

2021 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 2021 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 2021, 85 varieties were tested using four maturity groups: MG 3 (22 varieties, Table 6), early MG 4 (4.0-4.3, 21 varieties, Table 7), late MG 4 (>4.4, 36 varieties, Table 8) and MG 5 (6 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. For 2021, we modified a John Deere Maxemerge 2 four-row, 30" spacing, no-till planter, with coulters and trash wheels. The modifications included the addition of a single cone planting unit that delivered seed to a spinner powered by a 12v motor to evenly distribute seed to the four planter units (Figure 1). 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 and plot harvest length was approximately 20 feet, but harvested plot length varied slightly across locations. Center two rows (~5 ft. swath) 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. Due to the fabrication of the new planter, planting dates were slightly delayed – especially in the double crop tests. We believe this negatively impacted yields in these tests. Additionally, there was ample stover present on the surface at Central Maryland Research and Education Center when planting, and we believe poor seed-to-soil contact at planting negatively impacted yield at this location. Despite late planting, we were able to harvest plots in a timely manner, due to favorable fall weather conditions.

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 28-31. Variety performance at individual locations can be found in Tables 14-27. The agronomic characteristics reported are yield, in bushels/acre at 13% moisture content, test weight (lb/bu) at 13% moisture, height in inches (at Wye location, one replication) and date to maturity (at Wye location, one replication).

A least significant difference (LSD) value is reported for each test where statistically significant differences ($P \leq 0.1$) for yield was 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. To compare the performance of each variety across the five locations, relative yield tables (Tables 32-35) 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.

Acknowledgments

The University of Maryland Agronomy Trials Center work would not be possible without the assistance and oversight of equipment maintenance, seed packaging, planting, data collection, and plot harvest by faculty research assistant, Louis Thorne. This work could not be accomplished without the assistance of research technician Joseph Crank during the season. Also, we acknowledge the undergraduate students for their assistance with seed packaging. Thank you to the crew at Wye Research and Education Center for sharing your experience, tools, and space in your shop with Louis Thorne as he continues to keep our equipment running. Table 1 outlines the crews at each test location who assisted with land preparation, flagging, plot management, and harvest. I personally would like to acknowledge each farm manager, David Armentrout, John Draper, Ryan McDonald, and Douglas Price for their continued support of the Agronomy Trials Center and their continued patience with me.

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.



Figure 1. Modified no-till planter fabricated in 2021 for no-till planting of all plots in the test.

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Table 1. Production management practices and other information for the full season locations for the 2021 Soybean Variety Trials.

Location	Soil Type and Previous Crop	Fertilizer	Pesticides	Pesticides	Tillage	Plant and Harvest Dates	Farm Staff
Wye R&E Center Queenstown, MD	Mattapex-Butlertown silt loam Wheat then rye cover crop	<u>10 June</u> 10 lb/100 gal of 21-0-0 (ammonium sulfate) <u>29 July</u> 3lb/ac of 21-0-0 (ammonium sulfate) <u>Total:</u> 5-0-0-6(S)	<u>10 June</u> Fierce XLT @ 4 oz/a Gly Start Plus @ 1 qt/a Metribuzin 75 @ 5 oz/a Interline @ 4 oz/a Scanner @ 2pt/100gal <u>1 July</u> Intensity one @ 16 oz/a Scanner @ 2pt/100gal	<u>29 July</u> Cadet @ 0.6 oz/a Intensity one @ 36 oz/a Scanner @ 2pt/100gal	No-tillage 30" row spacing	<u>Plant</u> 09 June <u>Harvest</u> 10 November	John Draper Thomas Eason
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Mattapex silt loam Sorghum	<u>20 May</u> 400 lb/a 5-5.1-36.2-6(S)-0.3(B)-0.83(Mg) <u>Total</u> 20-20.4-145-24(S)-1.2(B)-3.3(Mg)	<u>17 May</u> Gramoxone @ 1 qt/a 2,4-D @ 1qt/a Scanner 80/20 @ 6 fl oz/a <u>14 June</u> Gramoxone @ 1 qt/a Valor XLT @ 4 oz/a Scanner 80/20 @ 10 fl oz/a	<u>14 July</u> RoundUp @ 1 qt/a Dual II Magnum @ 1 pt/a	No-tillage 30" row spacing	<u>Plant</u> 14 June <u>Harvest</u> 16 November	David Armentrout Vivian Calder Jordan Miller Fred Senkbeil
Central Maryland R&E Center Clarksville Facility Clarksville, MD	Glenville silt loam Field corn	<u>4 May</u> 0-0-100-15(S)-1(B) <u>Total</u> 0-0-100-15(S)-1(B)	<u>18 April</u> RoundUp @ 1.5 qt/a 2,4D LV4 @ 1 qt/a Surfactant @ 1qt/100gal <u>17 June</u> Paraquat (Solera) @ 1 qt/a Sharpen @ 1oz/a Cloak @ 5 oz/a Brawl II @ 1.33 pt/a MSO @ 1gal/100gal	<u>19 August</u> Basagran @ 1.6 pt/a MSO @ 1 gal/100gal <u>25 August</u> Poast Plus @ 1.5 qt/a COC @ 1 pt/a AMS @ 2.5 lb/a	No-tillage 30" row spacing	<u>Plant</u> 16 June <u>Harvest</u> 10 November	Ryan McDonald Michael Gray
Western Maryland R&E Center Keedysville, MD	Swanpond-Funkstown silt loam Field corn then rye cover crop	<u>Total</u> 11-52-100-15(S)	<u>20 April</u> Roundup Powermax @ 1 qt/a Weedone LV4 @ 1 pt/a <u>14 June</u> Paraquat @ 1.5 qt/a Brawl II @ 1.33 pt/a Sharpen @ 1 oz/a Cloak @ 5 oz/a	<u>29 July</u> Roundup Powermax @ 1 qt/a	No-tillage 30" row spacing	<u>Plant</u> 17 June <u>Harvest</u> 18 November	Douglas Price David Wyand

Table 2. Production management practices and other information for the double crop locations for the 2021 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 silt loam Wheat	<u>04 July</u> 10lb/100gal of 21-0-0 (ammonium sulfate) <u>17 August</u> 2lb/a of 21-0-0 (ammonium sulfate) <u>Total</u> 1.4-0-0-1.5(S)	<u>04 July</u> Fierce XLT @ 4 oz/a Metribuzin 75 @ 5 oz/a Interline @ 29 oz/a Bullseye @ 1 qt/a <u>17 Aug</u> Cadet @ 0.6oz/a Scanner 80/20 @ 2pt/100gal Intensity One @ 36 oz/a	No-tillage 30" row spacing	<u>Plant</u> 01 July <u>Harvest</u> 10 November	John Draper Thomas Eason
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Nassawango silt loam Field corn then wheat	-	<u>12 July</u> RoundUp @ 1pt/a ValorXLT @ 4 oz/a Scanner 80/20 @ 10 fl oz/a	No-tillage 30" row spacing	<u>Plant</u> 12 July <u>Harvest</u> 16 November	David Armentrout Vivian Calder Jordan Miller Fred Senkbeil

Table 3. Brands and companies in the 2021 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
Hubner	Hubner Seed Company, 306 North Main St., Monticello, IN 47960 www.hubnerseed.com
Mid-Atlantic Seeds	Mid-Atlantic Seeds, 316 N Albemarle St., York, PA 17402 www.midatlanticseeds.com
MorSoy	SeedKoz, 1725 Windward Concourse, Suite 410, Alpharetta, GA 30005 www.meherrinag.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
Southern Harvest	Meherrin, 1725 Windward Concourse, Suite 410, Alpharetta, GA 30005 www.meherrinag.com
Syngenta/NK	Syngenta Seeds, 4013 Fairmount Pike, Signal Mountain, TN 37377 www.syngenta-us.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 2021 at Maryland locations of soybean variety trials

	Wye	Poplar Hill	Keedysville	Clarksville
Month	inches			
June	2.55	4.8	3.68	1.61
July	2.60	5.27	3.26	2.14
August	6.58	7.23	2.02	2.26
September	2.24	3.45	7.52	4.19
October	3.50	4.89	1.81	0.97
2021 Total (5 mos.)	17.47	25.64	18.29	11.17
Long Term Average¹	23.85	21.08	16.59	15.61

¹Long term average precipitation is for the follow number of years at each location: Wye=22; Poplar Hill = 21; Keedysville = 42; Clarksville =12

