG 3 full season soybeans evaluated in the “plus” test at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG36X6	3.6	88.0*	-	-	106	57.5	35
Asgrow	AG37X0	3.7	85.6*	-	-	104	60.1	40
Asgrow	AG38X8**	3.8	82.7	-	-	100	58.9	37
Asgrow	AG38X8	3.8	79.5	-	-	96	57.7	35
Credenz	CZ3750GTLL	3.7	88.0*	-	-	106	58.8	36.3
Credenz	CZ4701GTLL	3.7	93.1*	-	-	113	59.1	41
Credenz	CZ3840GTLL	3.8	91.9*	-	-	111	58.6	40
Credenz	CZ3930GTLL	3.9	80.0	-	-	97	59.3	32
Dyna-Gro	S39EN19	3.9	84.2*	-	-	102	57.6	35
Dyna-Gro	S39GL11	3.9	81.8	-	-	99	25.3	36
Local Seed	ZS3496GL	3.4	81.7	-	-	99	59.4	37
Local Seed	LS3606GL	3.6	82.9	-	-	100	58.4	33
Local Seed	ZS3898E3S	3.8	86.9*	-	-	105	59.5	36
Local Seed	LS3976X	3.9	78.5	-	-	95	59.0	36
Local Seed	LS3906GL	3.9	78.5	-	-	95	58.7	35
Mid-Atlantic	MAS3220E3	3.2	81.2	-	-	98	58.1	32
Mid-Atlantic	MAS3600E3/STS	3.6	86.9*	-	-	105	58.0	36
Mid-Atlantic	MAS3720E3/STS	3.7	82.7	-	-	100	58.0	30
MorSoy	MS 3907	3.9	85.1*	-	-	103	58.5	37
NK Brand	S37-A4X	3.7	84.1*	-	-	102	60.9	38
NK Brand	S39-G2X	3.9	86.7*	-	-	105	57.6	39
Pioneer	P25A82L	2.5	42.8	-	-	52	55.8	32
Pioneer	P31A95X	3.1	77.8	-	-	94	58.1	34
Pioneer	P33A24X	3.3	72.6	-	-	88	57.8	30
Seed Consultants	SC 7361E	3.6	82.3	-	-	100	59.0	35
Seed Consultants	SC 7381E	3.8	83.6*	-	-	101	58.7	34
Seed Consultants	SC 7390E	3.9	89.9*	-	-	109	58.9	38
Southern Harvest	SH 3814 LL	3.8	77.0	-	-	93	58.3	35
Syngenta	S37-A4X	3.7	89.6*	-	-	108	59.7	38
Syngenta	S39-G2X	3.9	86.9*	-	-	105	58.8	39
USG	7381ETS	3.8	87.1*	-	-	105	57.5	33
Mean			82.6	-	-	-	58.5	36
Probability > F			<0.0001	-	-	-	-	-
LSD_{0,1}			10	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 19. Performance of MG 4 (early) full season soybeans evaluated in the “plus” test at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG42X9	4.2	83.0	61.6	72.3	100	58.4	47
Asgrow	AG43X0	4.3	91.2*	49.1	71.1	110	59.4	38
Asgrow	AG43X8	4.3	86.0	50.9	68.4	104	59.3	44
Credenz	CZ4240GTLL	4.2	86.3	-	-	104	60.2	37
Credenz	CZ4410GTLL	4.4	64.3	-	-	77	60.4	37
Dyna-Gro	S41ES80	4.1	82.6	-	-	99	60.0	68
Dyna-Gro	S41XS98	4.1	83.8	51.2	67.5	101	59.4	41
Dyna-Gro	S43EN61	4.3	81.4	-	-	98	58.6	40
Dyna-Gro	S43EN70	4.3	97.4*	-	-	117	59.0	42
Dyna-Gro	S44EN40	4.4	84.0	-	-	101	59.7	33
Local Seed	LS4299XS	4.2	91.7	-	-	110	59.3	40
Local Seed	ZS4295GLS	4.2	83.1	-	-	100	59.7	40
Local Seed	LS4407X	4.4	82.8	-	-	100	59.2	39
Mid-Atlantic	MAS4077GT/STS	4	75.2	-	-	91	59.1	36
NK Brand	S42-B9XS	4	92.1*	-	-	111	58.3	40
Pioneer	P42A96X	4.2	80.9	-	-	97	57.9	39
Seed Consultants	SC 7421E	4.2	78.5	-	-	95	60.1	37
Southern Harvest	SH 4020 E3	4	72.1	-	-	87	58.8	34
Southern Harvest	SH 4019 LLGT	4	79.6	50.9	65.2	96	58.8	41
Syngenta	S42-B9XS	4.2	90.5*	-	-	109	60.7	36
USG	7431ET	4.3	74.9	-	-	90	58.7	41
Mean			83.0	-	-	-	59.3	39
Probability > F			<0.0001	-	-	-	-	-
LSD_{0.1}			9.1	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 20. Performance of MG 4 (late) full season soybeans evaluated in the “plus” test at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.			
Asgrow	AG46X0	4.6	91.3*	45.8	68.5	115	61.6	38
Asgrow	AG46X6	4.6	78.0	51.2	64.6	99	59.4	40
Asgrow	AG47X9	4.7	90.3	-	-	114	59.4	45
Asgrow	AG48X7	4.8	89.6*	-	-	113	61.8	44
Asgrow	AG48X9	4.8	87.3	57.4	72.3	110	60.1	43
Dyna-Gro	S45ES10	4.5	84.9	-	-	107	59.5	40
Dyna-Gro	S46EN91	4.6	77.2	-	-	98	59.8	39
Dyna-Gro	S46XS60	4.6	90.1*	-	-	114	60.5	38
Dyna-Gro	S48XT90	4.8	85.9	-	-	109	61.0	36
Local Seed	LS4583X	4.5	93.7*	-	-	118	59.8	42
Local Seed	ZS4694E3S	4.6	82.4	-	-	104	60.6	36
Local Seed	LS4607XS	4.6	71.5	-	-	90	60.0	42
Local Seed	LS4706GL	4.7	91.5*	-	-	116	61.0	39
Local Seed	LS4795XS	4.7	93.9*	-	-	119	61.3	39
Local Seed	LS4798X	4.7	73.5	-	-	93	60.8	41
Local Seed	LS4889XS	4.8	62.7	-	-	79	59.2	41
Local Seed	LS4999X	4.9	97.5*	-	-	124	58.4	44
Mid-Atlantic	MAS4675E3/STS	4.6	78.1	-	-	73	59.7	40
Mid-Atlantic	MAS4666GT	4.6	66.7	-	-	84	61.7	37
Mid-Atlantic	MAS4811/E3/STS	4.8	76.0	-	-	96	60.2	40
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	-	-	-	-
MorSoy	MS 4616	4.6	77.9	-	-	98	58.8	43
MorSoy	MS 4800	4.8	72.4	-	-	91	62.4	42
MorSoy	MS 4846	4.8	92.7*	-	-	117	61.1	41
Pioneer	P46A57X	4.6	79.3	-	-	100	61.9	42
Pioneer	P48A60X	4.8	94.6*	-	-	107	60.3	39
Seed Consultants	SC 8459X	4.5	80.6	-	-	102	61.2	37
Seed Consultants	SC 7461E	4.6	69.3	-	-	88	59.9	41
Southern Harvest	SH 4619 LLGT	4.6	81.2	42.7	61.9	103	60.9	42
Southern Harvest	SH 4820 E3	4.8	72.3	59.2	65.7	91	60.9	43
Southern Harvest	SH 4920 E3	4.9	81.0	-	-	102	62.5	37
Syngenta	S45-K5X	4.5	77.9	-	-	98	60.2	39
Uni. of Missouri	S15-5904RY	4.5	73.7	-	-	93	60.0	41
Uni. of Missouri	S15-3847R	4.6	79.2	-	-	92	57.8	38
Uni. of Missouri	S16-5540R	4.6	60.0	-	-	76	59.4	33
Uni. of Missouri	S15-3772RY	4.8	68.5	-	-	87	61.1	38

