

2022 Maryland State Soybean Variety Trials

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

Agronomy Facts No. 32 is prepared by Dr. Nicole Fiorellino, Mr. Louis Thorne, and Mr. Joseph Crank

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, 79 varieties were tested using four maturity groups: MG 3 (27 varieties, Table 6), early MG 4 (4.0-4.3, 15 varieties, Table 7), late MG 4 (>4.4, 30 varieties, Table 8) and MG 5 (7 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. 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.

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 and test weight (lb/bu) at 13% moisture.

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 technicians Joseph Crank and CJ Chansler during the season. Also, we acknowledge Shana Burke for her 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, Joe, and CJ as they 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.

<u>Index to Tables</u>	<u>Page</u>
Table 1. Production management practices and other information for the full season locations for the 2022 Soybean Variety Trials	5
Table 2. Production management practices and other information for the double crop locations for the 2022 Soybean Variety Trials	6
Table 3. Brands and companies in the 2022 Maryland soybean variety trials	7
Table 4. Precipitation received in 2022 at Maryland locations of soybean variety trials	7
Table 5. Glossary of abbreviations for variety genetic traits and description of seed treatments	8
Table 6. Group 3 soybean entries and their resistance to soybean cyst nematode (SCN), traits, and seed treatments	9-10
Table 7. Early Group 4 soybean entries (\leq MG 4.4) and their resistance to soybean cyst nematode (SCN), traits, and seed treatments	10
Table 8. Late Group 4 soybean entries ($>$ MG 4.4) and their resistance to soybean cyst nematode (SCN), traits, and seed treatments	11-12
Table 9. Group 5 soybean entries and their resistance to soybean cyst nematode (SCN), traits, and seed treatments	12
Table 10. Average performance of MG 3 full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2022	13
Table 11. Average performance of MG 4 (early) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2022	14
Table 12. Average performance of MG 4 (late) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2022	15
Table 13. Average performance of MG 5 full season soybeans evaluated at two locations (Wye, Poplar Hill) in 2022	16
Table 14. Performance of MG 3 full season soybeans evaluated at Wye Research and Education Center in 2022	17
Table 15. Performance of MG 4 (early) full season soybeans evaluated at Wye Research and Education Center in 2022	18
Table 16. Performance of MG 4 (late) full season soybeans evaluated at Wye Research and Education Center in 2022	19
Table 17. Performance of MG 5 full season soybeans evaluated at Wye Research and Education Center in 2022	20
Table 18. Performance of MG 3 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022	21
Table 19. Performance of MG 4 (early) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022	22
Table 20. Performance of MG 4 (late) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022	23
Table 21. Performance of MG 5 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022	24
Table 22. Performance of MG 3 full season soybeans evaluated at Central Maryland Research and Education Center in 2022	25
Table 23. Performance of MG 4 (early) full season soybeans evaluated at Central Maryland Research and Education Center in 2022	26
Table 24. Performance of MG 4 (late) full season soybeans evaluated at Central Maryland Research and Education Center in 2022	27
Table 25. Performance of MG 3 full season soybeans evaluated at Western Maryland Research and Education Center in 2022	28

<u>Index to Tables</u>	<u>Page</u>
Table 26. Performance of MG 4 (early) full season soybeans evaluated at Western Maryland Research and Education Center in 2022	29
Table 27. Performance of MG 4 (late) full season soybeans evaluated at Western Maryland Research and Education Center in 2022	30
Table 28. Average performance of MG 3 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022	31
Table 29. Average performance of MG 4 (early) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022	32
Table 30. Average performance of MG 4 (late) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022	33
Table 31. Average performance of MG 5 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022	34
Table 32. Relative yield summary for MG 3 soybeans	35
Table 33. Relative yield summary for MG 4 (early) soybeans	36
Table 34. Relative yield summary for MG 4 (late) soybeans	37
Table 35. Relative yield summary for MG 5 soybeans	38

Funding for purchase of check varieties provided by Maryland Soybean Board
(Project # 3778436)



Table 1. Production management practices and other information for the full season locations for the 2022 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>14 April</u> 250 lb/ac of 12-17-17-10S <u>Total:</u> 30-42-42-25(S)	<u>2 July</u> FS Transform Plus @ 1qt/100 gal Cadet @ 0.9 oz/a Intensity One @ 1 qt/a Scanner @ 1 qt/100gal		No-tillage 30" row spacing	<u>Plant</u> 19 May <u>Harvest</u> 8 November	John Draper Thomas Eason Reagan Milby
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Mattapex silt loam Corn then wheat cover crop	<u>19 May</u> 390 lb/a 5-5.1-36.2-6(S)-0.3(B)-0.83(Mg) <u>Total</u> 20-20-141-23(S)-1.2(B)-3.2(Mg)	<u>23 May</u> RoundUp @ 1 qt/a 2,4-D @ 1qt/a Scanner 80/20 @ 6 fl oz/a <u>2 June</u> Valor XLT @ 4 oz/a Scanner 80/20 @ 10 fl oz/a	<u>7 July</u> Reflex @ 20 oz/a Intensity @ 24 oz/a Scanner 80/20 @ 10 fl oz/a	No-tillage 30" row spacing	<u>Plant</u> 1 June <u>Harvest</u> 10 November	David Armentrout Vivian Calder Jordan Miller Fred Senkbeil
Central Maryland R&E Center Clarksville Facility Clarksville, MD	Glenville silt loam Field corn	<u>13 June</u> 173 lb/a 13-0-62-15(S)-1(B) <u>Total</u> 7.5-0-36-8.7(S)-0.6(B)	<u>3 June</u> Gramoxone @ 1.5qt/a Metolachlor @ 1.33pt/a Sharpen @ 1oz/a Cloak @ 5 oz/a 2,4D LV4 @ 1 pt/a MSO @ 1 gal/100gal AMS @ 2 lb/a	<u>12 July</u> Basagran 5L @ 1.6 pt/a COC @ 1gal/100 UAN @ 2 gal/100 <u>18 July</u> Poast Plus @ 1.5 qt/a COC @ 1gal/100 UAN @ 2 gal/100	No-tillage 30" row spacing	<u>Plant</u> 2 June <u>Harvest</u> 17 November	Ryan McDonald Michael Gray
Western Maryland R&E Center Keedysville, MD	Swanpond silt loam Corn	<u>Total</u> 10.5-50-50	<u>1 June</u> Metrixx Plus @ 5oz/a Moccasin II @ 1.33pt/a Helmquat 3SL @ 1.5pt/a Sharpen @ 1oz/a MSO @ 1qt/100 gal AMS @ 10 lb/100gal <u>21 July</u> Dakota @ 16oz/a		No-tillage 30" row spacing	<u>Plant</u> 6 June <u>Harvest</u> 22 November	Douglas Price David Wyand

Table 2. Production management practices and other information for the double crop locations for the 2022 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>27 July</u> Cadet @ 0.9 oz/a Scanner 80/20 @ 2pt/100gal Intensity One @ 32 oz/a Transform Plus @ 1 qt/100 gal	No-tillage 30" row spacing	<u>Plant</u> 22 June <u>Harvest</u> 8 November	John Draper Thomas Eason Reagan Milby
Lower Eastern Shore R&E Center Poplar Hill Facility Quantico, MD	Nassawango silt loam Field corn then wheat	-	<u>19 July</u> Liberty @ 30 oz/a ValorXLT @ 4 oz/a Scanner 80/20 @ 10 fl oz/a <u>18 August</u> Reflex @ 1pt/a Poast @ 24 oz/a Scanner 80/20 @ 10 fl oz/a	No-tillage 30" row spacing	<u>Plant</u> 18 July <u>Harvest</u> 10 November	David Armentrout Vivian Calder Jordan Miller Fred Senkbeil