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

Abbreviation	Description
Acceleron	Seed treatment for nematode and insect protection and soil/seed-borne fungal pathogens with the number referring to the concentration of the insecticide used
ApronMaxx RFC	Seed treatment fungicide for control of certain seed-borne, soil-borne, and seedling diseases of soybeans and other legumes
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
Equity VIP	Broad, multi-function combination of insecticide and fungicide seed treatment to protect against a range of early season soybean diseases, many early season insects, including aphids and thrips.
Extend Flex (XF)	Soybeans which have dicamba herbicide resistance
ILeVO	Seed treatment to protect against sudden death syndrome and nematodes
Imidicloprid	Insecticide that mimics nicotine, which is toxic to insects and is used to control sucking insects, termites, and some soil insects
Ipconazole	Fungicide seed treatment used to protect plants from soil borne and seed borne disease
LibertyLink GT27 LLGT27	Refers to glufosinate (Liberty) herbicide tolerance
LumiGEN	Fungicide seed treatment to protect against common seedborne diseases
Metalaxyl	systemic fungicide used to control plant diseases caused by the Oomycetes or water-mold fungi
Proshield	Fungicide and insecticide seed treatment with three modes of action against scab, smut and bunt, plus the added benefit of imidacloprid
PVI	Poly(N-vinyl imidazole) which has bactericidal properties and can be used for seed treatment to control xanthomonads associated with bacterial leaf spot
Rancona Summit	Combination seed treatment of Ipconazole and metalaxyl
RR2X (Xtend)	Soybeans which have dicamba and glyphosate herbicide resistance
RR2Y (Yield)	Soybeans which have glyphosate herbicide resistance
Salstro	Seed treatment for protection against sudden death syndrome
STS	Sulfonylurea-tolerant soybeans
Vibrance	Seed treatment effective against certain smut diseases and provide protection against seedling blight or damping-off caused by seed- and soilborne pathogens including Rhizoctonia
Warden CX	Fungicide seed treatment that can prevent Rhizoctonia, Fusarium, and Pythium, and Phytophthora fungal diseases and/or plant parasites

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

Brand	Variety	MG	SCN Resistant Gene	Seed Treatment	Traits
Asgrow	AG38x8	3.8		Untreated	
Asgrow	AG38x8	3.8		Acceleron	RR2 Xtend
Credenz	CZ 3750GTLL	3.7		PVI	GTLL
Credenz	CZ 3930GTLL	3.9		PVI	GTLL
Dyna-Gro	S37ES52	3.7	PI88788	Equity VIP Saltro	Enlist E3/STS
Dyna-Gro	S39EN19	3.9	PI88788	Equity VIP Saltro	Enlist E3
Dyna-Gro	S39XF41	3.9	PI88788	Equity VIP Saltro	XtendFlex/STS
Mid-Atlantic Seeds	MAS3021E3	3.0	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS3220E3	3.2	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	N/A	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	N/A	MAS Proshield	Enlist
Pioneer	P38T76E	3.8			
Seed Consultants	SC7381E	3.8	PI88788	LumiGEN	Enlist
Seed Consultants	SC7390E	3.9	PI88788	LumiGEN	Enlist
Southern Harvest	SH3814LL	3.8		Untreated	Liberty Link
Southern Harvest	SH3814LL	3.8		ApronMaxx RFC & Germate Plus	Liberty Link
Syngenta/NK Brand	S39-G2X	3.9	R3	Cruiser Maxx Beans + Vibrance + Saltro	E3
USG	7382ETS	3.8	PI88788	Ipconazole/metalaxyl/ imidiclopird	Enlist/STS
USG	7392XFS	3.9	PI88788	Ipconazole/metalaxyl/ imidiclopird	XtendFlex/STS
Xitavo	XO 3861E	3.8		PVI	Enlist

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	MG	SCN Resistant Gene	Seed Treatment	Traits
Credenz	CZ 4202XF	4.2		PVI	XtendFlex
Credenz	CZ 4241GTLL	4.2		PVI	GTLL
Dyna-Gro	S41EN72	4.1	PI88788	Equity VIP Saltro	Enlist E3
Dyna-Gro	S41ES80	4.1	PI88788	Equity VIP Saltro	Enlist E3/STS
Dyna-Gro	S43EN61	4.3	PI88788	Equity VIP Saltro	Enlist E3
Hubner	H42-31XF	4.2		Accelaron	RR, Dicamba, Liberty
Hubner	H44-42XF	4.4		Accelaron	RR, Dicamba, Liberty
Mid-Atlantic Seeds	MAS4021E3	4.0	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	N/A	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS4120E3	4.1	PI88.788	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS4320E3	4.3	N/A	MAS Proshield	Enlist
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	N/A	MAS Proshield	RR
Pioneer	P41T07E	4.1		LumiGEN, ILLevo	Enlist E3
Seed Consultants	SC7421E	4.2	PI88788	LumiGEN	Enlist
Southern Harvest	4022 E3	4.0	PI88788	Fungicide + Growth Promoter	Enlist E3
Syngenta/NK Brand	S43-V8XF	4.3	R3	Cruiser Maxx Beans + Vibrance + Saltro	E3
USG	7420ETS	4.2	PI88788	Ipconazole/metalaxyl/ imidiclopird	Enlist/STS
USG	7429ET	4.2	PI88788	Ipconazole/metalaxyl/ imidiclopird	Enlist
USG	7431ET	4.3	PI88788	Ipconazole/metalaxyl/ imidiclopird	Enlist
USG	7441XF	4.4	PI88788	Ipconazole/metalaxyl/ imidiclopird	XtendFlex
Xitavo	XO 4371E	4.3		PVI	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	MG	SCN Resistant Gene	Seed Treatment	Traits
Credenz	CZ 4562XF	4.5		PVI	XtendFlex
Credenz	CZ 4701GTLL	4.7		PVI	GTLL
Credenz	CZ 4742XF	4.7		PVI	XtendFlex
Credenz	CZ 4892XF	4.8		PVI	XtendFlex
Credenz	CZ 4912XF	4.9		PVI	XtendFlex
Dyna-Gro	S45ES10	4.5	PI88788	Equity VIP Saltro	Enlist E3/STS
Dyna-Gro	S46XF31S	4.6	PI88788	Equity VIP Saltro	XtendFlex/STS
Dyna-Gro	S46XS60	4.6	PI88788	Equity VIP Saltro	Xtend/STS
Dyna-Gro	S48EN02	4.8	PI88788	Equity VIP Saltro	Enlist E3
Dyna-Gro	S48XF61S	4.8	PI88788	Equity VIP Saltro	XtendFlex/STS
Dyna-Gro	S48XT90	4.8		Equity VIP Saltro	Xtend
Hubner	H48-31XF	4.8		Acceleron	RR, Dicamba, Liberty
Mid-Atlantic Seeds	MAS4666GT	4.6	N/A	MAS Proshield	RR
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	PI88.788	MAS Proshield	E3/STS
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	PI88.788	MAS Proshield	E3/STS
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	N/A	MAS Proshield	E3/STS
MorSoy	MS 4640 XF	4.6	PI88788	Avicta Complete	XF
MorSoy	MS 4850 XF/STS	4.8	PI88788	Avicta Complete	XF
Pioneer	P45T88E	4.5		LumiGEN, ILLevo	Enlist E3
Seed Consultants	SC7461E	4.6	PI88788	LumiGEN	Enlist
Seed Consultants	SC7481E	4.8	PI88788	LumiGEN	Enlist
Southern Harvest	4622 E3	4.6		Fungicide + Growth Promoter	Enlist E3
Southern Harvest	4820 E3	4.8		Fungicide + Growth Promoter	Enlist E3
Syngenta/NK Brand	NK45-P9XF	4.5	R3	Cruiser Maxx Beans + Vibrance + Saltro	ExtendFlex
Syngenta/NK Brand	NK45-V9E3	4.5	R3	Cruiser Maxx Beans + Vibrance + Saltro	E3
Syngenta/NK Brand	S49-F5X	4.9	R3	Cruiser Maxx Beans + Vibrance + Saltro	E3
University of Missouri	S09-13608C	4.5	N	Warden CX	Conv
University of Missouri	S16-7922C	4.9	Rhg1 (Peking)	Warden CX	Conv
USG	7451ET	4.5	No	Ipconazole/metalaxyl/imidiclopird	Enlist
USG	7461XFS	4.6	PI88788	Ipconazole/metalaxyl/imidiclopird	XtendFlex/STS
USG	7472ETS	4.7	No	Ipconazole/metalaxyl/imidiclopird	Enlist/STS

Table 8. (cont).