Table 20. (cont.)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.			
USG	7451ET	4.5	60.6	-	-	77	59.6	38
USG	7480ET	4.8	78.8	59.8	69.3	100	60.7	38
USG	7447XTS	4.8	80.9	-	-	102	60.4	43
USG	7491ETS	4.9	71.6	-	-	90	61.2	35
Virginia Tech	V16-0293	4.8	77.1	-	-	97	61.2	41
Virginia Tech	V17-0437	4.9	67.0	-	-	85	60.3	32
Mean			79.1	-	-	-	60.5	39.8
Probability > F			<0.0001	-	-	-	-	-
LSD_{0.1}			9.3	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 21. Performance of MG 5 full season soybeans evaluated in the “plus” test at Wye Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Local Seed	LS5087X	5	82.1*	-	-	113	51.8	41
Local Seed	LS5386X	5.3	82.3*	-	-	114	62.3	39
Local Seed	ZS5098E3	5	70.7	-	-	98	62.1	40
MorSoy	MS 5110	5.1	79.2*	-	-	109	61.9	36
MorSoy	MS 5398	5.3	78.9*	-	-	109	62.4	39
MorSoy	MS 5607	5.6	64.2	-	-	89	59.5	34
Southern Harvest	SH 5321 E3	5.3	70.0	-	-	97	60.1	39
Syngenta	S51-R3XS	5.1	77.5*	-	-	107	62.6	31
Syngenta	S53-F7X	5.3	81.8*	-	-	113	61.4	44
Univ. of Missouri	S16-3739RY	5.2	63.4	-	-	88	61.6	27
Univ. of Missouri	S16-3747RY	5	61.7	49.1	55.4	85	61.3	32
VT	V16-0025	5.4	73.4*	-	-	101	60.6	35
VT	V16-2471R	5.4	76.8*	-	-	107	62.6	32
Mean			72.3	-	-	-	60.7	37
Probability > F			<0.0001	-	-	-	-	-
LSD_{0.1}			9.3	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 22. Performance of MG 3 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG36X6	3.6	59.5	56.7	58.1	83	52.9
Asgrow	AG37X0	3.7	70.7	55.6	63.1	98	54.5
Asgrow	AG38X8**	3.8	66.1	55.7	60.9	92	53.0
Asgrow	AG38X8	3.8	53.4	51.6	52.5	74	51.8
Credenz	CZ3750GTLL	3.7	72.5	-	-	101	52.5
Credenz	CZ4701GTLL	3.7	84.4*	-	-	117	55.0
Credenz	CZ3840GTLL	3.8	78.8*	-	-	110	53.1
Credenz	CZ3930GTLL	3.9	75.4*	-	-	105	54.6
Dyna-Gro	S39EN19	3.9	72.6	58.5	65.5	101	52.6
Dyna-Gro	S39GL11	3.9	76.6*	-	-	106	53.0
Local Seed	ZS3496GL	3.4	76.4*	-	-	106	53.5
Local Seed	LS3606GL	3.6	81.9*	-	-	114	53.7
Local Seed	ZS3898E3S	3.8	82.1*	-	-	114	52.0
Local Seed	LS3976X	3.9	74.3	-	-	103	53.2
Local Seed	LS3906GL	3.9	74.4*	-	-	104	52.4
Mid-Atlantic	MAS3220E3	3.2	79.1*	-	-	110	52.9
Mid-Atlantic	MAS3600E3/STS	3.6	76.2*	51.2	63.7	106	52.1
Mid-Atlantic	MAS3720E3/STS	3.7	82.3*	-	-	112	53.0
MorSoy	MS 3907	3.9	68.9	-	-	96	52.7
NK Brand	S37-A4X	3.7	54.0	-	-	75	52.1
NK Brand	S39-G2X	3.9	69.3	52.2	60.7	97	53.4
Pioneer	P25A82L	2.5	53.5	-	-	74	47.3
Pioneer	P31A95X	3.1	71.1	-	-	99	51.3
Pioneer	P33A24X	3.3	67.1	-	-	93	52.2
Seed Consultants	SC 7361E	3.6	76.4*	-	-	106	53.0
Seed Consultants	SC 7381E	3.8	67.8	-	-	94	52.7
Seed Consultants	SC 7390E	3.9	82.0*	-	-	114	53.5
Southern Harvest	SH 3814 LL	3.8	74.0	-	-	103	53.1
Syngenta	S37-A4X	3.7	59.1	-	-	82	51.6
Syngenta	S39-G2X	3.9	64.9	-	-	90	53.2
USG	7381ETS	3.8	83.1*	-	-	115	52.4
Mean			71.8	-	-	-	52.8
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			10.0	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 23. Performance of MG 4 (early) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG42X9	4.2	71.9	60.8	66.3	95	54.5
Asgrow	AG43X0	4.3	73.4	59.9	66.6	97	53.6
Asgrow	AG43X8	4.3	81.4	67.6	74.5	107	53.4
Credenz	CZ4240GTLL	4.2	85.4*	-	-	113	53.8
Credenz	CZ4410GTLL	4.4	68.2	-	-	90	54.5
Dyna-Gro	S41ES80	4.1	75.5	-	-	99	53.6
Dyna-Gro	S41XS98	4.1	84.2	57.3	70.7	111	54.4
Dyna-Gro	S43EN61	4.3	74.4	-	-	98	53.8
Dyna-Gro	S43EN70	4.3	66.0	-	-	87	53.1
Dyna-Gro	S44EN40	4.4	75.9	-	-	100	54.4
Local Seed	LS4299XS	4.2	59.4	-	-	78	52.9
Local Seed	ZS4295GLS	4.2	83.8	-	-	110	54.6
Local Seed	LS4407X	4.4	78.7	-	-	104	54.1
Mid-Atlantic	MAS4077GT/STS	4	72.4	-	-	95	54.3
NK Brand	S42-B9XS	4	93.0*	-	-	122	53.7
Pioneer	P42A96X	4.2	85.8*	-	-	113	53.1
Seed Consultants	SC 7421E	4.2	71.4	-	-	94	53.0
Southern Harvest	SH 4020 E3	4	73.7	-	-	97	51.6
Southern Harvest	SH 4019 LLGT	4	61.6	60.3	60.9	80	54.2
Syngenta	S42-B9XS	4.2	85.0	-	-	112	53.2
USG	7431ET	4.3	72.5	-	-	95	54.0
Mean			75.9	-	-	-	53.7
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			7.8	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 24. Performance of MG 4 (late) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG46X0	4.6	95.5*	67.3	81.4	125	55.3
Asgrow	AG46X6	4.6	93.3*	65.6	79.4	122	54.8
Asgrow	AG47X9	4.7	84.8	-	-	111	54.5
Asgrow	AG48X7	4.8	57.7	-	-	75	53.9
Asgrow	AG48X9	4.8	87.3*	75.0	81.1	114	55.4
Dyna-Gro	S45ES10	4.5	81.6	-	-	107	54.6
Dyna-Gro	S46EN91	4.6	80.1	-	-	105	54.3
Dyna-Gro	S46XS60	4.6	96.7*	-	-	127	54.5
Dyna-Gro	S48XT90	4.8	75.6	-	-	99	54.0
Local Seed	LS4583X	4.5	68.6	-	-	90	54.8
Local Seed	ZS4694E3S	4.6	77.0	-	-	101	54.4
Local Seed	LS4607XS	4.6	83.1	-	-	109	56.5
Local Seed	LS4706GL	4.7	68.6	-	-	90	52.8
Local Seed	LS4795XS	4.7	84.4	-	-	110	55.6
Local Seed	LS4798X	4.7	72.8	-	-	95	54.7
Local Seed	LS4889XS	4.8	82.1	-	-	107	54.1
Local Seed	LS4999X	4.9	89.2*	-	-	117	54.4
Mid-Atlantic	MAS4675E3/STS	4.6	91.3*	-	-	119	54.0
Mid-Atlantic	MAS4666GT	4.6	55.0	-	-	72	53.8
Mid-Atlantic	MAS4811/E3/STS	4.8	69.9	-	-	91	54.0
Mid-Atlantic	MAS4820E3/STS	4.8	71.9	-	-	94	50.5
MorSoy	MS 4616	4.6	76.1	-	-	100	53.8
MorSoy	MS 4800	4.8	68.2	-	-	89	54.4
MorSoy	MS 4846	4.8	75.3	-	-	98	56.4
Pioneer	P46A57X	4.6	83.0	-	-	109	54.8
Pioneer	P48A60X	4.8	84.7	-	-	111	53.1
Seed Consultants	SC 8459X	4.5	79.8	-	-	104	54.8
Seed Consultants	SC 7461E	4.6	75.9	-	-	99	55.4
Southern Harvest	SH 4619 LLGT	4.6	68.8	63.1	65.9	90	53.7
Southern Harvest	SH 4820 E3	4.8	81.3	65.2	73.2	106	52.7
Southern Harvest	SH 4920 E3	4.9	74.4	-	-	97	54.2
Syngenta	S45-K5X	4.5	78.0	-	-	102	53.8
Uni. of Missouri	S15-5904RY	4.5	69.6	-	-	91	53.8
Uni. of Missouri	S15-3847R	4.6	68.7	-	-	90	55.1
Uni. of Missouri	S16-5540R	4.6	60.5	-	-	79	54.7
Uni. of Missouri	S15-3772RY	4.8	64.8	-	-	85	54.7