Table 3. Brands and companies in the 2022 Maryland soybean variety trials

Brand	Address
Dyna-Gro	Dyna-Gro Seed, 615 Hilliard Rome Road, Columbus, OH 43228 www.dynagroseed.com
Hubner	Hubner Seed Company, 113 Hanover Street, Gettysburg, PA 17325 www.hubnerseed.com
Meherrin Ag	Meherrin Agricultural and Chemical Co, 4136 Severn Road, Severn, NC 27877 www.meherrinag.com
Mid-Atlantic Seeds	Mid-Atlantic Seeds, 204 St. Charles Way, #163E, York, PA 17402 www.midatlanticseeds.com
Pioneer	DuPont-Pioneer, PO Box 1000, Johnston, IA 50131 www.pioneer.com
SeedKoz	SeedKoz, 1725 Windward Concourse, Suite 410, Alpharetta, GA 30005 www.meherrinag.com
Syngenta	Syngenta Seeds, 4013 Fairmount Pike, Signal Mountain, TN 37377 www.syngenta-us.com
UniSouth Genetics	3205 C Highway 46S, Dickson, TN 37055 https://www.usgseed.com/
University of Missouri	147 W State Highway T, Portageville, MO 63873 https://soybeancenter.missouri.edu/center/
Xitavo	Xitavo Soybean Seed, 103 Ave D, West Point, IA 52656 https://www.xitavosoybeanseed.com/

Table 4. Precipitation received in 2022 at Maryland locations of soybean variety trials

	Wye	Poplar Hill	Keedysville	Clarksville
Month	inches			
June	6.18	4.8	0	3.18
July	4.10	5.27	0.56	3.04
August	2.63	7.23	0.12	1.95
September	2.97	3.45	0.04	1.94
October	4.55	2.42	0.74	0.02
2022 Total (5 mos.)	20.43	23.17	1.46	10.13
Long Term Average¹	23.92	21.17	16.23	15.19

¹Long term average precipitation is for the follow number of years at each location: Wye=23; Poplar Hill = 22; Keedysville = 43; Clarksville =13

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
Avicta Complete	Provides protection again a wide spectrum of damaging nematodes, insects, and diseases
Carboxin	Systemic fungicide used to control seed and seedling diseases (smut, rot, blight)
CruiserMaxx	Seed treatment to protect against insect, seedborne and seedling diseases
Dicamba	Refers to genetic tolerance to Dicamba herbicide
Enlist E3	Soybeans modified to be tolerant to use of 2,4-D choline, glyphosate, and glufosinate herbicides for weed control
Equity VIP Saltro Vayantis	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 again 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
Iponazole	Fungicide seed treatment used to protect plants from soil borne and seed borne disease
Liberty	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
Obvius Plus	Protection against Phytophthora, Pythium, Fusarium, and Rhizoctonia
Poncho	Insecticide seed treatment
Proshield	Fungicide and insecticide seed treatment with three modes of action against scab, smut and bunt, plus the added benefit of imidacloprid
Relenyaa	Protection against Fusarium and Rhizoctonia
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 seedling blight or damping-off caused by seed- and soilborne pathogens including Rhizoctonia
Votivo	Control of insect pests and protection from soil plant pathogenic nematodes
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 Resistance Gene	Seed Treatment	Traits
Dyna-Gro	S39EN19	3.9	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Dyna-Gro	S39XF41	3.9	PI 88788	Equity VIP Saltro Vayantis	XtendFlex
Mid-Atlantic Seeds	MAS3022E3/STS	3.1		MAS Proshield	E3
Mid-Atlantic Seeds	MAS3220E3	3.2		MAS Proshield	E3
Mid-Atlantic Seeds	MAS3600E3/STS	3.6		MAS Proshield	E3
Mid-Atlantic Seeds	MAS3884GT/LL	3.8		MAS Proshield	E3
Mid-Atlantic Seeds	MAS3822E3/STS	3.9		MAS Proshield	E3
Pioneer	P31A73E	3.1		LumiGEN	
Pioneer	P34T21SE	3.4		LumiGEN	
Pioneer	P38A54E	3.8		LumiGEN	
Syngenta	NK31-M7E3	3.1			
Syngenta	NK37-V4E3S	3.7			
Syngenta	NK38-G9XF	3.8			
Syngenta	NK39-M8XF	3.9			
Syngenta	NK39-T5E3S	3.9			
USG	7353XFS	3.5	PI88788	Carboxin, imidiclopid, metalaxyl, ipconazole	Xtend STS
USG	7392XFS	3.9	PI88788	Carboxin, imidiclopid, metalaxyl, ipconazole	XtendFlex STS
Xitavo	XO 3131E	3.1	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3341E	3.3	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3402E	3.4	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3483E	3.4	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3651E	3.6	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenyaa	Enlist E3
Xitavo	XO 3752E	3.7	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3

Xitavo	XO 3861E	3.8	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3803E	3.8	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 3922E	3.9	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3

Table 7. Early Group 4 soybean entries (\leq MG 4.4) 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
Dyna-Gro	S41EN72	4.1	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Dyna-Gro	S42XF93S	4.2	PI 88788	Equity VIP Saltro Vayantis	XtendFlex
Dyna-Gro	S43EN61	4.3	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Hubner	H42-31XF	4.2		Acceleron	RR, Dicamba, Liberty
Hubner	H44-42XF	4.4		Acceleron	RR, Dicamba, Liberty
Meherrin Ag	SH4022 E3	4.0	PI88788	Fungicide+ Growth Promoter	Enlist E3
Mid-Atlantic Seeds	MAS4021E3	4.0		MAS PROSHIELD	E3
Mid-Atlantic Seeds	MAS4320E3/STS	4.3		MAS PROSHIELD	E3
Pioneer	P41T07E	4.1		LumiGEN	
Syngenta	NK43-P7E3S	4.3	PI88788	CrusierMaxx Beand + Vibrance + Saltro	E3
USG	7420ETS	4.2	PI88788	Carboxin, imidiclopid, metalaxyl, ipconazole	Enlist STS
USG	7429ET	4.2	PI88788	Carboxin, imidiclopid, metalaxyl, ipconazole	Enlist
USG	7431ET	4.3	PI88788	Carboxin, imidiclopid, metalaxyl, ipconazole	Enlist
Xitavo	XO 4132E	4.1	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 4371E	4.3	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3

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
Dyna-Gro	S45ES10	4.5	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Dyna-Gro	S46XF31S	4.6	PI 88788	Equity VIP Saltro Vayantis	XtendFlex
Dyna-Gro	S47XF23S	4.7	PI 88788	Equity VIP Saltro Vayantis	XtendFlex
Dyna-Gro	S48EN02	4.8	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Dyna-Gro	S48EN73	4.8	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Dyna-Gro	S49EN12	4.9	PI 88788	Equity VIP Saltro Vayantis	Enlist E3
Hubner	H48-31XF	4.8		Acceleron	RR, Dicamba, Liberty
Meherrin Ag	SH 4622 E3	4.6		Fungicide+ Growth Promoter	Enlist E3
Mid-Atlantic Seeds	MAS4675E3/STS	4.6		MAS Proshield	E3
Mid-Atlantic Seeds	MAS4622E3	4.6		MAS Proshield	E3
Mid-Atlantic Seeds	MAS4721E3/STS	4.7		MAS Proshield	E3
Mid-Atlantic Seeds	MAS4822E3	4.8		MAS Proshield	E3
Pioneer	P45T88E	4.5		LumiGEN	
SeedKoz	MS 4640 XF	4.6	PI88788	Avicta Complete	XtendFlex
SeedKoz	MS 4852 XF	4.8	PI88788	Avicta Complete	XtendFlex
Syngenta	NK45-V9E3	4.5	PI88788	CrusierMaxx Beand + Vibrance + Saltro	E3
Syngenta	NK48-H3XFS	4.8		CrusierMaxx Beand + Vibrance + Saltro	ExtendFlex
University of Missouri	S16-13165C	4.7	Rhg1 + Rhg4 (Peking)	Warden CX	Conventional
University of Missouri	S16-7922C	4.9	Rhg1 + Rhg4 (Peking)	Warden CX	Conventional

Table 8. (cont).