Brand	Variety	MG	SCN Resistant Gene	Seed Treatment	Traits
Va Tech	V15-0057DI	4.8	Not specified	Rancona, Summitt	Conv.
Va Tech	V16-0293	4.8	Not specified	Rancona, Summitt	Conv.
Va Tech	V17-0454	4.6	Not specified	Rancona, Summitt	Conv.
Va Tech	V17-2478R	4.9	Not specified	Rancona, Summitt	RR1
Xitavo	XO 4681E	4.6	N/A	PVI	Enlist

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

Brand	Variety	MG	SCN Resistant Gene	Seed Treatment	Traits
Credenz	CZ 5282XF	5.2	N/A	PVI	XtendFlex
MorSoy	MS 5110E	5.1	PI88788	Avicta Complete	E3
Syngenta/NK	S53-F7X	5.3	R3	Cruiser Maxx Beans + Vibrance + Saltro	E3
Uni. of Missouri	S16-11651C	5.3	Rhg1(Peking)	Warden CX	Conv.
Va Tech	V15-2261ST	5.2	N/A	Rancona, Summitt	STS
Va Tech	V17-2361R	5.3	N/A	Rancona, Summitt	RR1

Table 10. Average performance of MG 3 full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg	
Asgrow	AG38x8 - Untreated	3.8	44.1	57.4	50.7	58.2
Asgrow	AG38x8	3.8	50.3	62.4	56.3	59.8
Credenz	CZ 3750GTLL	3.7	50.6	71.8	61.2	56.2
Credenz	CZ 3930GTLL	3.9	59.9	67.7	63.8	60.3
Dyna-Gro	S37ES52	3.7	51.2	-	-	58.3
Dyna-Gro	S39EN19	3.9	56.1	72.3	64.2	59.5
Dyna-Gro	S39XF41	3.9	53.3	-	-	59.4
Mid-Atlantic Seeds	MAS3021E3	3.0	42.7	-	-	57.9
Mid-Atlantic Seeds	MAS3220E3	3.2	52.6	73.5	63.0	59.3
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	48.1	-	-	53.9
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	50.1	71.9	61.0	59.4
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	51.0	-	-	58.1
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	61.1	-	-	59.7
Pioneer	P38T76E	3.8	48.1	-	-	59.5
Seed Consultants	SC7381E	3.8	46.8	67.0	56.9	59.0
Seed Consultants	SC7390E	3.9	60.6	73.1	66.8	57.8
Southern Harvest	SH3814LL - Untreated	3.8	50.3	64.2	57.2	59.7
Southern Harvest	SH3814LL	3.8	49.3	-	-	58.9
Syngenta/NK Brand	S39-G2X	3.9	53.6	66.7	60.1	59.2
USG	7382ETS	3.8	57.1	-	-	61.2
USG	7392XFS	3.9	59.7	-	-	59.6
Xitavo	XO 3861E	3.8	51.4	-	-	52.9
Mean			52.3	66.7	-	58.5
Probability > F			0.1151	-	-	-
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 11. Average performance of MG 4 (early) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg	
Credenz	CZ 4202XF	4.2	49.9	-	-	59.6
Credenz	CZ 4241GTLL	4.2	57.4	-	-	58.6
Dyna-Gro	S41EN72	4.1	64.7	-	-	58.9
Dyna-Gro	S41ES80	4.1	56.9	71.6	64.2	59.1
Dyna-Gro	S43EN61	4.3	63.4	68.7	66.0	59.5
Hubner	H42-31XF	4.2	57.1	-	-	59.6
Hubner	H44-42XF	4.4	61.4	-	-	58.3
Mid-Atlantic Seeds	MAS4021E3	4.0	59.6	-	-	57.3
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	50.8	60.3	55.5	59.6
Mid-Atlantic Seeds	MAS4120E3	4.1	53.0	-	-	59.4
Mid-Atlantic Seeds	MAS4320E3	4.3	61.0	-	-	58.8
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	56.8	-	-	59.1
Pioneer	P41T07E	4.1	57.2	-	-	59.4
Seed Consultants	SC7421E	4.2	57.9	66.9	62.4	58.9
Southern Harvest	4022 E3	4.0	60.0	-	-	58.7
Syngenta/NK Brand	S43-V8XF	4.3	58.9	-	-	59.7
USG	7420ETS	4.2	61.2	-	-	58.8
USG	7429ET	4.2	61.7	-	-	59.9
USG	7431ET	4.3	54.2	69.4	61.8	59.3
USG	7441XF	4.4	59.2	-	-	58.8
Xitavo	XO 4371E	4.3	60.6	-	-	59.2
Mean			58.2	68.0	-	59.1
Probability > F			0.6082	-	-	-
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 12. Average performance of MG 4 (late) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg	
Credenz	CZ 4562XF	4.5	60.7	-	-	58.6
Credenz	CZ 4701GTLL	4.7	63.1	-	-	64.2
Credenz	CZ 4742XF	4.7	53.2	-	-	60.6
Credenz	CZ 4892XF	4.8	50.6	-	-	65.1
Credenz	CZ 4912XF	4.9	60.6	-	-	61.1
Dyna-Gro	S45ES10	4.5	61.3	73.4	67.3	59.6
Dyna-Gro	S46XF31S	4.6	67.3*	-	-	60.0
Dyna-Gro	S46XS60	4.6	62.4	72.5	67.4	59.9
Dyna-Gro	S48EN02	4.8	63.7	-	-	60.5
Dyna-Gro	S48XF61S	4.8	58.6	-	-	59.9
Dyna-Gro	S48XT90	4.8	68.7*	66.2	67.4	62.1
Hubner	H48-31XF	4.8	62.9	-	-	60.3
Mid-Atlantic Seeds	MAS4666GT	4.6	57.4	58.0	57.7	59.9
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	64.0	71.7	67.8	60.0
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	62.5	-	-	56.5
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	62.9	-	-	58.7
MorSoy	MS 4640 XF	4.6	68.8*	-	-	59.0
MorSoy	MS 4850 XF/STS	4.8	64.1	-	-	60.3
Pioneer	P45T88E	4.5	61.7	-	-	59.7
Seed Consultants	SC7461E	4.6	64.6*	68.7	66.6	59.8
Seed Consultants	SC7481E	4.8	63.1	-	-	59.6
Southern Harvest	4622 E3	4.6	57.7	-	-	57.5
Southern Harvest	4820 E3	4.8	63.7	66.9	65.3	59.5
Syngenta/NK Brand	NK45-P9XF	4.5	63.8	-	-	60.0
Syngenta/NK Brand	NK45-V9E3	4.5	62.5	-	-	59.4
Syngenta/NK Brand	S49-F5X	4.9	68.3*	-	-	59.5
University of Missouri	S09-13608C	4.5	66.3*	-	-	64.2
University of Missouri	S16-7922C	4.9	66.4*	-	-	62.3
USG	7451ET	4.5	64.6*	64.7	64.6	60.0
USG	7461XFS	4.6	72.8*	-	-	60.2
USG	7472ETS	4.7	62.5	-	-	59.2
Va Tech	V15-0057DI	4.8	61.4	-	-	56.2
Va Tech	V16-0293	4.8	67.5*	63.3	65.4	63.4
Va Tech	V17-0454	4.6	57.1	-	-	55.0
Va Tech	V17-2478R	4.9	55.8	-	-	65.7
Xitavo	XO 4681E	4.6	62.2	-	-	62.5
Mean			62.5	67.1	-	60.3
Probability > F			0.0031	-	-	-
LSD_{0.1}			8.4	-	-	-

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 13. Average performance of MG 5 full season soybeans evaluated at two locations (Wye, Poplar Hill) in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg	
Credenz	CZ 5282XF	5.2	60.6	-	-	62.1
MorSoy	MS 5110E	5.1	72.0	74.7	73.3	67.0
Syngenta/NK	S53-F7X	5.3	71.1	81.8	76.4	61.6
Uni. of Missouri	S16-11651C	5.3	72.7	-	-	56.1
Va Tech	V15-2261ST	5.2	68.6	-	-	66.5
Va Tech	V17-2361R	5.3	64.3	-	-	62.6
Mean			68.2	71.5	-	62.7
Probability > F			0.1196	-	-	-
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 14. Performance of MG 3 full season soybeans evaluated at Wye Research and Education Center in 2021.

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹	Height (in)	Maturity date
			2021	2020	2 yr. avg			
Asgrow	AG38x8 - Untreated	3.8	42.7	69.0	55.8	61.8	28	30 Sept
Asgrow	AG38x8	3.8	49.2	73.3	61.2	61.0	28	30 Sept
Credenz	CZ 3750GTLL	3.7	42.7	87.7	65.2	60.8	28	30 Sept
Credenz	CZ 3930GTLL	3.9	67.3*	71.9	69.6	61.8	28	30 Sept
Dyna-Gro	S37ES52	3.7	54.7*	-	-	61.4	20	29 Sept
Dyna-Gro	S39EN19	3.9	52.9*	74.2	63.5	60.3	26	30 Sept
Dyna-Gro	S39XF41	3.9	58.5*	-	-	60.8	34	30 Sept
Mid-Atlantic Seeds	MAS3021E3	3.0	32.9	-	-	55.9	22	21 Sept
Mid-Atlantic Seeds	MAS3220E3	3.2	48.2	80.2	64.2	60.0	22	30 Sept
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	46.4	-	-	50.8	26	30 Sept
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	46.6	81.9	64.2	60.9	26	21 Sept
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	54.6*	-	-	59.1	28	28 Sept
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	63.0*	-	-	62.0	30	5 Oct
Pioneer	P38T76E	3.8	35.3	-	-	60.6	22	21 Sept
Seed Consultants	SC7381E	3.8	42.4	76.2	59.3	60.6	24	28 Sept
Seed Consultants	SC7390E	3.9	68.5*	82.8	75.6	61.8	32	8 Oct
Southern Harvest	SH3814LL - Untreated	3.8	48.6	59.9	54.2	60.8	28	28 Sept
Southern Harvest	SH3814LL	3.8	45.0	-	-	61.0	28	30 Sept
Syngenta/NK Brand	S39-G2X	3.9	55.6*	74.0	64.8	60.7	32	5 Oct
USG	7382ETS	3.8	50.3	-	-	61.4	26	28 Sept
USG	7392XFS	3.9	67.1*	-	-	61.6	28	30 Sept
Xitavo	XO 3861E	3.8	54.0*	-	-	61.1	20	28 Sept
Mean			51.0	72.9	-	60.3	27	-
Probability > F			0.0052	-	-	-	-	-
LSD_{0.1}			14.7	-	-	-	-	-

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 15. Performance of MG 4 (early) full season soybeans evaluated at Wye Research and Education Center in 2021.