Table 24. (cont.)

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
USG	7451ET	4.5	65.5	-	-	86	54.4
USG	7480ET	4.8	73.4	57.2	65.3	96	54.7
USG	7447XTS	4.8	81.5	-	-	107	53.7
USG	7491ETS	4.9	68.7	-	-	90	54.9
Virginia Tech	V16-0293	4.8	67.7	-	-	89	54.0
Virginia Tech	V17-0437	4.9	76.2	-	-	100	55.0
Mean			76.4	-	-	-	54.3
Probability > F			<0.001	-	-	-	-
LSD_{0.1}			10.4	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 25. Performance of MG 5 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Local Seed	LS5087X	5	79.9	-	-	106	55.1
Local Seed	LS5386X	5.3	80.6	-	-	107	56.3
Local Seed	ZS5098E3	5	68.8	-	-	91	51.6
MorSoy	MS 5110	5.1	78.9	-	-	105	55.1
MorSoy	MS 5398	5.3	77.0	-	-	102	54.4
MorSoy	MS 5607	5.6	77.6	-	-	103	56.4
Southern Harvest	SH 5321 E3	5.3	70.7	-	-	94	54.6
Syngenta	S51-R3XS	5.1	71.0	-	-	94	54.6
Syngenta	S53-F7X	5.3	90.7*	-	-	120	52.4
Univ. of Missouri	S16-3739RY	5.2	74.2	-	-	98	54.8
Univ. of Missouri	S16-3747RY	5	64.3	51.0	57.6	85	56.0
VT	V16-0025	5.4	77.9	-	-	103	54.2
VT	V16-2471R	5.4	68.7	-	-	91	53.8
Mean			75.4	-	-	-	54.6
Probability > F			0.0039	-	-	-	-
LSD_{0.1}			8.7	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 26. Performance of MG 3 full season soybeans evaluated at Central Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG36X6	3.6	62.2	67.8	65	87	51.6	36
Asgrow	AG37X0	3.7	69.6	63.4	66.5	97	52.1	42
Asgrow	AG38X8**	3.8	72.1*	52.5	62.3	100	51.8	39
Asgrow	AG38X8	3.8	68.9	54.4	61.6	96	51.5	38
Credenz	CZ3750GTLL	3.7	71.8	-	-	100	51.4	39
Credenz	CZ4701GTLL	3.7	73.3*	-	-	102	52.8	41
Credenz	CZ3840GTLL	3.8	78.4*	-	-	109	53.2	40
Credenz	CZ3930GTLL	3.9	76.9*	-	-	107	52.6	41
Dyna-Gro	S39EN19	3.9	78.5*	64.9	71.7	109	50.9	36
Dyna-Gro	S39GL11	3.9	67.4	-	-	94	52.0	43
Local Seed	ZS3496GL	3.4	69.6	-	-	97	52.1	39
Local Seed	LS3606GL	3.6	72.9*	-	-	102	52.4	36
Local Seed	ZS3898E3S	3.8	75.4*	-	-	105	51.4	38
Local Seed	LS3976X	3.9	70.7	-	-	98	52.0	39
Local Seed	LS3906GL	3.9	73.3*	-	-	102	52.0	38
Mid-Atlantic	MAS3220E3	3.2	72.7*	-	-	102	52.0	35
Mid-Atlantic	MAS3600E3/STS	3.6	71.7	55.6	63.6	100	51.1	38
Mid-Atlantic	MAS3720E3/STS	3.7	71.8	-	-	100	51.3	35
MorSoy	MS 3907	3.9	73.5*	-	-	102	51.6	38
NK Brand	S37-A4X	3.7	70.5	-	-	98	51.5	41
NK Brand	S39-G2X	3.9	77.5*	59.5	68.5	108	51.4	40
Pioneer	P25A82L	2.5	51.7	-	-	72	50.3	34
Pioneer	P31A95X	3.1	68.2	-	-	95	51.7	38
Pioneer	P33A24X	3.3	72.2*	-	-	100	51.2	35
Seed Consultants	SC 7361E	3.6	68.4	-	-	95	51.4	35
Seed Consultants	SC 7381E	3.8	65.2	-	-	91	51.9	37
Seed Consultants	SC 7390E	3.9	72.3*	-	-	101	52.2	40
Southern Harvest	SH 3814 LL	3.8	78.8*	56.6	67.7	110	52.3	40
Syngenta	S37-A4X	3.7	73.3*	-	-	102	52.3	39
Syngenta	S39-G2X	3.9	74.3*	-	-	103	51.4	45
USG	7381ETS	3.8	81.7*	-	-	114	51.1	37
Mean			71.8	-	-	-	51.7	38
Probability > F			0.0233	-	-	-	-	-
LSD_{0.1}			9.8	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 27. Performance of MG 4 (early) full season soybeans evaluated at Central Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (inches)