Brand	Variety	MG	SCN Resistant Gene	Seed Treatment	Traits
USG	7451ET	4.5		Carboxin, imidicloprid, metalaxyl, ipconazole	Enlist
USG	7461XFS	4.6	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	XtendFlex/STS
USG	7463XFS	4.6		Carboxin, imidicloprid, metalaxyl, ipconazole	XtendFlex/STS
USG	7461XTS	4.6	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	Xtend/STS
USG	7472XFS	4.7	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	XtendFlex/STS
USG	7472ETS	4.7		Carboxin, imidicloprid, metalaxyl, ipconazole	Enlist/STS
USG	4824V	4.8	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	Conventional
USG	7482XFS	4.8	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	XtendFlex/STS
Xitavo	XO 4522E	4.5	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 4653E	4.6	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3
Xitavo	XO 4772E	4.7	PI88788	Obvius Plus, Poncho/Votivo, ILeVO, and Relenya	Enlist E3

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
Meherrin Ag	SH 5223E3	5.2	PI88788	Fungicide+ Growth Promoter	Enlist E3
Mid-Atlantic Seeds	MAS5122E3	5.1		MAS Proshield	E3
Pioneer	P53T90E	5.0			
SeedKoz	MS 5110E	5.1	PI88788	Avicta Complete	Enlist
University of Missouri	S16-11651C	5.3	Rhg1 + Rhg4 (Peking)	Warden CX	Conventional
University of Missouri	S16-14869C	5.3	Rhg1 + Rhg4 (Peking)	Warden CX	Conventional
USG	7542ET	5.4	PI88788	Carboxin, imidicloprid, metalaxyl, ipconazole	Enlist

Table 10. Average performance of MG 3 full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹
			2022	2021	2 yr. avg	
Dyna-Gro	S39EN19	3.9	68.7	56.1	62.4	55.5
Dyna-Gro	S39XF41	3.9	63.7	53.3	58.5	56.0
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	59.7	-	-	52.9
Mid-Atlantic Seeds	MAS3220E3	3.2	67.5	52.6	60.0	55.8
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	64.3	50.1	57.2	55.1
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	66.8	61.1	63.9	57.9
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	70.7	-	-	56.9
Pioneer²	P31A73E	3.1	62.9	-	-	56.0
Pioneer	P34T21SE	3.4	68.2	-	-	56.0
Pioneer	P38A54E	3.8	64.1	-	-	55.4
Syngenta	NK31-M7E3	3.1	63.9	-	-	55.8
Syngenta	NK37-V4E3S	3.7	67.7	-	-	56.9
Syngenta	NK38-G9XF	3.8	70.5	-	-	56.1
Syngenta	NK39-M8XF	3.9	65.4	-	-	51.1
Syngenta	NK39-T5E3S	3.9	68.4	-	-	57.0
USG	7353XFS	3.5	65.7	-	-	56.3
USG	7392XFS	3.9	62.7	59.7	61.2	56.2
Xitavo	XO 3131E	3.1	58.3	-	-	55.6
Xitavo	XO 3341E	3.3	66.3	-	-	55.5
Xitavo	XO 3402E	3.4	62.9	-	-	56.1
Xitavo	XO 3483E	3.4	58.0	-	-	55.2
Xitavo	XO 3651E	3.6	67.4	-	-	54.8
Xitavo	XO 3752E	3.7	69.8	-	-	55.7
Xitavo	XO 3861E	3.8	70.9	51.4	61.1	56.1
Xitavo	XO 3803E	3.8	70.5	-	-	56.6
Xitavo	XO 3922E	3.9	69.1	-	-	57.0
Mean			66.9	52.3	-	55.7
Probability > F			0.3121	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹
			2022	2021	2 yr. avg	
Dyna-Gro	S41EN72	4.1	75.2*	64.7	69.9	56.5
Dyna-Gro	S42XF93S	4.2	71.3*	-	-	55.1
Dyna-Gro	S43EN61	4.3	72.9*	63.4	68.1	57.7
Hubner	H42-31XF	4.2	70.7*	57.1	63.9	57.6
Hubner	H44-42XF	4.4	70.5*	61.4	65.9	57.4
Meherrin Ag	SH4022 E3	4.0	72.8*	60.0	66.4	56.4
Mid-Atlantic Seeds	MAS4021E3	4.0	68.4*	59.6	64.0	56.5
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	67.0	61.0	64.0	56.8
Pioneer²	P41T07E	4.1	70.6*	57.2	63.9	56.9
Syngenta	NK43-P7E3S	4.3	66.9	-	-	53.0
USG	7420ETS	4.2	68.3*	61.2	64.7	54.3
USG	7429ET	4.2	69.7*	61.7	65.7	56.6
USG	7431ET	4.3	71.7*	54.2	62.9	53.4
Xitavo	XO 4132E	4.1	70.8*	-	-	56.5
Xitavo	XO 4371E	4.3	67.6	60.6	64.1	57.1
Mean			69.8	58.2	-	56.6
Probability > F			0.0433	-	-	-
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.

Table 12. Average performance of MG 4 (late) full season soybeans evaluated at four locations (Wye, Poplar Hill, Clarksville, Keedysville) in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹
			2022	2021	2 yr. avg	
Dyna-Gro	S45ES10	4.5	70.3*	61.3	65.8	57.8
Dyna-Gro	S46XF31S	4.6	73.9*	-	-	57.8
Dyna-Gro	S47XF23S	4.7	71.5*	-	-	58.0
Dyna-Gro	S48EN02	4.8	65.7*	63.7	64.7	58.2
Dyna-Gro	S48EN73	4.8	71.3*	-	-	53.3
Dyna-Gro	S49EN12	4.9	64.2	-	-	58.3
Hubner	H48-31XF	4.8	71.7*	62.9	67.3	58.3
Meherrin Ag	SH 4622 E3	4.6	68.1*	57.7	62.9	57.6
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	68.1*	64.0	66.0	57.3
Mid-Atlantic Seeds	MAS4622E3	4.6	68.0*	-	-	57.1
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	70.8*	62.5	66.6	55.3
Mid-Atlantic Seeds	MAS4822E3	4.8	73.6*	-	-	57.4
Pioneer²	P45T88E	4.5	68.3*	61.7	65.0	57.1
SeedKoz	MS 4640 XF	4.6	71.6*	68.8	70.2	57.9
SeedKoz	MS 4852 XF	4.8	62.7	-	-	58.2
Syngenta	NK45-V9E3	4.5	75.2*	62.5	68.8	57.3
Syngenta	NK48-H3XFS	4.8	73.8*	-	-	57.3
University of Missouri	S16-13165C	4.7	63.2	-	-	59.6
University of Missouri	S16-7922C	4.9	61.9	-	-	59.2
USG	7451ET	4.5	68.0*	64.6	66.3	57.1
USG	7461XFS	4.6	71.3*	72.8	72.0	57.5
USG	7463XFS	4.6	71.0*	-	-	58.1
USG	7461XTS	4.6	74.3*	-	-	57.8
USG	7472XFS	4.7	70.0*	-	-	58.1
USG	7472ETS	4.7	71.2*	62.5	66.8	57.9
USG	4824V	4.8	69.0*	-	-	56.3
USG	7482XFS	4.8	71.4*	-	-	58.4
Xitavo	XO 4522E	4.5	72.1*	-	-	57.1
Xitavo	XO 4653E	4.6	70.8*	-	-	59.9
Xitavo	XO 4772E	4.7	69.8*	-	-	57.8
Mean			69.9	62.5	-	57.4
Probability > F			0.0412	-	-	-
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 13. Average performance of MG 5 full season soybeans evaluated at two locations (Wye, Poplar Hill) in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹
			2022	2021	2 yr. avg	
Meherrin Ag	SH 5223E3	5.2	52.2	-	-	57.6
Mid-Atlantic Seeds	MAS5122E3	5.1	37.1	-	-	57.0
Pioneer²	P53T90E	5	63.6*	-	-	58.4
SeedKoz	MS 5110E	5.1	64.3*	72.0	68.1	57.7
University of Missouri	S16-11651C	5.3	62.7*	72.7	67.7	59.2
University of Missouri	S16-14869C	5.3	61.6*	-	-	59.3
USG	7542ET	5.4	61.0*	-	-	58.4
Mean			59.0	68.2	-	58.3
Probability > F			0.0025	-	-	-
LSD_{0.1}			9.4	-	-	-