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹	Height (in)	Maturity date
			2021	2020	2 yr. avg			
Credenz	CZ 4202XF	4.2	56.6	-	-	62.4	38	5 Oct
Credenz	CZ 4241GTLL	4.2	59.5	-	-	60.5	28	30 Sept
Dyna-Gro	S41EN72	4.1	63.3	-	-	60.4	24	8 Oct
Dyna-Gro	S41ES80	4.1	60.2	74.8	67.5	61.0	28	8 Oct
Dyna-Gro	S43EN61	4.3	69.3	77.4	72.0	60.4	32	8 Oct
Hubner	H42-31XF	4.2	64.0	-	-	61.6	34	5 Oct
Hubner	H44-42XF	4.4	71.5	-	-	60.7	38	8 Oct
Mid-Atlantic Seeds	MAS4021E3	4.0	65.4	-	-	60.2	28	8 Oct
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	42.6	67.3	54.9	60.7	36	5 Oct
Mid-Atlantic Seeds	MAS4120E3	4.1	49.3	-	-	60.9	28	5 Oct
Mid-Atlantic Seeds	MAS4320E3	4.3	62.4	-	-	60.4	30	5 Oct
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	67.4	-	-	60.8	32	5 Oct
Pioneer	P41T07E	4.1	50.1	-	-	60.7	32	8 Oct
Seed Consultants	SC7421E	4.2	59.1	76.8	67.9	60.6	32	5 Oct
Southern Harvest	4022 E3	4.0	57.0	-	-	60.3	22	30 Sept
Syngenta/NK Brand	S43-V8XF	4.3	62.5	-	-	61.3	40	8 Oct
USG	7420ETS	4.2	68.7	-	-	60.7	26	8 Oct
USG	7429ET	4.2	53.3	-	-	60.6	26	30 Sept
USG	7431ET	4.3	52.3	70.4	61.3	60.5	26	5 Oct
USG	7441XF	4.4	57.2	-	-	59.9	30	8 Oct
Xitavo	XO 4371E	4.3	62.9	-	-	60.7	32	8 Oct
Mean			59.7	72.6	-	60.7	31	-
Probability > F			0.1025	-	-	-	-	-
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 2021.

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹	Height (in)	Maturity date
			2021	2020	2 yr. avg			
Credenz	CZ 4562XF	4.5	65.3*	-	-	56.4	36	8 Oct
Credenz	CZ 4701GTLL	4.7	67.4*	-	-	58.8	40	11 Oct
Credenz	CZ 4742XF	4.7	56.8	-	-	60.4	42	11 Oct
Credenz	CZ 4892XF	4.8	48.3	-	-	60.7	40	8 Oct
Credenz	CZ 4912XF	4.9	63.3	-	-	61.9	46	15 Oct
Dyna-Gro	S45ES10	4.5	69.8*	70.7	70.2	60.6	32	11 Oct
Dyna-Gro	S46XF31S	4.6	76.0*	-	-	60.6	42	15 Oct
Dyna-Gro	S46XS60	4.6	62.5	72.7	67.6	61.0	32	12 Oct
Dyna-Gro	S48EN02	4.8	65.3*	-	-	61.2	44	15 Oct
Dyna-Gro	S48XF61S	4.8	56.9	-	-	59.8	34	11 Oct
Dyna-Gro	S48XT90	4.8	70.6*	66.4	68.5	60.1	36	16 Oct
Hubner	H48-31XF	4.8	62.0	-	-	59.8	44	20 Oct
Mid-Atlantic Seeds	MAS4666GT	4.6	54.7	57.2	55.9	61.4	38	8 Oct
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	67.0*	62.9	64.9	60.4	30	8 Oct
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	59.8	-	-	48.6	34	15 Oct
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	61.7	-	-	59.2	36	16 Oct
MorSoy	MS 4640 XF	4.6	72.1*	-	-	56.7	42	15 Oct
MorSoy	MS 4850 XF/STS	4.8	64.7*	-	-	60.7	32	11 Oct
Pioneer	P45T88E	4.5	66.1*	-	-	59.8	28	11 Oct
Seed Consultants	SC7461E	4.6	72.9*	71.3	72.1	59.4	34	8 Oct
Seed Consultants	SC7481E	4.8	67.0*	-	-	60.2	32	11 Oct
Southern Harvest	4622 E3	4.6	60.0	-	-	59.8	32	13 Oct
Southern Harvest	4820 E3	4.8	71.4*	62.3	66.8	59.0	38	11 Oct
Syngenta/NK Brand	NK45-P9XF	4.5	69.5*	-	-	60.1	42	11 Oct
Syngenta/NK Brand	NK45-V9E3	4.5	63.4	-	-	60.3	36	15 Oct
Syngenta/NK Brand	S49-F5X	4.9	64.7*	-	-	60.8	34	11 Oct
University of Missouri	S09-13608C	4.5	70.8*	-	-	59.8	38	20 Oct
University of Missouri	S16-7922C	4.9	68.6*	-	-	62.3	24	10 Oct
USG	7451ET	4.5	59.8	69.6	64.7	60.9	28	15 Oct
USG	7461XFS	4.6	63.3	-	-	60.5	40	11 Oct
USG	7472ETS	4.7	57.4	-	-	60.1	34	15 Oct
Va Tech	V15-0057DI	4.8	58.5	-	-	49.8	34	15 Oct
Va Tech	V16-0293	4.8	66.1*	64.5	65.3	60.6	34	15 Oct
Va Tech	V17-0454	4.6	53.9	-	-	41.1	38	12 Oct
Va Tech	V17-2478R	4.9	56.6	-	-	60.8	40	11 Oct
Xitavo	XO 4681E	4.6	62.0	-	-	59.8	34	11 Oct
Mean			63.7	69.0	-	59.0	36.1	-
Probability > F			0.0530	-	-	-	-	-
LSD_{0.1}			11.5	-	-	-	-	-

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 17. Performance of MG 5 full season soybeans evaluated at Wye Research and Education Center in 2021.

Brand	Variety	MG	Yield ¹ , bu/ac			Test weight (lb/ bu) ¹	Height (in)	Maturity date
			2021	2020	2 yr. avg			
Credenz	CZ 5282XF	5.2	55.4	-	-	61.8	48	20 Oct
MorSoy	MS 5110E	5.1	68.4	68.5	68.4	61.1	34	12 Oct
Syngenta/NK	S53-F7X	5.3	65.1	68.6	66.8	60.6	46	15 Oct
Uni. of Missouri	S16-11651C	5.3	71.3	-	-	47.8	34	20 Oct
Va Tech	V15-2261ST	5.2	65.0	-	-	61.5	-	-
Va Tech	V17-2361R	5.3	58.0	-	-	61.3	36	20 Oct
Mean			63.9	65.7	-	59.0	39.6	-
Probability > F			0.1316	-	-	-	-	-
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 18. Performance of MG 3 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/bu) ¹
			2021	2020	2 yr. avg		
Asgrow	AG38x8 - Untreated	3.8	-	-	-	-	-
Asgrow	AG38x8	3.8	55.6	53.4	54.5	84	64.9
Credenz	CZ 3750GTLL	3.7	58.9	72.5	65.7	89	64.1
Credenz	CZ 3930GTLL	3.9	69.0*	75.4	72.2	104	65.2
Dyna-Gro	S37ES52	3.7	63.1	-	-	95	64.3
Dyna-Gro	S39EN19	3.9	71.5*	72.6	72.0	108	64.1
Dyna-Gro	S39XF41	3.9	67.8*	-	-	103	65.0
Mid-Atlantic Seeds	MAS3021E3	3.0	56.0	-	-	85	64.3
Mid-Atlantic Seeds	MAS3220E3	3.2	65.1	79.1	72.1	99	64.3
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	70.8*	-	-	107	64.4
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	63.9	76.2	70.0	97	64.7
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	75.4*	-	-	114	64.5
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	74.9*	-	-	113	65.2
Pioneer	P38T76E	3.8	65.0	-	-	98	64.1
Seed Consultants	SC7381E	3.8	64.4	67.8	66.1	97	64.5
Seed Consultants	SC7390E	3.9	64.8	82.0	73.4	98	64.8
Southern Harvest	SH3814LL - Untreated	3.8	67.6*	74.0	70.8	102	64.6
Southern Harvest	SH3814LL	3.8	74.0*	-	-	112	65.3
Syngenta/NK Brand	S39-G2X	3.9	59.7	69.3	64.5	90	64.1
USG	7382ETS	3.8	62.7	-	-	95	63.9
USG	7392XFS	3.9	76.1*	-	-	115	64.7
Xitavo	XO 3861E	3.8	67.1	-	-	101	64.6
Mean			66.1	71.8	-	-	64.5
Probability > F			0.0044	-	-	-	-
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 19. Performance of MG 4 (early) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4202XF	4.2	59.9	-	-	82	61.2
Credenz	CZ 4241GTLL	4.2	73.6	-	-	101	61.8
Dyna-Gro	S41EN72	4.1	80.7	-	-	110	60.9
Dyna-Gro	S41ES80	4.1	73.3	75.5	74.4	100	62.2
Dyna-Gro	S43EN61	4.3	71.2	74.4	72.8	97	61.5
Hubner	H42-31XF	4.2	75.2	-	-	103	61.7
Hubner	H44-42XF	4.4	72.6	-	-	99	62.5
Mid-Atlantic Seeds	MAS4021E3	4.0	74.3	-	-	102	61.5
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	65.0	72.4	68.7	89	62.3
Mid-Atlantic Seeds	MAS4120E3	4.1	78.1	-	-	107	62.7
Mid-Atlantic Seeds	MAS4320E3	4.3	75.4	-	-	103	62.5
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	71.4	-	-	98	62.2
Pioneer	P41T07E	4.1	76.7	-	-	105	62.2
Seed Consultants	SC7421E	4.2	76.5	71.4	73.9	105	61.6
Southern Harvest	4022 E3	4.0	75.4	-	-	103	61.3
Syngenta/NK Brand	S43-V8XF	4.3	72.4	-	-	99	63.0
USG	7420ETS	4.2	98.3*	-	-	93	62.4
USG	7429ET	4.2	79.6	-	-	109	62.0
USG	7431ET	4.3	69.8	72.5	71.1	95	62.0
USG	7441XF	4.4	73.2	-	-	100	62.1
Xitavo	XO 4371E	4.3	72.5	-	-	99	61.6
Mean			73.1	75.9	-	-	62.1
Probability > F			0.0001	-	-	-	-
LSD_{0.1}			5.7	-	-	-	-