			2020	2019	2 yr. avg.			
Asgrow	AG42X9	4.2	73.2	54.2	63.7	95	51.8	43
Asgrow	AG43X0	4.3	82.0*	61.8	71.9	106	51.9	45
Asgrow	AG43X8	4.3	79.1	60.5	69.8	102	51.6	47
Credenz	CZ4240GTLL	4.2	82.5*	-	-	107	53.2	42
Credenz	CZ4410GTLL	4.4	75.8	-	-	98	52.4	45
Dyna-Gro	S41ES80	4.1	73.1	-	-	94	51.5	39
Dyna-Gro	S41XS98	4.1	74.7	61.1	67.9	97	52.3	42
Dyna-Gro	S43EN61	4.3	73.3	-	-	95	52.2	44
Dyna-Gro	S43EN70	4.3	89.3*	-	-	115	52.2	45
Dyna-Gro	S44EN40	4.4	75.5	-	-	98	51.9	41
Local Seed	LS4299XS	4.2	79.5	-	-	103	52.3	47
Local Seed	ZS4295GLS	4.2	75.5	-	-	98	52.5	43
Local Seed	LS4407X	4.4	73.0	-	-	94	51.9	42
Mid-Atlantic	MAS4077GT/STS	4	67.4	-	-	87	52.2	41
NK Brand	S42-B9XS	4	85.1*	-	-	110	52.0	40
Pioneer	P42A96X	4.2	76.3	-	-	99	51.2	42
Seed Consultants	SC 7421E	4.2	74.5	-	-	96	51.9	43
Southern Harvest	SH 4020 E3	4	88.7*	-	-	115	50.6	42
Southern Harvest	SH 4019 LLGT	4	76.5	50.9	63.7	99	51.3	43
Syngenta	S42-B9XS	4.2	75.3	-	-	97	51.9	46
USG	7431ET	4.3	74.0	-	-	96	52.2	41
Mean			77.3	-	-	-	52.0	43
Probability > F			0.0757	-	-	-	-	-
LSD^{0.1}			9.5	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 28. Performance of MG 4 (late) full season soybeans evaluated at Central Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹	Height (in)
			2020	2019	2 yr. avg.			
Asgrow	AG46X0	4.6	75.8*	57.6	66.7	105	52.7	42
Asgrow	AG46X6	4.6	79.6*	78.3	78.9	110	52.2	46
Asgrow	AG47X9	4.7	74.8	-	-	103	53.0	45
Asgrow	AG48X7	4.8	73.7	-	-	102	52.3	46
Asgrow	AG48X9	4.8	71.7	65.1	68.4	99	52.4	48
Dyna-Gro	S45ES10	4.5	77.5*	-	-	107	52.8	46
Dyna-Gro	S46EN91	4.6	74.0	-	-	102	51.1	45
Dyna-Gro	S46XS60	4.6	69.9	-	-	97	52.4	41
Dyna-Gro	S48XT90	4.8	73.6	-	-	102	52.6	43
Local Seed	LS4583X	4.5	79.9*	-	-	110	52.9	47
Local Seed	ZS4694E3S	4.6	71.9	-	-	99	53.6	43
Local Seed	LS4607XS	4.6	77.7*	-	-	107	52.9	43
Local Seed	LS4706GL	4.7	70.7	-	-	98	52.6	43
Local Seed	LS4795XS	4.7	74.2	-	-	103	52.9	45
Local Seed	LS4798X	4.7	71.7	-	-	99	52.8	46
Local Seed	LS4889XS	4.8	77.0*	-	-	107	52.3	50
Local Seed	LS4999X	4.9	71.8	-	-	99	52.0	46
Mid-Atlantic	MAS4675E3/STS	4.6	68.9	-	-	95	51.3	44
Mid-Atlantic	MAS4666GT	4.6	71.1	-	-	98	53.2	45
Mid-Atlantic	MAS4811/E3/STS	4.8	70.4	-	-	97	51.2	46
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	-	-	-	-
MorSoy	MS 4616	4.6	71.7	-	-	99	53.2	47
MorSoy	MS 4800	4.8	66.1	-	-	91	51.9	43
MorSoy	MS 4846	4.8	78.6*	-	-	109	52.6	40
Pioneer	P46A57X	4.6	72.0	-	-	100	52.9	46
Pioneer	P48A60X	4.8	79.2*	-	-	110	52.8	40
Seed Consultants	SC 8459X	4.5	71.5	-	-	99	52.5	43
Seed Consultants	SC 7461E	4.6	67.0	-	-	93	51.7	44
Southern Harvest	SH 4619 LLGT	4.6	67.6	47.6	57.6	99	52.4	44
Southern Harvest	SH 4820 E3	4.8	68.8	58.2	63.5	95	52.1	39
Southern Harvest	SH 4920 E3	4.9	73.0	-	-	101	52.1	47
Syngenta	S45-K5X	4.5	81.9*	-	-	113	52.6	43
Uni. of Missouri	S15-5904RY	4.5	72.7	-	-	101	52.3	46
Uni. of Missouri	S15-3847R	4.6	61.3	-	-	85	52.7	46
Uni. of Missouri	S16-5540R	4.6	66.1	-	-	91	52.3	45
Uni. of Missouri	S15-3772RY	4.8	63.4	-	-	88	53.0	49

Table 28. (cont.)