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 14. Performance of MG 3 full season soybeans evaluated at Wye Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S39EN19	3.9	68.6*	52.9	60.7	55.1	109
Dyna-Gro	S39XF41	3.9	60.5	-	-	53.0	96
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	53.8	-	-	53.9	86
Mid-Atlantic Seeds	MAS3220E3	3.2	65.6*	48.2	56.9	55.6	105
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	60.1	46.6	53.3	52.0	96
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	62.0	63.0	62.5	57.5	99
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	75.3*	-	-	57.2	120
Pioneer²	P31A73E	3.1	62.7	-	-	55.9	100
Pioneer	P34T21SE	3.4	61.1	-	-	55.5	97
Pioneer	P38A54E	3.8	59.4	-	-	53.2	95
Syngenta	NK31-M7E3	3.1	65.2*	-	-	55.5	104
Syngenta	NK37-V4E3S	3.7	62.0	-	-	57.1	95
Syngenta	NK38-G9XF	3.8	69.7*	-	-	56.3	111
Syngenta	NK39-M8XF	3.9	68.4*	-	-	55.6	109
Syngenta	NK39-T5E3S	3.9	67.4*	-	-	56.8	108
USG	7353XFS	3.5	52.5	-	-	54.9	84
USG	7392XFS	3.9	63.9	67.1	65.5	53.9	102
Xitavo	XO 3131E	3.1	42.7	-	-	54.0	68
Xitavo	XO 3341E	3.3	64.5	-	-	54.6	103
Xitavo	XO 3402E	3.4	64.3	-	-	55.6	103
Xitavo	XO 3483E	3.4	52.1	-	-	52.4	83
Xitavo	XO 3651E	3.6	62.3	-	-	51.4	99
Xitavo	XO 3752E	3.7	58.3	-	-	53.8	93
Xitavo	XO 3861E	3.8	72.0*	-	-	55.5	115
Xitavo	XO 3803E	3.8	69.3*	-	-	56.6	110
Xitavo	XO 3922E	3.9	73.1*	54.0	63.5	56.1	117
Mean			62.7	51.0	-	54.9	-
Probability > F			0.0006	-	-	-	-
LSD_{0.1}			10.2	-	-	-	-

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 15. Performance of MG 4 (early) full season soybeans evaluated at Wye Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S41EN72	4.1	76.0	63.3	69.6	56.0	104
Dyna-Gro	S42XF93S	4.2	74.6	-	-	55.5	102
Dyna-Gro	S43EN61	4.3	78.6	69.3	73.9	57.1	108
Hubner	H42-31XF	4.2	72.2	64.0	68.1	57.2	99
Hubner	H44-42XF	4.4	67.1	71.5	69.3	56.1	92
Meherrin Ag	SH4022 E3	4.0	69.4	57.0	63.2	54.7	95
Mid-Atlantic Seeds	MAS4021E3	4.0	65.7	65.4	65.5	55.5	90
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	78.2	62.4	70.3	56.8	107
Pioneer²	P41T07E	4.1	79.8	50.1	64.9	55.1	109
Syngenta	NK43-P7E3S	4.3	74.5	-	-	55.3	102
USG	7420ETS	4.2	66.6	68.7	67.6	54.7	91
USG	7429ET	4.2	63.4	53.3	58.3	53.6	87
USG	7431ET	4.3	78.5	52.3	65.4	56.6	108
Xitavo	XO 4132E	4.1	79.4	-	-	55.9	109
Xitavo	XO 4371E	4.3	71.1	62.9	67.0	56.2	97
Mean			73.0	72.6	-	55.7	-
Probability > F			0.1588	-	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S45ES10	4.5	66.0	69.8	67.9	57.1	94
Dyna-Gro	S46XF31S	4.6	71.9	-	-	57.6	102
Dyna-Gro	S47XF23S	4.7	74.2	-	-	58.6	106
Dyna-Gro	S48EN02	4.8	68.5	65.3	66.9	57.6	97
Dyna-Gro	S48EN73	4.8	72.7	-	-	57.8	103
Dyna-Gro	S49EN12	4.9	64.4	-	-	58.6	92
Hubner	H48-31XF	4.8	72.9	62.0	67.4	58.3	104
Meherrin Ag	SH 4622 E3	4.6	64.9	60.0	63.4	58.3	92
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	67.7	67.0	67.3	56.7	96
Mid-Atlantic Seeds	MAS4622E3	4.6	73.4	-	-	57.1	104
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	68.7	59.8	64.2	57.7	98
Pioneer²	P45T88E	4.5	67.9	66.1	67.0	56.9	97
SeedKoz	MS 4640 XF	4.6	70.7	72.1	71.4	57.6	101
SeedKoz	MS 4852 XF	4.8	60.1	-	-	58.4	86
Syngenta	NK45-V9E3	4.5	73.0	63.4	68.2	57.3	104
Syngenta	NK48-H3XFS	4.8	78.6	-	-	57.0	112
University of Missouri	S16-13165C	4.7	64.9	-	-	59.3	92
University of Missouri	S16-7922C	4.9	73.9	68.6	71.2	59.8	105
USG	7451ET	4.5	66.9	59.8	63.3	57.3	95
USG	7461XFS	4.6	71.8	63.3	67.5	56.7	102
USG	7463XFS	4.6	74.5	-	-	58.4	106
USG	7461XTS	4.6	75.2	-	-	58.1	107
USG	7472XFS	4.7	69.3	-	-	58.2	99
USG	7472ETS	4.7	68.0	57.4	62.7	57.7	97
USG	4824V	4.8	72.6	-	-	57.9	103
USG	7482XFS	4.8	72.8	-	-	57.7	104
Xitavo	XO 4522E	4.5	70.5	-	-	56.6	100
Xitavo	XO 4653E	4.6	73.0	-	-	51.3	104
Xitavo	XO 4772E	4.7	71.3	-	-	57.4	101
Mean			70.3	63.7	-	57.5	-
Probability > F			0.3584	-	-	-	-
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 17. Performance of MG 5 full season soybeans evaluated at Wye Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Meherrin Ag	SH 5223E3	5.2	61.0	-	-	57.5	91
Pioneer²	P53T90E	5.0	65.6	-	-	58.8	98
SeedKoz	MS 5110E	5.1	65.7	68.4	67.0	57.7	98
University of Missouri	S16-11651C	5.3	70.7	71.3	71.0	59.9	106
University of Missouri	S16-14869C	5.3	70.0	-	-	59.4	105
USG	7542ET	5.4	67.7	-	-	59.1	101
Mean			66.8	63.9	-	58.7	-
Probability > F			0.3563	-	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr avg.		
Dyna-Gro	S39EN19	3.9	61.2*	71.5	66.3	55.0	100
Dyna-Gro	S39XF41	3.9	55.5	67.8	61.6	56.3	91
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	48.4	-	-	55.5	79
Mid-Atlantic Seeds	MAS3220E3	3.2	54.9	65.1	60.0	55.5	90
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	58.5	63.9	61.2	55.8	96
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	62.0*	74.9	68.4	57.0	102
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	64.8*	-	-	56.6	106
Pioneer²	P31A73E	3.1	59.9	-	-	56.2	98
Pioneer	P34T21SE	3.4	61.7*	-	-	55.4	101
Pioneer	P38A54E	3.8	60.3	-	-	55.6	99
Syngenta	NK31-M7E3	3.1	62.6*	-	-	55.3	103
Syngenta	NK37-V4E3S	3.7	66.1*	-	-	57.3	108
Syngenta	NK38-G9XF	3.8	68.7*	-	-	55.6	113
Syngenta	NK39-M8XF	3.9	66.6*	-	-	56.1	109
Syngenta	NK39-T5E3S	3.9	67.1*	-	-	56.6	110
USG	7353XFS	3.5	66.3*	-	-	55.7	109
USG	7392XFS	3.9	56.5	76.1	66.3	56.4	93
Xitavo	XO 3131E	3.1	58.6	-	-	55.8	96
Xitavo	XO 3341E	3.3	60.6	-	-	55.3	99
Xitavo	XO 3402E	3.4	51.1	-	-	55.3	84
Xitavo	XO 3483E	3.4	56.8	-	-	55.2	93
Xitavo	XO 3651E	3.6	62.8*	-	-	53.7	103
Xitavo	XO 3752E	3.7	57.1	-	-	55.5	94
Xitavo	XO 3861E	3.8	66.5*	67.1	66.8	55.9	109
Xitavo	XO 3803E	3.8	66.6*	-	-	55.9	109
Xitavo	XO 3922E	3.9	63.6*	-	-	56.2	104
Mean			61.0	66.1	-	55.8	-
Probability > F			0.0021	-	-	-	-
LSD_{0.1}			7.6	-	-	-	-