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 20. Performance of MG 4 (late) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4562XF	4.5	62.6	-	-	86	62.2
Credenz	CZ 4701GTLL	4.7	71.5	-	-	99	82.4
Credenz	CZ 4742XF	4.7	47.8	-	-	94	63.8
Credenz	CZ 4892XF	4.8	64.8	-	-	89	81.6
Credenz	CZ 4912XF	4.9	67.3	-	-	93	64.7
Dyna-Gro	S45ES10	4.5	72.5	81.6	77.0	100	61.7
Dyna-Gro	S46XF31S	4.6	73.1	-	-	101	63.5
Dyna-Gro	S46XS60	4.6	78.3	96.7	87.5	108	63.3
Dyna-Gro	S48EN02	4.8	73.1	-	-	101	62.7
Dyna-Gro	S48XF61S	4.8	69.1	-	-	95	63.9
Dyna-Gro	S48XT90	4.8	76.8	75.6	76.2	106	72.5
Hubner	H48-31XF	4.8	71.7	-	-	99	65.2
Mid-Atlantic Seeds	MAS4666GT	4.6	68.0	55.0	61.5	94	62.5
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	68.1	91.3	79.7	94	64.8
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	74.6	-	-	103	62.4
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	78.1	71.9	75.0	108	60.5
MorSoy	MS 4640 XF	4.6	76.3	-	-	105	62.8
MorSoy	MS 4850 XF/STS	4.8	75.5	-	-	104	63.2
Pioneer	P45T88E	4.5	74.2	-	-	102	63.7
Seed Consultants	SC7461E	4.6	73.6	75.9	74.7	102	63.6
Seed Consultants	SC7481E	4.8	71.5	-	-	99	63.4
Southern Harvest	4622 E3	4.6	68.8	-	-	95	61.7
Southern Harvest	4820 E3	4.8	72.4	81.3	76.8	100	63.5
Syngenta/NK Brand	NK45-P9XF	4.5	75.3	-	-	104	63.5
Syngenta/NK Brand	NK45-V9E3	4.5	72.7	-	-	100	62.7
Syngenta/NK Brand	S49-F5X	4.9	74.4	-	-	103	63.6
University of Missouri	S09-13608C	4.5	72.7	-	-	100	75.1
University of Missouri	S16-7922C	4.9	74.7	-	-	103	65.4
USG	7451ET	4.5	69.5	65.5	67.5	96	63.6
USG	7461XFS	4.6	88.4*	-	-	122	63.2
USG	7472ETS	4.7	77.5	-	-	107	62.4
Va Tech	V15-0057DI	4.8	74.1	-	-	102	61.6
Va Tech	V16-0293	4.8	73.9	67.7	70.8	102	72.3
Va Tech	V17-0454	4.6	70.4	-	-	97	64.4
Va Tech	V17-2478R	4.9	65.4	-	-	90	83.4
Xitavo	XO 4681E	4.6	69.3	-	-	96	74.3
Mean			72.4	76.4	-	-	66.0
Probability > F			0.0029	-	-	-	-
LSD_{0.1}			7.5	-	-	-	-