Brand	Variety²	MG	Yield¹, bu ac⁻¹			Relative Yield	Test weight (lb/bu)¹	Height (in)
			2020	2019	2 yr. avg.			
USG	7451ET	4.5	75.9*	-	-	105	51.9	46
USG	7480ET	4.8	68.6	51.1	59.8	95	52.4	45
USG	7447XTS	4.8	76.7*	-	-	106	52.2	45
USG	7491ETS	4.9	70.9	-	-	98	52.0	44
Virginia Tech	V16-0293	4.8	75.5*	-	-	104	53.2	47
Virginia Tech	V17-0437	4.9	61.0	-	-	84	53.6	47
Mean			72.3	-	-	-	52.5	45
Probability > F			<0.0001	-	-	-	-	-
LSD_{0.1}			7.0	-	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 29. Performance of MG 3 full season soybeans evaluated at Western Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG36X6	3.6	45.1	76.1	60.6	90	51.7
Asgrow	AG37X0	3.7	45.9	72.5	59.2	91	52.0
Asgrow	AG38X8**	3.8	38.2	74.1	56.1	76	52.0
Asgrow	AG38X8	3.8	38.5	74.3	56.4	76	51.8
Credenz	CZ3750GTLL	3.7	55.2	-	-	110	52.1
Credenz	CZ4701GTLL	3.7	56.9*	-	-	113	51.5
Credenz	CZ3840GTLL	3.8	51.8	-	-	103	52.9
Credenz	CZ3930GTLL	3.9	46.5	-	-	92	53.0
Dyna-Gro	S39EN19	3.9	62.0*	72.9	67.4	123	50.9
Dyna-Gro	S39GL11	3.9	49.7	-	-	99	52.7
Local Seed	ZS3496GL	3.4	54.1	-	-	107	52.8
Local Seed	LS3606GL	3.6	49.7	-	-	99	52.8
Local Seed	ZS3898E3S	3.8	63.6*	-	-	126	52.0
Local Seed	LS3976X	3.9	50.6	-	-	101	52.3
Local Seed	LS3906GL	3.9	53.3	-	-	106	51.4
Mid-Atlantic	MAS3220E3	3.2	62.1*	-	-	123	51.4
Mid-Atlantic	MAS3600E3/STS	3.6	57.7*	62.6	60.1	115	52.1
Mid-Atlantic	MAS3720E3/STS	3.7	60.2*	-	-	120	51.9
MorSoy	MS 3907	3.9	47.7	-	-	95	51.9
NK Brand	S37-A4X	3.7	46.3	-	-	92	53.4
NK Brand	S39-G2X	3.9	46.0	72.0	59.0	91	51.7
Pioneer	P25A82L	2.5	32.2	-	-	64	50.2
Pioneer	P31A95X	3.1	36.0	-	-	72	51.0
Pioneer	P33A24X	3.3	39.6	-	-	79	52.0
Seed Consultants	SC 7361E	3.6	59.1*	-	-	117	52.6
Seed Consultants	SC 7381E	3.8	58.7*	-	-	117	51.6
Seed Consultants	SC 7390E	3.9	55.3	-	-	110	52.3
Southern Harvest	SH 3814 LL	3.8	44.3	-	-	88	52.3
Syngenta	S37-A4X	3.7	45.3	-	-	90	53.1
Syngenta	S39-G2X	3.9	45.9	-	-	91	52.2
USG	7381ETS	3.8	61.8*	-	-	123	51.8
Mean			50.3	-	-	-	52.0
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			7.4	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

**Treated variety

Table 30. Performance of MG 4 (early) full season soybeans evaluated at Western Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG42X9	4.2	48.2	77.3	62.7	97	52.0
Asgrow	AG43X0	4.3	49.7	65.5	57.6	100	52.0
Asgrow	AG43X8	4.3	45.1	63.2	54.1	91	52.2
Credenz	CZ4240GTLL	4.2	50.4	-	-	102	51.1
Credenz	CZ4410GTLL	4.4	45.1	-	-	91	53.2
Dyna-Gro	S41ES80	4.1	64.5*	-	-	130	53.0
Dyna-Gro	S41XS98	4.1	37.2	70.3	53.7	75	51.4
Dyna-Gro	S43EN61	4.3	54.1	-	-	109	52.4
Dyna-Gro	S43EN70	4.3	49.4	-	-	100	52.8
Dyna-Gro	S44EN40	4.4	64.2*	-	-	130	52.8
Local Seed	LS4299XS	4.2	55.5*	-	-	112	51.9
Local Seed	ZS4295GLS	4.2	52.4	-	-	106	53.0
Local Seed	LS4407X	4.4	52.0	-	-	105	53.5
Mid-Atlantic	MAS4077GT/STS	4	38.7	-	-	78	51.9
NK Brand	S42-B9XS	4	32.9	-	-	66	51.4
Pioneer	P42A96X	4.2	50.8	-	-	105	52.7
Seed Consultants	SC 7421E	4.2	54.1	-	-	109	52.5
Southern Harvest	SH 4020 E3	4	52.3	-	-	106	51.7
Southern Harvest	SH 4019 LLGT	4	52.3	66.5	59.4	106	52.3
Syngenta	S42-B9XS	4.2	29.0	-	-	59	45.4
USG	7431ET	4.3	62.4*	-	-	126	52.7
Mean			49.5	-	-	-	52.0
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			9.0	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 31. Performance of MG 4 (late) full season soybeans evaluated at Western Maryland Research and Education Center in 2020

Brand	Variety ²	MG	Yield ¹ , bu ac ⁻¹			Relative Yield	Test weight (lb/bu) ¹
			2020	2019	2 yr. avg.		
Asgrow	AG46X0	4.6	42.8	73.1	57.9	84	51.0
Asgrow	AG46X6	4.6	51.8	72.6	62.2	102	51.4
Asgrow	AG47X9	4.7	51.3	-	-	101	52.8
Asgrow	AG48X7	4.8	59.7*	-	-	58	50.8
Asgrow	AG48X9	4.8	54.3	66.9	60.6	107	52.3
Dyna-Gro	S45ES10	4.5	63.0*	-	-	124	53.4
Dyna-Gro	S46EN91	4.6	57.1*	-	-	112	52.8
Dyna-Gro	S46XS60	4.6	50.8	-	-	100	52.0
Dyna-Gro	S48XT90	4.8	49.3	-	-	97	52.7
Local Seed	LS4583X	4.5	54.6	-	-	107	53.0
Local Seed	ZS4694E3S	4.6	60.7*	-	-	119	53.2
Local Seed	LS4607XS	4.6	45.0	-	-	88	52.5
Local Seed	LS4706GL	4.7	54.2	-	-	106	52.8
Local Seed	LS4795XS	4.7	49.6	-	-	97	52.5
Local Seed	LS4798X	4.7	49.5	-	-	97	53.2
Local Seed	LS4889XS	4.8	51.2	-	-	101	52.8
Local Seed	LS4999X	4.9	51.9	-	-	102	52.6
Mid-Atlantic	MAS4675E3/STS	4.6	60.8*	-	-	119	52.4
Mid-Atlantic	MAS4666GT	4.6	48.5	-	-	95	53.5
Mid-Atlantic	MAS4811/E3/STS	4.8	52.3	-	-	103	52.7
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	-	-	-
MorSoy	MS 4616	4.6	54.4	-	-	107	53.1
MorSoy	MS 4800	4.8	57.3	-	-	112	53.5
MorSoy	MS 4846	4.8	46.2	-	-	89	52.2
Pioneer	P46A57X	4.6	49.7	-	-	98	53.1
Pioneer	P48A60X	4.8	46.8	-	-	92	53.7
Seed Consultants	SC 8459X	4.5	56.3*	-	-	111	54.0
Seed Consultants	SC 7461E	4.6	61.5*	-	-	121	53.3
Southern Harvest	SH 4619 LLGT	4.6	47.0	66.7	56.8	92	53.1
Southern Harvest	SH 4820 E3	4.8	53.5	63.3	58.4	105	53.6
Southern Harvest	SH 4920 E3	4.9	63.5*	-	-	125	53.8
Syngenta	S45-K5X	4.5	55.0	-	-	108	52.4
Uni. of Missouri	S15-5904RY	4.5	44.2	-	-	87	53.4
Uni. of Missouri	S15-3847R	4.6	24.5	-	-	48	47.4
Uni. of Missouri	S16-5540R	4.6	49.1	-	-	96	54.2
Uni. of Missouri	S15-3772RY	4.8	47.2	-	-	93	52.9

Table 31. (cont.)