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 19. Performance of MG 4 (early) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S41EN72	4.1	70.1*	80.7	75.4	55.7	112
Dyna-Gro	S42XF93S	4.2	65.4*	-	-	57.3	105
Hubner	H42-31XF	4.2	66.2*	75.2	70.7	57.1	106
Hubner	H44-42XF	4.4	67.3*	72.6	69.9	56.6	108
Mid-Atlantic Seeds	MAS4021E3	4	66.7*	74.3	70.5	55.6	107
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	62.1	75.4	68.7	56.5	99
Pioneer²	P41T07E	4.1	60.4	76.7	68.5	56.5	97
Syngenta	NK43-P7E3S	4.3	51.8	-	-	55.0	83
USG	7420ETS	4.2	63.2*	98.3	80.7	56.5	101
USG	7431ET	4.3	64.4*	69.8	67.1	56.2	103
Xitavo	XO 4132E	4.1	59.5	-	-	55.9	95
Xitavo	XO 4371E	4.3	62.2	72.5	67.3	56.7	100
Mean			62.5	73.1	-	56.5	-
Probability > F			0.0092	-	-	-	-
LSD_{0.1}			7.6	-	-	-	-

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 20. Performance of MG 4 (late) full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S45ES10	4.5	61.9	72.5	67.2	57.4	99
Dyna-Gro	S46XF31S	4.6	69.4*	73.1	71.2	57.3	111
Dyna-Gro	S47XF23S	4.7	64.6*	-	-	57.3	103
Dyna-Gro	S48EN02	4.8	50.7	73.1	61.9	57.7	81
Dyna-Gro	S48EN73	4.8	60.8	-	-	57.1	97
Dyna-Gro	S49EN12	4.9	58.2	-	-	57.7	93
Hubner	H48-31XF	4.8	66.8*	71.7	69.2	57.5	107
Meherrin Ag	SH 4622 E3	4.6	69.7*	68.8	69.2	57.1	111
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	55.8	68.1	61.9	57.4	89
Mid-Atlantic Seeds	MAS4622E3	4.6	55.6	-	-	57.2	89
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	64.4*	74.6	69.5	56.5	103
Mid-Atlantic Seeds	MAS4822E3	4.8	57.0	-	-	57.8	91
Pioneer²	P45T88E	4.5	62.6*	74.2	68.4	56.5	100
SeedKoz	MS 4640 XF	4.6	64.5*	76.3	70.4	56.7	103
SeedKoz	MS 4852 XF	4.8	48.1	-	-	56.7	77
Syngenta	NK45-V9E3	4.5	71.5*	72.7	72.1	57.3	114
Syngenta	NK48-H3XFS	4.8	61.5	-	-	56.7	98
U. of Missouri	S16-13165C	4.7	61.3	-	-	58.5	98
U. of Missouri	S16-7922C	4.9	55.8	74.7	65.2	59.7	89
USG	7451ET	4.5	59.0	69.5	64.2	56.4	94
USG	7461XFS	4.6	70.8*	88.4	79.6	57.6	113
USG	7463XFS	4.6	63.3*	-	-	57.6	101
USG	7461XTS	4.6	66.8*	-	-	57.4	107
USG	7472XFS	4.7	65.5*	-	-	57.9	105
USG	7472ETS	4.7	63.8*	88.4	76.1	57.1	102
USG	4824V	4.8	63.1*	-	-	50.6	101
USG	7482XFS	4.8	61.9	-	-	58.2	99
Xitavo	XO 4522E	4.5	62.7*	-	-	57.6	100
Xitavo	XO 4653E	4.6	62.7*	-	-	57.7	100
Xitavo	XO 4772E	4.7	62.6*	-	-	57.5	100
Mean			62.5	72.4	-	57.2	-
Probability > F			0.0139	-	-	-	-
LSD_{0.1}			9.2	-	-	-	-

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 21. Performance of MG 5 full season soybeans evaluated at Lower Eastern Shore Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Meherrin Ag	SH 5223E3	5.2	43.5	-	-	57.6	83
Mid-Atlantic Seeds	MAS5122E3	5.1	37.1	-	-	57.0	71
Pioneer²	P53T90E	5.0	62.3*	-	-	58.1	119
SeedKoz	MS 5110E	5.1	62.4*	75.6	69.0	57.6	119
U. of Missouri	S16-11651C	5.3	54.7*	74.0	64.3	58.5	104
U. of Missouri	S16-14869C	5.3	53.3*	-	-	59.1	101
USG	7542ET	5.4	54.3*	-	-	57.7	103
Mean			52.5	72.6	-	57.9	-
Probability > F			0.0053	-	-	-	-
LSD_{0.1}			9.9	-	-	-	-