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 21. Performance of MG 5 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 5282XF	5.2	65.9	-	-	91	62.4
MorSoy	MS 5110E	5.1	75.6	78.9	77.2	104	72.9
Syngenta/NK	S53-F7X	5.3	77.0	90.7	83.8	106	62.6
Uni. of Missouri	S16-11651C	5.3	74.0	-	-	102	64.5
Va Tech	V15-2261ST	5.2	72.2	-	-	99	71.5
Va Tech	V17-2361R	5.3	70.6	-	-	97	63.9
Mean			72.6	75.4	-	-	66.3
Probability > F			0.5650	-	-	-	-
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 22. Performance of MG 3 full season soybeans evaluated at Central Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/bu) ¹
			2021	2020	2 yr. avg		
Asgrow	AG38x8 - Untreated	3.8	38.4	68.9	53.6	106	54.5
Asgrow	AG38x8	3.8	42.0	72.1	57.0	115	55.2
Credenz	CZ 3750GTLL	3.7	29.3	71.8	50.5	81	53.6
Credenz	CZ 3930GTLL	3.9	49.0	76.9	62.9	135	55.7
Dyna-Gro	S37ES52	3.7	33.0	-	-	91	52.2
Dyna-Gro	S39EN19	3.9	39.3	78.5	58.9	108	53.1
Dyna-Gro	S39XF41	3.9	39.0	-	-	107	55.8
Mid-Atlantic Seeds	MAS3021E3	3.0	32.5	-	-	89	51.9
Mid-Atlantic Seeds	MAS3220E3	3.2	39.9	72.7	56.3	110	55.0
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	20.6	-	-	56	42.9
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	34.5	71.7	53.1	95	53.2
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	27.4	-	-	75	49.5
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	44.9	-	-	123	54.6
Pioneer	P38T76E	3.8	33.7	-	-	92	54.4
Seed Consultants	SC7381E	3.8	31.8	65.2	48.5	87	54.9
Seed Consultants	SC7390E	3.9	47.6	72.3	59.9	131	54.9
Southern Harvest	SH3814LL - Untreated	3.8	38.6	78.8	58.7	97	55.2
Southern Harvest	SH3814LL	3.8	30.3	-	-	83	49.8
Syngenta/NK Brand	S39-G2X	3.9	39.8	77.5	58.6	109	52.2
USG	7382ETS	3.8	-	-	-	-	-
USG	7392XFS	3.9	38.4	-	-	105	53.7
Xitavo	XO 3861E	3.8	29.9	-	-	82	46.4
Mean			36.4	71.8	-	-	52.8
Probability > F			0.1331	-	-	-	-
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 23. Performance of MG 4 (early) full season soybeans evaluated at Central Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4202XF	4.2	36.5	-	-	83	53.1
Credenz	CZ 4241GTLL	4.2	42.2	-	-	97	52.9
Dyna-Gro	S41EN72	4.1	54.2	-	-	124	55.2
Dyna-Gro	S41ES80	4.1	39.3	73.1	56.2	90	54.5
Dyna-Gro	S43EN61	4.3	58.3	73.3	65.8	133	56.1
Hubner	H42-31XF	4.2	38.3	-	-	88	56.1
Hubner	H44-42XF	4.4	47.0	-	-	107	51.9
Mid-Atlantic Seeds	MAS4021E3	4.0	41.6	-	-	95	49.1
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	39.5	67.4	53.4	90	56.1
Mid-Atlantic Seeds	MAS4120E3	4.1	35.0	-	-	80	56.0
Mid-Atlantic Seeds	MAS4320E3	4.3	49.1	-	-	112	54.1
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	37.8	-	-	87	55.1
Pioneer	P41T07E	4.1	40.7	-	-	93	56.0
Seed Consultants	SC7421E	4.2	41.7	74.5	58.1	95	53.9
Southern Harvest	4022 E3	4.0	49.1	-	-	112	55.3
Syngenta/NK Brand	S43-V8XF	4.3	48.8	-	-	112	56.7
USG	7420ETS	4.2	32.8	-	-	75	43.7
USG	7429ET	4.2	42.7	-	-	98	56.6
USG	7431ET	4.3	49.4	74.0	61.7	113	56.0
USG	7441XF	4.4	41.4	-	-	95	53.5
Xitavo	XO 4371E	4.3	47.7	-	-	109	56.0
Mean			43.7	77.3	-	-	54.4
Probability > F			0.2341	-	-	-	-
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 24. Performance of MG 4 (late) full season soybeans evaluated at Central Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4562XF	4.5	57.2	-	-	109	57.2
Credenz	CZ 4701GTLL	4.7	54.6	-	-	104	57.4
Credenz	CZ 4742XF	4.7	42.0	-	-	80	59.1
Credenz	CZ 4892XF	4.8	38.5	-	-	73	57.8
Credenz	CZ 4912XF	4.9	54.9	-	-	105	58.3
Dyna-Gro	S45ES10	4.5	45.3	77.5	61.4	86	87.7
Dyna-Gro	S46XF31S	4.6	52.9	-	-	101	57.7
Dyna-Gro	S46XS60	4.6	49.2	69.9	59.5	94	54.7
Dyna-Gro	S48EN02	4.8	57.9	-	-	110	58.5
Dyna-Gro	S48XF61S	4.8	53.1	-	-	101	58.0
Dyna-Gro	S48XT90	4.8	57.3	73.6	65.4	109	56.8
Hubner	H48-31XF	4.8	55.1	-	-	105	57.6
Mid-Atlantic Seeds	MAS4666GT	4.6	44.1	71.1	57.6	84	57.1
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	56.9	68.9	6.9	109	56.2
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	49.5	-	-	94	56.2
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	51.9	-	-	99	57.5
MorSoy	MS 4640 XF	4.6	52.7	-	-	101	58.1
MorSoy	MS 4850 XF/STS	4.8	60.7	-	-	116	58.1
Pioneer	P45T88E	4.5	47.6	-	-	91	57.1
Seed Consultants	SC7461E	4.6	52.6	67.0	59.8	100	57.0
Seed Consultants	SC7481E	4.8	51.3	-	-	98	57.1
Southern Harvest	4622 E3	4.6	38.9	-	-	74	50.0
Southern Harvest	4820 E3	4.8	48.1	68.8	58.4	92	57.1
Syngenta/NK Brand	NK45-P9XF	4.5	47.8	-	-	91	57.9
Syngenta/NK Brand	NK45-V9E3	4.5	50.8	-	-	97	56.4
Syngenta/NK Brand	S49-F5X	4.9	75.2	-	-	144	53.0
University of Missouri	S09-13608C	4.5	55.5	-	-	106	57.7
University of Missouri	S16-7922C	4.9	56.0	-	-	107	59.1
USG	7451ET	4.5	63.6	75.9	69.7	121	56.5
USG	7461XFS	4.6	65.2	-	-	124	57.0
USG	7472ETS	4.7	54.9	-	-	105	56.4
Va Tech	V15-0057DI	4.8	51.7	-	-	99	57.2
Va Tech	V16-0293	4.8	62.5	75.5	69.0	119	57.4
Va Tech	V17-0454	4.6	46.9	-	-	89	59.5
Va Tech	V17-2478R	4.9	41.1	-	-	75	59.1
Xitavo	XO 4681E	4.6	55.7	-	-	106	57.3
Mean			52.4	72.3	-	-	57.2
Probability > F			0.2362	-	-	-	-
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 25. Performance of MG 3 full season soybeans evaluated at Western Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/bu) ¹
			2021	2020	2 yr. avg		
Asgrow	AG38x8 - Untreated	3.8	51.2	38.5	45.1	91	58.3
Asgrow	AG38x8	3.8	54.6	38.2	46.4	98	58.1
Credenz	CZ 3750GTLL	3.7	57.2	55.2	56.2	102	44.4
Credenz	CZ 3930GTLL	3.9	54.2	46.5	50.3	97	58.6
Dyna-Gro	S37ES52	3.7	57.8*	-	-	103	57.4
Dyna-Gro	S39EN19	3.9	55.2	62.0	58.6	99	58.4
Dyna-Gro	S39XF41	3.9	52.6	-	-	94	58.0
Mid-Atlantic Seeds	MAS3021E3	3.0	45.9	-	-	82	57.6
Mid-Atlantic Seeds	MAS3220E3	3.2	57.1	62.1	59.6	102	58.0
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	54.5	-	-	98	57.5
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	55.5	57.7	56.6	99	58.7
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	46.6	-	-	83	59.1
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	66.1*	-	-	118	58.8
Pioneer	P38T76E	3.8	58.6*	-	-	105	58.9
Seed Consultants	SC7381E	3.8	54.3	58.7	56.5	97	58.0
Seed Consultants	SC7390E	3.9	61.7*	55.3	58.5	110	49.5
Southern Harvest	SH3814LL - Untreated	3.8	-	44.3	-	-	-
Southern Harvest	SH3814LL	3.8	-	-	-	-	-
Syngenta/NK Brand	S39-G2X	3.9	59.4*	46.0	52.7	106	59.8
USG	7382ETS	3.8	58.4*	-	-	104	58.1
USG	7392XFS	3.9	62.5*	-	-	112	60.2
Xitavo	XO 3861E	3.8	54.5	-	-	97	39.3
Mean			55.9	50.3	-	-	56.3
Probability > F			0.0452	-	-	-	-
LSD_{0.1}			8.4	-	-	-	-

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 26. Performance of MG 4 (early) full season soybeans evaluated at Western Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4202XF	4.2	46.7	-	-	86	59.7
Credenz	CZ 4241GTLL	4.2	49.2	-	-	91	57.4
Dyna-Gro	S41EN72	4.1	61.4*	-	-	111	59.0
Dyna-Gro	S41ES80	4.1	54.7*	64.5	59.6	101	58.7
Dyna-Gro	S43EN61	4.3	53.2*	54.1	58.6	98	58.8
Hubner	H42-31XF	4.2	50.9	-	-	94	59.2
Hubner	H44-42XF	4.4	54.7*	-	-	101	58.3
Mid-Atlantic Seeds	MAS4021E3	4.0	57.3*	-	-	106	58.6
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	52.4	38.7	45.5	97	58.1
Mid-Atlantic Seeds	MAS4120E3	4.1	49.4	-	-	91	57.9
Mid-Atlantic Seeds	MAS4320E3	4.3	56.9*	-	-	105	58.3
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	50.7	-	-	94	58.3
Pioneer	P41T07E	4.1	61.3*	-	-	113	58.6
Seed Consultants	SC7421E	4.2	54.3*	54.1	54.2	100	59.4
Southern Harvest	4022 E3	4.0	58.5*	-	-	108	58.1
Syngenta/NK Brand	S43-V8XF	4.3	51.9	-	-	96	57.9
USG	7420ETS	4.2	56.0*	-	-	103	58.4
USG	7429ET	4.2	58.3*	-	-	108	58.3
USG	7431ET	4.3	43.7	62.4	53.0	81	57.7
USG	7441XF	4.4	58.9*	-	-	109	57.9
Xitavo	XO 4371E	4.3	59.3*	-	-	109	58.7
Mean			54.2	49.5	-	-	58.4
Probability > F			0.0774	-	-	-	-
LSD_{0.1}			8.6	-	-	-	-

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 27. Performance of MG 4 (late) full season soybeans evaluated at Western Maryland Research and Education Center in 2021

Brand	Variety	MG	Yield ¹ , bu/ac			Relative Yield	Test weight (lb/ bu) ¹
			2021	2020	2 yr. avg		
Credenz	CZ 4562XF	4.5	57.8	-	-	94	58.5
Credenz	CZ 4701GTLL	4.7	58.7	-	-	96	58.2
Credenz	CZ 4742XF	4.7	48.1	-	-	78	59.2
Credenz	CZ 4892XF	4.8	50.8	-	-	83	60.2
Credenz	CZ 4912XF	4.9	56.8	-	-	93	59.6
Dyna-Gro	S45ES10	4.5	57.6	63.0	60.3	94	58.4
Dyna-Gro	S46XF31S	4.6	67.1*	-	-	109	58.3
Dyna-Gro	S46XS60	4.6	59.7	50.8	55.2	97	58.7
Dyna-Gro	S48EN02	4.8	58.3	-	-	95	59.5
Dyna-Gro	S48XF61S	4.8	55.4	-	-	90	57.9
Dyna-Gro	S48XT90	4.8	70.0*	49.3	59.6	114	59.1
Hubner	H48-31XF	4.8	62.9	-	-	103	58.5
Mid-Atlantic Seeds	MAS4666GT	4.6	63.0	48.5	55.7	103	58.5
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	64.2	60.8	62.5	105	58.5
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	66.2*	-	-	108	58.9
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	60.1	-	-	98	57.8
MorSoy	MS 4640 XF	4.6	74.0*	-	-	121	58.5
MorSoy	MS 4850 XF/STS	4.8	55.5	-	-	91	59.2
Pioneer	P45T88E	4.5	58.9	-	-	96	58.2
Seed Consultants	SC7461E	4.6	59.3	61.5	60.4	97	59.0
Seed Consultants	SC7481E	4.8	62.7	-	-	102	57.8
Southern Harvest	4622 E3	4.6	63.0	-	-	103	58.4
Southern Harvest	4820 E3	4.8	63.0	53.5	58.2	103	58.3
Syngenta/NK Brand	NK45-P9XF	4.5	62.8	-	-	102	58.5
Syngenta/NK Brand	NK45-V9E3	4.5	63.0	-	-	103	58.3
Syngenta/NK Brand	S49-F5X	4.9	61.3	-	-	100	58.6
University of Missouri	S09-13608C	4.5	-	-	-	-	-
University of Missouri	S16-7922C	4.9	-	-	-	-	-
USG	7451ET	4.5	65.1	49.4	57.2	106	57.9
USG	7461XFS	4.6	74.4*	-	-	121	60.3
USG	7472ETS	4.7	60.1	-	-	98	57.9
Va Tech	V15-0057DI	4.8	-	-	-	-	-
Va Tech	V16-0293	4.8	-	45.7	-	-	-
Va Tech	V17-0454	4.6	-	-	-	-	-
Va Tech	V17-2478R	4.9	60.3	-	-	98	59.7
Xitavo	XO 4681E	4.6	61.8	-	-	101	58.8
Mean			61.3	50.9	-	-	58.7
Probability > F			0.0069	-	-	-	-
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 28. Average performance of MG 3 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2021