Brand	Variety²	MG	Yield¹, bu ac⁻¹			Relative Yield	Test weight (lb/bu)¹
			2020	2019	2 yr. avg.		
USG	7451ET	4.5	49.4	-	-	97	52.9
USG	7480ET	4.8	54.0	65.3	59.6	106	53.4
USG	7447XTS	4.8	54.2	-	-	106	53.2
USG	7491ETS	4.9	61.8*	-	-	121	52.7
Virginia Tech	V16-0293	4.8	45.7	-	-	90	52.0
Virginia Tech	V17-0437	4.9	38.8	-	-	76	54.3
Mean			50.9	-	-	-	52.7
Probability > F			<0.0001	-	-	-	-
LSD_{0.1}			7.3	-	-	-	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

Table 32. Average performance of MG 3 double crop soybeans evaluated at two locations (Wye, Poplar Hill)

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/a)	Test weight ¹ (lb/bu)	Yield (bu/a)	Test weight (lb/bu)	Yield (bu/a)	Test weight (lb/bu)
Asgrow	AG36X6	3.6	78.8	61.7	53.2	52.3	66.0	56.5
Asgrow	AG37X0	3.7	68.2	60.1	53.9	52.7	61.1	56.4
Asgrow	AG38X8	3.8	76.9	61.1	56.7*	52.5	66.8	56.8
Asgrow	AG38X8	3.8	75.8	60.6	55.0	52.7	65.4	56.6
Credenz	CZ3750GTLL	3.7	88.7*	59.1	56.5	51.5	72.6	55.3
Credenz	CZ4701GTLL	3.7	93.3*	61.2	54.3	53.1	73.8	57.2
Credenz	CZ3840GTLL	3.8	102.3*	60.3	55.3	53.1	78.8	56.7
Credenz	CZ3930GTLL	3.9	88.5*	60.5	56.1*	52.8	72.3	56.7
Dyna-Gro	S39EN19	3.9	75.5	58.9	55.4	49.8	65.5	54.3
Dyna-Gro	S39GL11	3.9	81.4	60.8	59.0*	52.1	70.2	56.5
Local Seed	ZS3496GL	3.4	84.8*	61.4	53.6	51.8	69.2	56.6
Local Seed	LS3606GL	3.6	90.7*	59.1	57.8*	52.2	71.0	55.3
Local Seed	ZS3898E3S	3.8	76.2	59.9	54.8	50.1	65.5	55.0
Local Seed	LS3976X	3.9	82.1	59.8	59.1*	51.3	68.3	54.7
Local Seed	LS3906GL	3.9	85.3*	60.7	51.1	52.3	68.2	56.5
Mid-Atlantic	MAS3220E3	3.2	71.4	87.8	51.8	52.0	61.6	54.9
Mid-Atlantic	MAS3600E3/STS	3.6	78.0	58.8	53.3	50.9	65.7	54.8
Mid-Atlantic	MAS3720E3/STS	3.7	69.2	58.9	57.5*	51.1	63.3	55.0
MorSoy	MS 3907	3.9	93.3*	60.8	61.5*	51.7	77.4	56.3
NK Brand	S37-A4X	3.7	88.2*	59.2	53.1	52.1	70.7	55.6
NK Brand	S39-G2X	3.9	93.4*	60.3	53.4	52.9	73.4	56.6
Pioneer	P25A82L	2.5	49.1	58.6	35.6	48.5	43.8	54.6
Pioneer	P31A95X	3.1	72.5	58.4	49.5	50.6	61.0	54.5
Pioneer	P33A24X	3.3	71.6	58.0	53.1	50.5	62.4	54.2
Seed Consultants	SC 7361E	3.6	73.6	85.9	49.3	51.5	61.5	55.2
Seed Consultants	SC 7381E	3.8	68.0	58.3	51.8	51.8	59.9	55.0
Seed Consultants	SC 7390E	3.9	85.3*	60.9	55.7	52.3	70.5	56.6
Southern Harvest	SH 3814 LL	3.8	67.5	60.3	52.1	51.6	59.8	55.9
Syngenta	S37-A4X	3.7	81.3	60.3	56.1	52.8	68.7	56.6
Syngenta	S39-G2X	3.9	97.4*	60.2	56.8	51.6	77.0	55.9
USG	7381ETS	3.8	76.8	59.4	52.9	51.4	64.9	55.4
Mean			80.0	59.8	54.5	51.8	67.1	55.8
Probability > F			0.0480	-	0.0007	-	0.7593	-
LSD_{0.1}			20.1	-	5.7	-	NS**	-

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

** NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 33. Average performance of MG 4 (early) double crop soybeans evaluated at two locations (Wye, Poplar Hill)

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/a)	Test weight ¹ (lb/bu)	Yield (bu/a)	Test weight (lb/bu)	Yield (bu/a)	Test weight (lb/bu)
Asgrow	AG42X9	4.2	72.6	59.5	53.3	51.1	63.0	55.3
Asgrow	AG43X0	4.3	96.3*	61.0	55.2	52.0	75.7	56.5
Asgrow	AG43X8	4.3	94.6*	60.0	55.5	53.2	75.0	56.5
Credenz	CZ4240GTLL	4.2	72.0	57.1	50.9	52.4	61.4	54.7
Credenz	CZ4410GTLL	4.4	95.8*	60.1	56.0	53.1	75.9	56.6
Dyna-Gro	S41ES80	4.1	81.3	58.2	51.5	51.3	66.4	54.7
Dyna-Gro	S41XS98	4.1	104.9*	59.3	57.0*	53.1	81.0	56.2
Dyna-Gro	S43EN61	4.3	85.0	60.0	56.5	52.8	78.1	56.4
Dyna-Gro	S43EN70	4.3	94.7*	59.9	60.8*	52.7	77.7	56.3
Dyna-Gro	S44EN40	4.4	90.6*	58.9	57.7*	52.1	74.1	55.5
Local Seed	LS4299XS	4.2	90.2*	59.7	62.6*	53.0	76.4	56.3
Local Seed	ZS4295GLS	4.2	81.8	60.8	55.7	52.4	68.8	56.6
Local Seed	LS4407X	4.4	93.1*	59.4	53.8	52.8	73.5	56.1
Mid-Atlantic	MAS4077GT/STS	4	84.5	60.2	52.5	52.7	61.2	56.4
NK Brand	S42-B9XS	4	93.1*	60.1	62.7*	53.2	77.9	56.6
Pioneer	P42A96X	4.2	75.7	58.8	51.5	52.9	63.6	55.9
Seed Consultants	SC 7421E	4.2	88.6*	59.1	52.7	52.6	70.7	55.8
Southern Harvest	SH 4020 E3	4	80.2	60.4	48.5	51.2	64.4	55.8
Southern Harvest	SH 4019 LLGT	4	80.3	58.6	53.9	51.6	67.1	55.1
Syngenta	S42-B9XS	4.2	92.1*	58.8	57.2*	51.9	74.7	55.3
USG	7431ET	4.3	91.3*	60.8	52.4	52.6	71.8	56.7
Mean			87.6	59.6	55.1	52.4	71.3	56.0
Probability > F			0.0281	-	0.0086	-	0.9329	
LSD_{0.1}			16.3	-	5.7	-	NS**	

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

** NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 34. Average performance of MG 4 (late) double crop soybeans evaluated at two locations (Wye, Poplar Hill)