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 Central Maryland Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S39EN19	3.9	66.3	39.3	52.8	54.8	107
Dyna-Gro	S39XF41	3.9	60.3	39.0	49.6	56.2	97
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	56.4	-	-	54.0	91
Mid-Atlantic Seeds	MAS3220E3	3.2	66.1	39.9	53.0	55.9	107
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	64.3	34.5	49.4	55.6	104
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	65.5	44.9	55.2	58.0	105
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	62.2	-	-	55.7	100
Pioneer²	P31A73E	3.1	55.9	-	-	55.3	90
Pioneer	P34T21SE	3.4	65.7	-	-	55.6	106
Pioneer	P38A54E	3.8	54.6	-	-	55.8	88
Syngenta	NK31-M7E3	3.1	55.7	-	-	55.8	90
Syngenta	NK37-V4E3S	3.7	60.9	-	-	55.6	98
Syngenta	NK38-G9XF	3.8	65.1	-	-	55.0	105
Syngenta	NK39-M8XF	3.9	46.1	-	-	35.6	74
Syngenta	NK39-T5E3S	3.9	67.2	-	-	56.4	108
USG	7353XFS	3.5	64.1	-	-	56.7	103
USG	7392XFS	3.9	58.7	38.4	48.5	56.0	95
Xitavo	XO 3131E	3.1	55.5	-	-	55.5	89
Xitavo	XO 3341E	3.3	60.1	-	-	54.9	97
Xitavo	XO 3402E	3.4	59.0	-	-	55.6	95
Xitavo	XO 3483E	3.4	46.6	-	-	55.4	75
Xitavo	XO 3651E	3.6	64.1	-	-	56.0	103
Xitavo	XO 3752E	3.7	87.8	-	-	55.6	141
Xitavo	XO 3861E	3.8	65.2	29.9	47.5	54.5	105
Xitavo	XO 3803E	3.8	72.1	-	-	56.5	116
Xitavo	XO 3922E	3.9	68.1	-	-	57.6	110
Mean			62.1	36.4	-	55.0	-
Probability > F			0.5804	-	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S41EN72	4.1	74.7	54.2	64.4	56.9	109
Dyna-Gro	S42XF93S	4.2	66.6	-	-	49.3	96
Dyna-Gro	S43EN61	4.3	67.0	58.3	62.6	57.5	97
Hubner	H42-31XF	4.2	68.7	38.3	53.5	57.7	99
Hubner	H44-42XF	4.4	71.0	47.0	59.0	58.2	103
Meherrin Ag	SH4022 E3	4.0	71.6	49.1	60.3	57.1	104
Mid-Atlantic Seeds	MAS4021E3	4.0	66.1	41.6	53.8	57.4	96
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	67.6	49.1	58.3	56.3	98
Pioneer²	P41T07E	4.1	65.3	40.7	53.0	57.8	94
Syngenta	NK43-P7E3S	4.3	70.5	-	-	44.0	102
USG	7420ETS	4.2	69.7	32.8	51.2	47.6	101
USG	7429ET	4.2	73.1	42.7	57.9	57.8	105
USG	7431ET	4.3	68.8	49.4	69.1	42.6	100
Xitavo	XO 4132E	4.1	66.6	-	-	56.7	97
Xitavo	XO 4371E	4.3	67.6	47.7	57.6	57.7	98
Mean			68.7	43.7	-	56.0	-
Probability > F			0.7851	-	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S45ES10	4.5	79.8	45.3	62.5	58.2	114
Dyna-Gro	S46XF31S	4.6	77.6	52.9	65.2	57.5	111
Dyna-Gro	S47XF23S	4.7	65.6	-	-	57.5	94
Dyna-Gro	S48EN02	4.8	70.7	57.9	64.3	58.4	101
Dyna-Gro	S48EN73	4.8	71.9	-	-	41.2	103
Dyna-Gro	S49EN12	4.9	66.2	-	-	57.7	95
Hubner	H48-31XF	4.8	69.1	55.1	62.1	58.0	99
Meherrin Ag	SH 4622 E3	4.6	65.2	38.9	52.0	56.5	93
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	73.0	56.9	64.9	57.0	105
Mid-Atlantic Seeds	MAS4622E3	4.6	58.2	-	-	56.0	83
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	67.4	49.5	58.4	57.2	97
Mid-Atlantic Seeds	MAS4822E3	4.8	83.6	-	-	56.0	120
Pioneer²	P45T88E	4.5	69.9	47.6	58.7	56.6	100
SeedKoz	MS 4640 XF	4.6	69.7	52.7	61.2	57.5	100
SeedKoz	MS 4852 XF	4.8	66.0	-	-	58.4	95
Syngenta	NK45-V9E3	4.5	73.9	-	-	56.8	106
Syngenta	NK48-H3XFS	4.8	70.1	-	-	57.0	100
U. of Missouri	S16-13165C	4.7	61.2	-	-	59.5	88
U. of Missouri	S16-7922C	4.9	55.2	56.0	55.6	58.0	79
USG	7451ET	4.5	72.5	63.6	68.0	56.4	104
USG	7461XFS	4.6	67.0	65.2	66.1	57.1	96
USG	7463XFS	4.6	69.1	-	-	57.4	99
USG	7461XTS	4.6	74.5	-	-	57.2	107
USG	7472XFS	4.7	70.2	-	-	57.2	101
USG	7472ETS	4.7	73.6	54.9	64.2	58.0	105
USG	4824V	4.8	66.2	-	-	57.7	95
USG	7482XFS	4.8	69.8	-	-	57.5	100
Xitavo	XO 4522E	4.5	73.8	-	-	56.8	106
Xitavo	XO 4653E	4.6	74.0	-	-	57.0	106
Xitavo	XO 4772E	4.7	68.5	-	-	57.4	98
Mean			69.8	52.4	-	56.0	-
Probability > F			0.1735	-	-	-	-
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 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S39EN19	3.9	78.6	55.2	66.9	57.1	101
Dyna-Gro	S39XF41	3.9	78.6	52.6	65.6	58.4	101
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	80.3	-	-	48.2	103
Mid-Atlantic Seeds	MAS3220E3	3.2	83.8	57.1	70.4	56.3	107
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	79.4	55.5	67.4	58.1	102
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	77.6	66.1	71.8	58.9	99
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	80.4	-	-	58.1	103
Pioneer²	P31A73E	3.1	73.1	-	-	56.4	94
Pioneer	P34T21SE	3.4	81.9	-	-	57.2	105
Pioneer	P38A54E	3.8	82.1	-	-	57.2	105
Syngenta	NK31-M7E3	3.1	76.4	-	-	57.2	98
Syngenta	NK37-V4E3S	3.7	81.8	-	-	57.4	105
Syngenta	NK38-G9XF	3.8	78.5	-	-	57.3	101
Syngenta	NK39-M8XF	3.9	80.3	-	-	57.3	103
Syngenta	NK39-T5E3S	3.9	71.5	-	-	58.0	92
USG	7353XFS	3.5	80.0	-	-	57.9	103
USG	7392XFS	3.9	71.7	62.5	67.1	58.5	92
Xitavo	XO 3131E	3.1	76.3	-	-	57.2	98
Xitavo	XO 3341E	3.3	80.2	-	-	57.0	103
Xitavo	XO 3402E	3.4	77.7	-	-	57.7	100
Xitavo	XO 3483E	3.4	76.6	-	-	58.0	98
Xitavo	XO 3651E	3.6	80.3	-	-	57.9	103
Xitavo	XO 3752E	3.7	75.9	-	-	57.8	97
Xitavo	XO 3861E	3.8	77.8	54.5	66.1	58.0	100
Xitavo	XO 3803E	3.8	74.0	-	-	57.6	95
Xitavo	XO 3922E	3.9	73.0	-	-	57.7	94
Mean			78.0	55.9	-	57.2	-
Probability > F			0.8149	-	-	-	-
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 26. Performance of MG 4 (early) full season soybeans evaluated at Western Maryland Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S41EN72	4.1	80.1	61.4	70.7	57.6	107
Dyna-Gro	S42XF93S	4.2	78.5	-	-	58.5	104
Dyna-Gro	S43EN61	4.3	73.3	53.2	63.2	58.7	97
Hubner	H42-31XF	4.2	80.4	50.9	65.6	58.9	107
Hubner	H44-42XF	4.4	76.5	54.7	65.6	58.7	102
Meherrin Ag	SH4022 E3	4.0	77.5	58.5	68.0	57.5	103
Mid-Atlantic Seeds	MAS4021E3	4.0	75.2	57.3	66.2	57.5	100
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	65.0	56.9	60.9	58.0	86
Pioneer²	P41T07E	4.1	77.0	61.3	69.1	58.2	102
Syngenta	NK43-P7E3S	4.3	70.7	-	-	57.7	94
USG	7420ETS	4.2	73.5	56.0	64.7	58.3	98
USG	7429ET	4.2	72.6	58.3	65.4	58.4	97
USG	7431ET	4.3	75.2	43.7	59.4	58.3	100
Xitavo	XO 4132E	4.1	77.7	-	-	57.6	103
Xitavo	XO 4371E	4.3	75.0	59.3	67.1	58.1	100
Mean			75.2	54.2	-	58.1	-
Probability > F			0.2820	-	-	-	-
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 27. Performance of MG 4 (late) full season soybeans evaluated at Western Maryland Research and Education Center in 2022.

Brand	Variety	MG	Yield (bu/ac) ¹			Test Weight (lb/bu) ¹	Relative Yield
			2022	2021	2 yr. avg		
Dyna-Gro	S45ES10	4.5	73.5	57.6	65.5	58.5	96
Dyna-Gro	S46XF31S	4.6	76.7*	67.1	71.9	58.7	100
Dyna-Gro	S47XF23S	4.7	81.7*	-	-	58.5	107
Dyna-Gro	S48EN02	4.8	73.1	58.3	65.7	59.2	95
Dyna-Gro	S48EN73	4.8	80.5*	-	-	58.6	105
Dyna-Gro	S49EN12	4.9	67.9	-	-	59.1	89
Hubner	H48-31XF	4.8	78.2*	62.9	70.5	59.3	102
Meherrin Ag	SH 4622 E3	4.6	72.8	63.0	67.9	58.4	95
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	76.0	64.2	70.1	58.0	99
Mid-Atlantic Seeds	MAS4622E3	4.6	84.7*	-	-	58.2	110
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	82.1*	66.2	74.1	50.5	107
Mid-Atlantic Seeds	MAS4822E3	4.8	80.3*	-	-	58.4	105
Pioneer²	P45T88E	4.5	72.8	58.9	65.8	58.3	95
SeedKoz	MS 4640 XF	4.6	81.5*	74.0	77.7	59.7	106
SeedKoz	MS 4852 XF	4.8	76.6*	-	-	59.2	100
Syngenta	NK45-V9E3	4.5	82.3*	63.0	72.6	57.9	107
Syngenta	NK48-H3XFS	4.8	84.9*	-	-	58.6	111
U. of Missouri	S16-13165C	4.7	65.3	-	-	60.9	85
U. of Missouri	S16-7922C	4.9	62.6	-	-	59.5	82
USG	7451ET	4.5	73.7	65.1	69.4	58.1	96
USG	7461XFS	4.6	75.7	74.4	75.0	58.7	99
USG	7463XFS	4.6	77.0*	-	-	59.0	100
USG	7461XTS	4.6	80.6*	-	-	58.7	105
USG	7472XFS	4.7	75.0	-	-	59.0	98
USG	7472ETS	4.7	79.5*	60.1	69.8	58.7	104
USG	4824V	4.8	74.2	-	-	59.3	97
USG	7482XFS	4.8	81.0*	-	-	60.2	106
Xitavo	XO 4522E	4.5	81.3*	-	-	57.5	106
Xitavo	XO 4653E	4.6	73.5	-	-	73.6	96
Xitavo	XO 4772E	4.7	76.7*	-	-	58.9	100
Mean			76.7	61.3	-	59.0	-
Probability > F			0.0094	-	-	-	-
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 28. Average performance of MG 3 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022.