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/ac)	Test weight (lb/bu) ¹	Yield (bu/ac)	Test weight (lb/bu)	Yield (bu/ac)	Test weight (lb/bu)
Asgrow	AG38x8 - Untreated	3.8	53.7	59.9	37.1	67.4	43.8	64.4
Asgrow	AG38x8	3.8	51.8	60.8	37.4	67.8	44.6	64.3
Credenz	CZ 3750GTLL	3.7	51.2	59.8	46.3*	67.0	48.7	63.4
Credenz	CZ 3930GTLL	3.9	58.7*	61.4	46.4*	69.2	52.5	65.3
Dyna-Gro	S37ES52	3.7	53.0	59.3	37.9	66.4	45.4	62.9
Dyna-Gro	S39EN19	3.9	52.6	59.7	48.0*	66.9	50.3	63.3
Dyna-Gro	S39XF41	3.9	63.9*	61.3	43.0*	68.3	53.5	64.8
Mid-Atlantic Seeds	MAS3021E3	3.0	48.0	60.8	37.2	66.1	42.6	63.5
Mid-Atlantic Seeds	MAS3220E3	3.2	51.7	60.5	39.8	66.7	45.8	63.6
Mid-Atlantic Seeds	MAS3521E3/STS	3.5	52.5	59.0	40.2	66.7	46.3	62.9
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	54.3	59.7	41.0	66.7	47.7	63.2
Mid-Atlantic Seeds	MAS3721E3/STS	3.7	55.7	60.9	45.9*	68.1	50.8	64.5
Mid-Atlantic Seeds	MAS3884GT/LL/STS	3.8	54.2	61.2	43.7*	68.7	49.0	64.9
Pioneer	P38T76E	3.8	47.8	61.0	44.5*	67.3	46.2	64.2
Seed Consultants	SC7381E	3.8	47.6	60.0	39.3	67.4	43.4	63.7
Seed Consultants	SC7390E	3.9	60.3*	61.0	46.0*	37.8	53.2	64.4
Southern Harvest	SH3814LL - Untreated	3.8	56.9	53.8	41.6	68.3	49.2	61.1
Southern Harvest	SH3814LL	3.8	54.9	60.3	39.3	67.4	47.1	63.8
Syngenta/NK Brand	S39-G2X	3.9	58.9*	61.3	49.0*	67.9	53.9	64.6
USG	7382ETS	3.8	57.0*	59.6	39.2	67.1	48.1	63.3
USG	7392XFS	3.9	65.1*	60.8	43.4*	68.1	54.3	64.4
Xitavo	XO 3861E	3.8	53.0	60.6	46.4*	67.6	49.7	64.1
Mean			54.7	60.1	42.4	67.5	48.5	63.8
Probability > F			0.0352	-	0.0304	-	0.4678	-
LSD_{0.1}			8.1	-	6.4	-	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 29. Average performance of MG 4 (early) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2021

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/ac)	Test weight (lb/bu) ¹	Yield (bu/ac)	Test weight (lb/bu)	Yield (bu/ac)	Test weight (lb/bu)
Credenz	CZ 4202XF	4.2	49.8	62.4	50.5	69.1	50.2	65.7
Credenz	CZ 4241GTLL	4.2	59.7	60.4	43.8	61.4	51.8	60.9
Dyna-Gro	S41EN72	4.1	68.7*	59.9	55.4*	67.2	62.1	63.6
Dyna-Gro	S41ES80	4.1	64.1*	60.3	52.0*	68.2	58.0	64.3
Dyna-Gro	S43EN61	4.3	64.6*	60.5	55.1*	67.5	59.8	64.0
Hubner	H42-31XF	4.2	58.6	61.0	44.6	67.6	51.6	64.3
Hubner	H44-42XF	4.4	60.8	61.2	48.7	68.0	54.7	64.6
Mid-Atlantic Seeds	MAS4021E3	4.0	68.0*	60.2	59.3*	68.2	63.7	64.2
Mid-Atlantic Seeds	MAS4077GT/STS	4.0	51.0	60.6	43.6	67.5	47.3	64.0
Mid-Atlantic Seeds	MAS4120E3	4.1	64.8*	61.0	47.8	68.3	56.3	64.7
Mid-Atlantic Seeds	MAS4320E3	4.3	60.6	60.1	43.7	67.6	52.1	63.9
Mid-Atlantic Seeds	MAS4399GT/STS	4.3	65.6*	61.0	49.4	68.5	57.5	64.8
Pioneer	P41T07E	4.1	57.2	60.3	47.0	67.8	52.1	64.0
Seed Consultants	SC7421E	4.2	60.6	60.5	49.1	68.1	54.8	64.3
Southern Harvest	4022 E3	4.0	60.9	59.8	46.6	67.4	53.7	63.6
Syngenta/NK Brand	S43-V8XF	4.3	63.8*	61.3	48.3	68.4	56.0	64.8
USG	7420ETS	4.2	64.2*	61.1	45.8	67.9	55.0	64.5
USG	7429ET	4.2	65.0*	60.5	51.9*	67.6	58.5	64.0
USG	7431ET	4.3	57.4	60.6	41.6	67.8	49.5	64.2
USG	7441XF	4.4	59.2	60.4	56.4*	68.2	57.8	64.3
Xitavo	XO 4371E	4.3	66.6*	60.0	53.0*	67.8	59.8	63.9
Mean			61.5	60.6	49.2	67.6	55.4	64.1
Probability > F			0.0003	-	0.0200	-	0.1045	-
LSD_{0.1}			6.2	-	7.8	-	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 30. Average performance of MG 4 (late) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2021

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/ac)	Test weight (lb/bu) ¹	Yield (bu/ac)	Test weight (lb/bu)	Yield (bu/ac)	Test weight (lb/bu)
Credenz	CZ 4562XF	4.5	51.1	56.2	58.5	68.8	54.8	62.5
Credenz	CZ 4701GTLL	4.7	62.5*	61.4	44.1	69.0	53.3	65.2
Credenz	CZ 4742XF	4.7	50.3	62.8	47.8	70.3	49.1	66.6
Credenz	CZ 4892XF	4.8	53.6	64.5	42.5	68.5	48.1	66.5
Credenz	CZ 4912XF	4.9	55.0	60.6	46.7	69.8	50.8	65.2
Dyna-Gro	S45ES10	4.5	65.1*	61.4	50.6	68.9	57.8	65.2
Dyna-Gro	S46XF31S	4.6	64.5*	61.5	51.2	68.6	57.8	65.1
Dyna-Gro	S46XS60	4.6	58.7	61.3	45.3	68.0	52.0	64.6
Dyna-Gro	S48EN02	4.8	65.5*	61.5	51.9	69.2	58.7	65.4
Dyna-Gro	S48XF61S	4.8	53.4	62.8	43.0	68.4	48.2	65.6
Dyna-Gro	S48XT90	4.8	58.2	63.0	49.1	68.4	53.6	65.7
Hubner	H48-31XF	4.8	63.2*	60.9	43.1	67.9	53.2	64.4
Mid-Atlantic Seeds	MAS4666GT	4.6	59.2	61.4	44.1	69.4	51.7	65.4
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	59.0	61.2	41.3	68.1	50.1	64.6
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	57.5	60.5	52.0	67.8	54.7	64.2
Mid-Atlantic Seeds	MAS4820E3/STS	4.8	63.5*	59.6	50.3	68.1	56.9	63.9
MorSoy	MS 4640 XF	4.6	60.4*	56.4	51.5	68.3	56.0	62.3
MorSoy	MS 4850 XF/STS	4.8	63.1*	61.7	45.8	68.9	54.5	65.3
Pioneer	P45T88E	4.5	66.7*	60.6	45.5	67.5	56.1	64.1
Seed Consultants	SC7461E	4.6	65.2*	61.2	48.2	68.1	56.7	64.6
Seed Consultants	SC7481E	4.8	65.3*	60.4	43.4	67.0	54.3	63.7
Southern Harvest	4622 E3	4.6	58.0	58.0	40.3	66.9	49.2	62.4
Southern Harvest	4820 E3	4.8	66.4*	61.3	48.3	54.9	57.4	58.1
Syngenta/NK Brand	NK45-P9XF	4.5	63.9*	61.6	43.8	68.7	53.9	65.2
Syngenta/NK Brand	NK45-V9E3	4.5	64.8*	61.0	48.6	68.0	56.7	64.5
Syngenta/NK Brand	S49-F5X	4.9	68.4*	61.1	47.2	68.5	57.8	64.8
University of Missouri	S09-13608C	4.5	65.0*	63.1	45.3	68.4	55.2	65.7
University of Missouri	S16-7922C	4.9	60.0*	61.5	46.2	69.3	53.1	65.4
USG	7451ET	4.5	64.4*	60.5	48.4	67.6	56.4	64.1
USG	7461XFS	4.6	60.2*	59.8	52.8	68.7	56.5	64.2
USG	7472ETS	4.7	61.3*	60.6	48.0	67.8	54.7	64.2
Va Tech	V15-0057DI	4.8	56.3	61.2	46.0	68.1	51.1	64.7
Va Tech	V16-0293	4.8	60.0*	62.7	46.7	69.6	53.3	66.2
Va Tech	V17-0454	4.6	64.6*	59.1	51.0	70.8	52.4	66.1
Va Tech	V17-2478R	4.9	58.8	63.4	43.9	69.3	51.4	66.4
Xitavo	XO 4681E	4.6	53.9	59.4	45.4	55.6	49.7	57.5
Mean			60.5	61.0	47.2	67.8	53.8	64.4
Probability > F			0.0029	-	0.5739	-	0.9829	-
LSD_{0.1}			8.4	-	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 31. Average performance of MG 5 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2021

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield ¹ (bu/ac)	Test weight (lb/bu) ¹	Yield (bu/ac)	Test weight (lb/bu)	Yield (bu/ac)	Test weight (lb/bu)
Credenz	CZ 5282XF	5.2	59.4	63.0	40.2	70.3	47.8	66.6
MorSoy	MS 5110E	5.1	60.4	63.7	51.2*	68.4	55.8	66.1
Syngenta/NK	S53-F7X	5.3	59.1	62.0	49.6*	68.6	54.4	65.3
Uni. of Missouri	S16-11651C	5.3	53.2	64.3	50.0*	68.3	51.6	66.3
Va Tech	V15-2261ST	5.2	66.1	62.5	50.9*	68.4	58.5	65.4
Va Tech	V17-2361R	5.3	59.5	64.7	49.3*	69.9	54.4	67.3
Mean			59.6	63.4	48.5	69.0	54.1	66.2
Probability > F			0.1026	-	0.0056	-	0.5450	-
LSD_{0.1}			NS**	-	4.1	-	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 32. Relative yield summary for MG 3 soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Asgrow	AG38x8 - Untreated	84	-	106	91	98	88
Asgrow	AG38x8	96	84	115	98	95	88
Credenz	CZ 3750GTLL	84	89	81	102	93	109
Credenz	CZ 3930GTLL	132	104	135	97	107	109
Dyna-Gro	S37ES52	107	95	91	103	97	89
Dyna-Gro	S39EN19	104	108	108	99	96	113
Dyna-Gro	S39XF41	115	103	107	94	117	101
Mid-Atlantic Seeds	MAS3021E3	64	85	89	82	88	88
Mid-Atlantic Seeds	MAS3220E3	94	99	110	102	95	94
Mid-Atlantic Seeds	MAS3521E3/STS	91	107	56	98	96	95
Mid-Atlantic Seeds	MAS3600E3/STS	91	97	95	99	99	97
Mid-Atlantic Seeds	MAS3721E3/STS	107	114	75	83	102	108
Mid-Atlantic Seeds	MAS3884GT/LL/STS	123	113	123	118	99	103
Pioneer	P38T76E	69	98	92	105	87	105
Seed Consultants	SC7381E	83	97	87	97	87	93
Seed Consultants	SC7390E	134	98	131	110	110	109
Southern Harvest	SH3814LL - Untreated	95	102	97	-	104	98
Southern Harvest	SH3814LL	84	112	83	-	100	93
Syngenta/NK Brand	S39-G2X	109	90	109	106	108	115
USG	7382ETS	99	95	-	104	104	92
USG	7392XFS	132	115	105	112	119	102
Xitavo	XO 3861E	106	101	82	97	97	109
Trial Mean (bu/ac)		51.0	66.1	36.4	55.9	54.7	42.4

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites (or both DC sites)

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

Table 33. Relative yield summary for MG 4 (early) soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Credenz	CZ 4202XF	95	82	83	86	81	103
Credenz	CZ 4241GTLL	100	101	97	91	97	89
Dyna-Gro	S41EN72	106	110	124	111	112	113
Dyna-Gro	S41ES80	101	100	90	101	104	106
Dyna-Gro	S43EN61	116	97	133	98	105	112
Hubner	H42-31XF	107	103	88	94	95	91
Hubner	H44-42XF	120	99	107	101	99	99
Mid-Atlantic Seeds	MAS4021E3	109	102	95	106	111	121
Mid-Atlantic Seeds	MAS4077GT/STS	71	89	90	97	83	89
Mid-Atlantic Seeds	MAS4120E3	83	107	80	91	105	97
Mid-Atlantic Seeds	MAS4320E3	104	103	112	105	98	89
Mid-Atlantic Seeds	MAS4399GT/STS	113	98	87	94	107	100
Pioneer	P41T07E	84	105	93	113	93	95
Seed Consultants	SC7421E	99	105	95	100	99	100
Southern Harvest	4022 E3	95	103	112	108	99	95
Syngenta/NK Brand	S43-V8XF	105	99	112	96	104	98
USG	7420ETS	115	93	75	103	104	93
USG	7429ET	89	109	98	108	106	105
USG	7431ET	88	95	113	81	93	85
USG	7441XF	96	100	95	109	96	115
Xitavo	XO 4371E	105	99	109	109	108	108
Trial Mean (bu/ac)		59.7	73.1	43.7	54.2	61.5	49.2

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites (or both DC sites)

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

Table 34. Relative yield summary for MG 4 (late) soybeans

Brand	Variety	Full Season				Double Crop	
		Wye	Poplar Hill	Clarksville	Keedysville	Wye	Poplar Hill
Credenz	CZ 4562XF	102	86	109	94	84	124
Credenz	CZ 4701GTLL	106	99	104	96	103	93
Credenz	CZ 4742XF	86	94	80	78	83	101
Credenz	CZ 4892XF	76	89	73	83	89	90
Credenz	CZ 4912XF	99	93	105	93	91	99
Dyna-Gro	S45ES10	110	100	86	94	107	107
Dyna-Gro	S46XF31S	119	101	101	109	107	108
Dyna-Gro	S46XS60	98	108	94	97	97	96
Dyna-Gro	S48EN02	102	101	110	95	108	110
Dyna-Gro	S48XF61S	89	95	101	90	88	91
Dyna-Gro	S48XT90	111	106	109	114	96	104
Hubner	H48-31XF	97	99	105	103	104	91
Mid-Atlantic Seeds	MAS4666GT	86	94	84	103	98	93
Mid-Atlantic Seeds	MAS4675E3/STS	105	94	109	105	97	88
Mid-Atlantic Seeds	MAS4721E3/STS	94	103	94	108	95	110
Mid-Atlantic Seeds	MAS4820E3/STS	97	108	99	98	105	106
MorSoy	MS 4640 XF	113	105	101	121	100	107
MorSoy	MS 4850 XF/STS	102	104	116	91	104	97
Pioneer	P45T88E	104	102	91	96	110	96
Seed Consultants	SC7461E	114	102	100	97	108	102
Seed Consultants	SC7481E	105	99	98	102	108	92
Southern Harvest	4622 E3	94	95	74	103	96	85
Southern Harvest	4820 E3	112	100	92	103	110	102
Syngenta/NK Brand	NK45-P9XF	109	104	91	102	106	93
Syngenta/NK Brand	NK45-V9E3	99	100	97	103	107	103
Syngenta/NK Brand	S49-F5X	102	103	144	100	113	100
University of Missouri	S09-13608C	111	100	106	-	107	96
University of Missouri	S16-7922C	108	103	107	-	99	98
USG	7451ET	94	96	121	106	106	103
USG	7461XFS	99	122	124	94	99	112
USG	7472ETS	90	107	105	96	101	102
Va Tech	V15-0057DI	92	102	99	78	93	97
Va Tech	V16-0293	104	102	119	83	99	99
Va Tech	V17-0454	85	97	89	93	90	108
Va Tech	V17-2478R	89	90	75	94	97	93
Xitavo	XO 4681E	97	96	106	109	89	96
Trial Mean (bu/ac)		63.7	72.4	52.4	61.3	60.5	47.2

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites (or both DC sites)
 Varieties highlighted in yellow have relative yield ratings of 100 or greater at three of four full season testing sites

Table 35. Relative yield summary for MG 5 soybeans

Brand	Variety	Full Season		Double Crop	
		Wye	Poplar Hill	Wye	Poplar Hill
Credenz	CZ 5282XF	87	91	100	83
MorSoy	MS 5110E	107	104	101	106
Syngenta/NK	S53-F7X	102	106	99	102
Uni. of Missouri	S16-11651C	112	102	89	103
Va Tech	V15-2261ST	102	99	111	105
Va Tech	V17-2361R	91	97	100	102
Trial Mean (bu/ac)		63.9	72.6	59.6	48.5

Varieties highlighted in green have relative yield ratings of 100 or greater at all sites (or both DC sites)