Brand	Variety ²	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/a)	Test weight ¹ (lb/bu)	Yield (bu/a)	Test weight (lb/bu)	Yield (bu/a)	Test weight (lb/bu)
Asgrow	AG46X0	4.6	86.7	59.2	56.4*	52.8	71.6	56.0
Asgrow	AG46X6	4.6	97.5*	58.7	53.6*	53.8	75.5	56.3
Asgrow	AG47X9	4.7	73.3	59.8	54.1*	53.5	63.7	56.7
Asgrow	AG48X7	4.8	104.3*	58.5	58.4*	53.2	81.4	55.9
Asgrow	AG48X9	4.8	89.4	59.8	57.7*	53.1	72.0	56.4
Dyna-Gro	S45ES10	4.5	89.2	60.1	57.3*	53.6	73.2	56.8
Dyna-Gro	S46EN91	4.6	93.3*	60.0	53.2	52.4	73.3	56.2
Dyna-Gro	S46XS60	4.6	97.1*	59.6	58.7*	53.5	77.9	56.6
Dyna-Gro	S48XT90	4.8	100.2*	58.5	58.3*	53.2	79.2	55.9
Local Seed	LS4583X	4.5	91.7*	59.5	59.1*	53.1	75.4	56.3
Local Seed	ZS4694E3S	4.6	76.9	61.1	55.7*	53.5	66.3	57.3
Local Seed	LS4607XS	4.6	84.6	59.6	55.4*	53.1	70.0	56.4
Local Seed	LS4706GL	4.7	76.4	61.0	48.6	53.8	62.5	57.4
Local Seed	LS4795XS	4.7	81.1	59.6	59.3*	53.2	70.2	56.4
Local Seed	LS4798X	4.7	94.3*	60.1	58.8*	54.1	76.5	57.1
Local Seed	LS4889XS	4.8	93.2*	59.4	53.9*	52.9	73.5	56.2
Local Seed	LS4999X	4.9	90.4	58.6	56.6*	52.8	73.5	55.7
Mid-Atlantic	MAS4675E3/STS	4.6	88.6	61.2	56.7*	52.6	72.6	56.9
Mid-Atlantic	MAS4666GT	4.6	91.0*	59.8	52.2	53.7	71.6	56.8
Mid-Atlantic	MAS4811/E3/STS	4.8	89.1	60.7	54.6*	53.0	71.9	56.8
Mid-Atlantic	MAS4820E3/STS	4.8	-	-	25.4	50.5	-	-
MorSoy	MS 4616	4.6	93.2*	60.6	53.5*	53.4	73.3	57.0
MorSoy	MS 4800	4.8	86.4	60.0	52.3	53.2	69.3	56.0
MorSoy	MS 4846	4.8	94.9*	59.1	57.9*	52.7	76.4	55.3
Pioneer	P46A57X	4.6	94.0*	61.2	50.2	54.0	72.1	57.6
Pioneer	P48A60X	4.8	89.6	60.6	54.5*	53.8	72.1	57.2
Seed Consultants	SC 8459X	4.5	92.0*	59.1	54.8*	53.9	73.4	56.5
Seed Consultants	SC 7461E	4.6	89.1	59.1	50.0	53.2	69.5	56.1
Southern Harvest	SH 4619 LLGT	4.6	74.2	60.7	46.7	51.8	60.5	56.3
Southern Harvest	SH 4820 E3	4.8	89.9	60.1	51.8	53.4	70.9	56.8
Southern Harvest	SH 4920 E3	4.9	94.8*	60.1	57.6*	53.0	76.2	56.6
Syngenta	S45-K5X	4.5	85.8	59.9	54.6*	53.2	70.2	56.5
Uni. of Missouri	S15-5904RY	4.5	92.0*	60.5	48.3	52.6	70.1	56.6
Uni. of Missouri	S15-3847R	4.6	74.4	60.8	52.9	53.6	63.7	57.2
Uni. of Missouri	S16-5540R	4.6	89.4	62.0	52.0	54.0	70.7	58.0
Uni. of Missouri	S15-3772RY	4.8	77.1	59.3	47.8	53.1	62.5	56.2

Table 31. (cont.)

Brand	Variety ²	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/a)	Test weight ¹ (lb/bu)	Yield (bu/a)	Test weight (lb/bu)	Yield (bu/a)	Test weight (lb/bu)
USG	7451ET	4.5	73.3	51.2	54.3*	53.1	63.8	54.1
USG	7480ET	4.8	86.8	59.8	52.0	52.7	65.5	54.3
USG	7447XTS	4.8	98.2*	60.4	58.5	52.5	69.4	56.3
USG	7491ETS	4.9	69.0	58.8	51.4	52.8	78.3	55.6
Virginia Tech	V16-0293	4.8	81.2	59.5	50.3	53.3	60.2	55.8
Virginia Tech	V17-0437	4.9	88.4	62.2	53.5*	55.0	65.7	56.4
Mean			87.8	60.0	53.5	53.2	70.5	56.5
Probability > F			0.0061	-	<0.0001	-	0.8626	
LSD_{0.1}			13.8	-	5.9	-	NS**	

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

** NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 35. Average performance of MG 5 double crop soybeans evaluated at two locations (Wye, Poplar Hill)

Brand	Variety ²	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/a)	Test weight ¹ (lb/bu)	Yield (bu/a)	Test weight (lb/bu)	Yield (bu/a)	Test weight (lb/bu)
Local Seed	LS5087X	5	84.4*	59.4	54.5	55.6	69.5	57.5
Local Seed	LS5386X	5.3	63.7	66.1	49.2	54.7	56.5	59.3
Local Seed	ZS5098E3	5	80.5*	60.0	48.6	54.5	64.6	57.3
MorSoy	MS 5110	5.1	82.9*	59.5	54.6	54.7	68.8	57.1
MorSoy	MS 5398	5.3	70.9	67.3	56.1	55.3	63.5	60.1
MorSoy	MS 5607	5.6	88.0*	66.1	50.9	56.7	69.5	61.4
Southern Harvest	SH 5321 E3	5.3	90.2*	59.3	53.5	55.0	71.9	57.1
Syngenta	S51-R3XS	5.1	90.1*	64.9	52.9	53.0	71.5	59.0
Syngenta	S53-F7X	5.3	66.7	59.5	57.0	55.8	61.9	57.3
Univ. of Missouri	S16-3739RY	5.2	81.0*	61.0	54.2	56.8	67.6	58.9
Univ. of Missouri	S16-3747RY	5	70.2	61.3	51.1	56.9	60.6	59.1
VT	V16-0025	5.4	76.3	66.6	49.5	56.2	62.9	61.0
VT	V16-2471R	5.4	80.1*	67.2	53.5	54.8	69.2	56.6
Mean			78.9	62.8	52.8	55.4	65.8	59.0
Probability > F			0.0065	-	0.5243	-	0.9334	
LSD_{0.1}			11.7	-	NS**	-	NS**	

¹Yields and test weights are reported at 13% moisture content.

²Varieties in **bold** are checks.

*Varieties with an asterisk next to yield are not statistically different (Probability > F ≤ 0.1) compared to the top yielding variety (highlighted in blue) at this location.