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield (bu/ac) ¹	Test Weight (lb/bu) ¹	Yield (bu/ac)	Test Weight (lb/bu)	Yield (bu/ac)	Test Weight (lb/bu)
Dyna-Gro	S39EN19	3.9	66.7	56.2	47.4	57.0	57.1	56.6
Dyna-Gro	S39XF41	3.9	63.8	55.4	56.2	58.6	59.2	57.3
Mid-Atlantic Seeds	MAS3022E3/STS	3.1	56.4	57.1	51.2	58.3	53.8	57.7
Mid-Atlantic Seeds	MAS3220E3	3.2	58.6	55.1	49.1	56.5	53.9	55.8
Mid-Atlantic Seeds	MAS3600E3/STS	3.6	60.6	55.9	49.9	57.7	55.3	56.8
Mid-Atlantic Seeds	MAS3884GT/LL	3.8	65.4	58.1	52.4	57.9	58.9	58.0
Mid-Atlantic Seeds	MAS3822E3/STS	3.9	66.9	57.5	49.0	50.3	58.0	53.9
Pioneer²	P31A73E	3.1	57.8	55.6	50.6	57.8	54.2	56.7
Pioneer	P34T21SE	3.4	58.3	56.7	49.5	57.4	53.9	57.1
Pioneer	P38A54E	3.8	59.7	57.6	49.1	58.2	54.4	57.9
Syngenta	NK31-M7E3	3.1	62.4	54.9	49.5	58.1	56.0	56.5
Syngenta	NK37-V4E3S	3.7	57.3	57.8	48.1	57.5	53.6	57.7
Syngenta	NK38-G9XF	3.8	62.5	57.7	48.4	57.6	54.5	57.6
Syngenta	NK39-M8XF	3.9	67.5	58.0	51.1	57.2	59.3	57.6
Syngenta	NK39-T5E3S	3.9	64.6	57.2	51.1	39.1	57.9	48.2
USG	7353XFS	3.5	60.9	57.4	57.9	58.4	59.4	57.9
USG	7392XFS	3.9	61.8	58.0	46.1	58.5	54.0	58.2
Xitavo	XO 3131E	3.1	56.6	56.6	51.5	57.0	54.1	56.8
Xitavo	XO 3341E	3.3	63.0	57.3	47.7	57.1	56.8	57.3
Xitavo	XO 3402E	3.4	62.7	56.3	47.8	58.0	55.2	57.1
Xitavo	XO 3483E	3.4	54.1	55.7	43.5	57.7	50.5	56.4
Xitavo	XO 3651E	3.6	58.2	56.5	48.8	50.9	53.5	53.7
Xitavo	XO 3752E	3.7	60.5	56.4	49.7	57.8	55.1	57.1
Xitavo	XO 3861E	3.8	57.8	57.4	46.9	57.5	52.3	57.4
Xitavo	XO 3803E	3.8	69.4	58.0	52.0	57.4	60.7	57.7
Xitavo	XO 3922E	3.9	64.5	57.8	52.2	57.0	58.4	57.4
Mean			61.3	56.9	50.0	56.4	55.7	56.6
Probability > F			0.3351	-	0.6022	-	0.9659	-
LSD_{0.1}			NS**	-	NS	-	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 29. Average performance of MG 4 (early) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022.

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield (bu/ac) ¹	Test Weight (lb/bu) ¹	Yield (bu/ac)	Test Weight (lb/bu)	Yield (bu/ac)	Test Weight (lb/bu)
Dyna-Gro	S41EN72	4.1	71.0*	57.8	54.6*	56.9	62.8	57.4
Dyna-Gro	S42XF93S	4.2	64.6	58.1	53.2*	57.7	58.9	57.9
Dyna-Gro	S43EN61	4.3	59.7	58.0	50.3	57.2	55.0	57.6
Hubner	H42-31XF	4.2	61.2	57.9	54.3*	57.5	57.7	57.7
Hubner	H44-42XF	4.4	70.5*	57.8	53.6*	58.3	62.0	58.1
Meherrin Ag	SH4022 E3	4.0	73.8*	57.5	47.7	57.5	60.7	57.5
Mid-Atlantic Seeds	MAS4021E3	4.0	72.2*	57.9	49.5	57.2	60.8	57.5
Mid-Atlantic Seeds	MAS4320E3/STS	4.3	64.3	58.1	51.9*	57.8	58.1	57.9
Pioneer²	P41T07E	4.1	64.4	58.1	50.3	57.8	57.4	57.9
Syngenta	NK43-P7E3S	4.3	60.1	57.3	53.3*	57.0	56.7	57.1
USG	7420ETS	4.2	60.7	58.6	50.5	58.2	55.6	58.4
USG	7429ET	4.2	69.0*	58.3	54.4*	57.5	61.7	57.9
USG	7431ET	4.3	60.9	58.1	49.7	57.6	55.3	57.8
Xitavo	XO 4132E	4.1	72.1*	57.7	49.6	57.4	60.9	57.5
Xitavo	XO 4371E	4.3	60.0	58.4	52.0*	57.6	56.0	58.0
Mean			65.6	58.0	51.7	57.5	58.6	57.8
Probability > F			0.0027	-	0.0645	-	0.9078	-
LSD_{0.1}			6.8	-	3.7	-	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 30. Average performance of MG 4 (late) double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022.

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield (bu/ac) ¹	Test Weight (lb/bu) ¹	Yield (bu/ac)	Test Weight (lb/bu)	Yield (bu/ac)	Test Weight (lb/bu)
Dyna-Gro	S45ES10	4.5	67.1	59.2	50.6	57.6	60.5	58.6
Dyna-Gro	S46XF31S	4.6	75.1	58.6	52.9*	57.8	64.0	58.2
Dyna-Gro	S47XF23S	4.7	72.4	58.4	52.4*	58.1	62.4	58.3
Dyna-Gro	S48EN02	4.8	68.0	58.5	42.4	58.7	55.2	58.6
Dyna-Gro	S48EN73	4.8	65.9	58.8	50.1	57.7	58.0	58.2
Dyna-Gro	S49EN12	4.9	67.2	58.0	45.2	57.5	56.2	57.8
Hubner	H48-31XF	4.8	75.4	58.8	51.6	58.5	63.5	58.6
Meherrin Ag	SH 4622 E3	4.6	66.4	52.4	41.7	57.1	55.8	54.4
Mid-Atlantic Seeds	MAS4675E3/STS	4.6	64.1	58.5	48.8	50.4	56.5	54.5
Mid-Atlantic Seeds	MAS4622E3	4.6	62.9	59.2	47.0	58.0	55.0	58.6
Mid-Atlantic Seeds	MAS4721E3/STS	4.7	69.7	58.5	55.3*	46.1	64.0	53.5
Mid-Atlantic Seeds	MAS4822E3	4.8	64.6	58.3	43.1	62.5	53.8	60.4
Pioneer²	P45T88E	4.5	67.2	57.6	52.1*	56.8	59.6	57.2
SeedKoz	MS 4640 XF	4.6	75.5	58.5	46.8	58.8	61.2	58.7
SeedKoz	MS 4852 XF	4.8	71.4	58.6	53.2*	58.0	62.3	58.3
Syngenta	NK45-V9E3	4.5	73.2	58.8	57.9*	57.6	67.0	58.3
Syngenta	NK48-H3XFS	4.8	72.4	57.8	53.5*	57.3	62.9	57.5
University of Missouri	S16-13165C	4.7	69.3	60.0	41.8	56.2	55.6	58.1
University of Missouri	S16-7922C	4.9	71.6	58.4	39.7	56.6	55.6	57.5
USG	7451ET	4.5	69.4	57.7	56.5*	38.5	63.0	48.1
USG	7461XFS	4.6	69.7	58.6	50.3	49.5	60.0	54.0
USG	7463XFS	4.6	69.2	58.6	54.2*	58.1	61.7	58.4
USG	7461XTS	4.6	70.8	58.3	53.8*	57.3	62.3	57.8
USG	7472XFS	4.7	72.3	59.3	54.4*	51.3	63.3	55.3
USG	7472ETS	4.7	67.5	58.0	53.3*	57.7	60.4	57.8
USG	4824V	4.8	76.9	58.4	49.1	43.8	63.0	51.1
USG	7482XFS	4.8	69.3	58.6	54.4*	58.2	61.9	58.4
Xitavo	XO 4522E	4.5	65.1	58.6	56.0*	57.9	60.6	58.2
Xitavo	XO 4653E	4.6	69.7	58.8	49.3	56.9	64.6	58.3
Xitavo	XO 4772E	4.7	71.6	58.4	49.3	37.9	60.5	48.2
Mean			69.7	58.3	50.1	54.9	60.2	56.7
Probability > F			0.5586	-	<0.0001	-	0.9896	-
LSD_{0.1}			NS**	-	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 31. Average performance of MG 5 double crop soybeans evaluated at two locations (Wye, Poplar Hill) in 2022.

Brand	Variety	MG	Wye		Poplar Hill		Both Locations	
			Yield (bu/ac) ¹	Test Weight (lb/bu) ¹	Yield (bu/ac)	Test Weight (lb/bu)	Yield (bu/ac)	Test Weight (lb/bu)
Meherrin Ag	SH 5223E3	5.2	75.0	58.1	37.2*	55.7	56.1	56.9
Mid-Atlantic Seeds	MAS5122E3	5.1	65.7	57.7	36.2*	49.8	50.9	53.7
Pioneer²	P53T90E	5.0	68.5	59.5	40.2*	54.4	54.4	57.0
SeedKoz	MS 5110E	5.1	76.9	57.4	43.8*	58.0	60.3	57.7
U. of Missouri	S16-11651C	5.3	71.3	59.1	22.9	39.3	47.1	49.2
U. of Missouri	S16-14869C	5.3	74.6	50.4	33.6*	56.3	54.1	53.3
USG	7542ET	5.4	68.6	56.9	31.5	41.0	50.1	48.9
Mean			71.5	57.0	35.1	50.6	53.3	53.8
Probability > F			0.2485	-	0.0813	-	0.9552	-
LSD_{0.1}			NS**	-	10.6	-	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
Dyna-Gro	S39EN19	109	100	107	101	109	95
Dyna-Gro	S39XF41	96	91	97	101	104	112
Mid-Atlantic Seeds	MAS3022E3/STS	86	79	91	103	92	102
Mid-Atlantic Seeds	MAS3220E3	105	90	107	107	96	98
Mid-Atlantic Seeds	MAS3600E3/STS	96	96	104	102	99	100
Mid-Atlantic Seeds	MAS3884GT/LL	99	102	105	99	107	105
Mid-Atlantic Seeds	MAS3822E3/STS	120	106	100	103	109	98
Pioneer²	P31A73E	100	98	90	94	94	101
Pioneer	P34T21SE	97	101	106	105	95	99
Pioneer	P38A54E	95	99	88	105	97	98
Syngenta	NK31-M7E3	104	103	90	98	102	99
Syngenta	NK37-V4E3S	95	108	98	105	93	96
Syngenta	NK38-G9XF	111	113	105	101	102	97
Syngenta	NK39-M8XF	109	109	74	103	110	102
Syngenta	NK39-T5E3S	108	110	108	92	105	102
USG	7353XFS	84	109	103	103	99	116
USG	7392XFS	102	93	95	92	101	92
Xitavo	XO 3131E	68	96	89	98	92	103
Xitavo	XO 3341E	103	99	97	103	103	95
Xitavo	XO 3402E	103	84	95	100	102	96
Xitavo	XO 3483E	83	93	75	98	88	87
Xitavo	XO 3651E	99	103	103	103	95	98
Xitavo	XO 3752E	93	94	141	97	99	99
Xitavo	XO 3861E	115	109	105	100	94	94
Xitavo	XO 3803E	110	109	116	95	113	104
Xitavo	XO 3922E	117	104	110	94	105	104
Trial Mean (bu/ac)		62.7	61.0	62.1	78.0	61.3	50.0

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
Dyna-Gro	S41EN72	104	112	109	107	108	106
Dyna-Gro	S42XF93S	102	105	96	104	99	103
Dyna-Gro	S43EN61	108	106	97	97	91	97
Hubner	H42-31XF	99	108	99	107	93	105
Hubner	H44-42XF	92	107	103	102	107	104
Meherrin Ag	SH4022 E3	95	99	104	103	112	92
Mid-Atlantic Seeds	MAS4021E3	90	97	96	100	110	96
Mid-Atlantic Seeds	MAS4320E3/STS	107	83	98	86	98	100
Pioneer²	P41T07E	109	101	94	102	98	97
Syngenta	NK43-P7E3S	102	103	102	94	92	103
USG	7420ETS	91	95	101	98	93	98
USG	7429ET	87	100	105	97	105	105
USG	7431ET	108	112	100	100	93	96
Xitavo	XO 4132E	109	105	97	103	110	96
Xitavo	XO 4371E	97	106	98	100	92	101
Trial Mean (bu/ac)		73.0	30.5	68.7	75.2	65.6	51.7

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
Dyna-Gro	S45ES10	94	99	114	96	96	101
Dyna-Gro	S46XF31S	102	111	111	100	108	106
Dyna-Gro	S47XF23S	106	103	94	107	104	105
Dyna-Gro	S48EN02	97	81	101	95	98	85
Dyna-Gro	S48EN73	103	97	103	105	95	100
Dyna-Gro	S49EN12	92	93	95	89	96	90
Hubner	H48-31XF	104	107	99	102	108	103
Meherrin Ag	SH 4622 E3	92	111	93	95	95	83
Mid-Atlantic Seeds	MAS4675E3/STS	96	89	105	99	92	97
Mid-Atlantic Seeds	MAS4622E3	104	89	83	110	90	94
Mid-Atlantic Seeds	MAS4721E3/STS	98	103	97	107	100	110
Pioneer²	P45T88E	97	91	120	105	93	86
SeedKoz	MS 4640 XF	101	100	100	95	96	104
SeedKoz	MS 4852 XF	86	103	100	106	108	93
Syngenta	NK45-V9E3	104	77	95	100	102	106
Syngenta	NK48-H3XFS	112	114	106	107	105	116
University of Missouri	S16-13165C	92	98	100	111	104	107
University of Missouri	S16-7922C	105	98	88	85	99	83
USG	7451ET	95	89	79	82	103	79
USG	7461XFS	102	94	104	96	100	113
USG	7463XFS	106	113	96	99	100	100
USG	7461XTS	107	101	99	100	99	108
USG	7472XFS	99	107	107	105	102	107
USG	7472ETS	97	105	101	98	104	109
USG	4824V	103	102	105	104	97	106
USG	7482XFS	104	101	95	97	110	98
Xitavo	XO 4522E	100	99	100	106	99	109
Xitavo	XO 4653E	104	100	106	106	93	112
Xitavo	XO 4772E	101	100	106	96	100	98
Trial Mean (bu/ac)		70.3	62.5	69.8	76.7	69.7	50.1

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
Meherrin Ag	SH 5223E3	91	83	105	106
Pioneer²	P53T90E	98	71	92	103
SeedKoz	MS 5110E	98	119	96	115
University of Missouri	S16-11651C	106	119	108	125
University of Missouri	S16-14869C	105	104	100	65
USG	7542ET	101	101	104	96
Trial Mean (bu/ac)		66.8	52.5	71.5	35.1

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