** NS indicates that no statistically significant difference was observed for yield at this location for this test.

Table 36. Relative yield summary for MG 3 soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Asgrow	AG36X6	102	83	87	90	98	98
Asgrow	AG37X0	102	98	97	91	85	99
Asgrow	AG38X8	100	92	100	76	96	104
Asgrow	AG38X8	95	74	96	76	95	101
Credenz	CZ3750GTLL	120	101	100	110	111	104
Credenz	CZ4701GTLL	117	117	102	113	117	100
Credenz	CZ3840GTLL	96	110	109	103	128	102
Credenz	CZ3930GTLL	99	105	107	92	111	103
Dyna-Gro	S39EN19	102	101	109	123	94	102
Dyna-Gro	S39GL11	104	106	94	99	102	108
Local Seed	ZS3496GL	97	106	97	107	106	98
Local Seed	LS3606GL	88	114	102	99	113	106
Local Seed	ZS3898E3S	97	114	105	126	95	100
Local Seed	LS3976X	98	103	98	101	103	108
Local Seed	LS3906GL	97	104	102	106	107	94
Mid-Atlantic	MAS3220E3	110	110	102	123	89	95
Mid-Atlantic	MAS3600E3/STS	112	106	100	115	98	98
Mid-Atlantic	MAS3720E3/STS	110	112	100	120	86	105
MorSoy	MS 3907	100	96	102	95	117	113
NK Brand	S37-A4X	101	75	98	92	110	97
NK Brand	S39-G2X	101	97	108	91	117	98
Pioneer	P25A82L	52	74	72	64	61	67
Pioneer	P31A95X	89	99	95	72	91	91
Pioneer	P33A24X	77	93	100	79	90	97
Seed Consultants	SC 7361E	105	106	95	117	92	90
Seed Consultants	SC 7381E	104	94	91	117	85	95
Seed Consultants	SC 7390E	113	114	101	110	107	102
Southern Harvest	SH 3814 LL	82	103	110	88	84	96
Syngenta	S37-A4X	112	82	102	90	102	103
Syngenta	S39-G2X	101	90	103	91	122	104
USG	7381ETS	112	115	114	123	96	97
Trial Mean (bu/ac)		72.9	71.8	71.8	50.3	80.0	54.5

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites

Varieties highlighted in yellow have relative yield ratings of 100 or greater at four testing sites

Table 37. Relative yield summary for MG 4 (early) soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Asgrow	AG42X9	106	95	95	97	83	97
Asgrow	AG43X0	103	97	106	100	110	100
Asgrow	AG43X8	92	107	102	91	108	101
Credenz	CZ4240GTLL	102	113	107	102	82	92
Credenz	CZ4410GTLL	92	90	98	91	109	102
Dyna-Gro	S41ES80	103	99	94	130	93	93
Dyna-Gro	S41XS98	101	111	97	75	120	103
Dyna-Gro	S43EN61	107	98	95	109	114	102
Dyna-Gro	S43EN70	97	87	115	100	108	110
Dyna-Gro	S44EN40	105	100	98	130	103	105
Local Seed	LS4299XS	104	78	103	112	103	114
Local Seed	ZS4295GLS	104	110	98	106	93	101
Local Seed	LS4407X	99	104	94	105	106	98
Mid-Atlantic	MAS4077GT/STS	93	95	87	78	80	95
NK Brand	S42-B9XS	101	122	110	66	106	114
Pioneer	P42A96X	91	113	99	105	86	93
Seed Consultants	SC 7421E	106	94	96	109	101	96
Southern Harvest	SH 4020 E3	83	97	115	106	92	88
Southern Harvest	SH 4019 LLGT	111	80	99	106	92	98
Syngenta	S42-B9XS	108	112	97	59	105	104
USG	7431ET	97	95	96	126	104	95
Trial Mean (bu/ac)		72.6	75.9	77.3	49.5	87.6	55.1

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites

Varieties highlighted in yellow have relative yield ratings of 100 or greater at four testing sites

Table 38. Relative yield summary for MG 4 (late) soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Asgrow	AG46X0	116	125	105	84	99	105
Asgrow	AG46X6	99	122	110	102	111	100
Asgrow	AG47X9	118	111	103	101	83	101
Asgrow	AG48X7	106	75	102	58	119	109
Asgrow	AG48X9	102	114	99	107	98	108
Dyna-Gro	S45ES10	102	107	107	124	101	107
Dyna-Gro	S46EN91	88	105	102	112	106	99
Dyna-Gro	S46XS60	105	127	97	100	110	110
Dyna-Gro	S48XT90	96	99	102	97	114	109
Local Seed	LS4583X	105	90	110	107	104	110
Local Seed	ZS4694E3S	110	101	99	119	88	104
Local Seed	LS4607XS	105	109	107	88	96	104
Local Seed	LS4706GL	108	90	98	106	87	91
Local Seed	LS4795XS	109	110	103	97	92	111
Local Seed	LS4798X	101	95	99	97	107	110
Local Seed	LS4889XS	89	107	107	101	106	101
Local Seed	LS4999X	113	117	99	102	103	106
Mid-Atlantic	MAS4675E3/STS	91	119	95	119	101	106
Mid-Atlantic	MAS4666GT	83	72	98	95	104	98
Mid-Atlantic	MAS4811/E3/STS	93	91	97	103	101	102
Mid-Atlantic	MAS4820E3/STS	-	94	-	-	-	-
MorSoy	MS 4616	102	100	99	107	106	100
MorSoy	MS 4800	108	89	91	112	98	98
MorSoy	MS 4846	124	98	109	89	108	108
Pioneer	P46A57X	108	109	100	98	107	94
Pioneer	P48A60X	106	111	110	92	102	102
Seed Consultants	SC 8459X	98	104	99	111	105	103
Seed Consultants	SC 7461E	103	99	93	121	101	93
Southern Harvest	SH 4619 LLGT	99	90	99	92	84	87
Southern Harvest	SH 4820 E3	90	106	95	105	102	97
Southern Harvest	SH 4920 E3	99	97	101	125	108	108
Syngenta	S45-K5X	96	102	113	108	98	102
Uni. of Missouri	S15-5904RY	93	91	101	87	105	90
Uni. of Missouri	S15-3847R	79	90	85	48	85	99
Uni. of Missouri	S16-5540R	85	79	91	96	102	97
Uni. of Missouri	S15-3772RY	88	85	88	93	88	89

Table 28. (cont)

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
USG	7451ET	101	86	105	97	83	101
USG	7480ET	102	96	95	106	99	97
USG	7447XTS	94	107	106	106	112	109
USG	7491ETS	104	90	98	121	79	96
Virginia Tech	V16-0293	93	89	104	90	92	94
Virginia Tech	V17-0437	87	100	84	76	107	102
Trial Mean (bu/ac)		69.0	76.4	72.3	50.9	87.8	53.5

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites

Varieties highlighted in yellow have relative yield ratings of 100 or greater at four testing sites

Table 39. Relative yield summary for MG 5 soybeans

Brand	Variety	Full Season		Double Crop	
		Wye	Poplar Hill	Wye	Poplar Hill
Local Seed	LS5087X	115	106	107	102
Local Seed	LS5386X	110	107	81	92
Local Seed	ZS5098E3	100	91	102	91
MorSoy	MS 5110	104	105	105	102
MorSoy	MS 5398	112	102	90	105
MorSoy	MS 5607	97	103	112	95
Southern Harvest	SH 5321 E3	88	94	114	100
Syngenta	S51-R3XS	96	94	114	99
Syngenta	S53-F7X	104	120	85	107
University of Missouri	S16-3739RY	96	98	103	101
University of Missouri	S16-3747RY	79	85	89	95
VT	V16-0025	101	103	97	93
VT	V16-2471R	97	91	100	101
Trial Mean (bu/ac)		65.7	75.4	78.9	52.8

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites