



UNIVERSITY OF
DELAWARE.

Delaware Soybean Variety Trials 2023

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Acknowledgments

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We are indebted and extend appreciation to the following cooperators who generously provided land and support for our off-site locations. They are Craig Murray of Murray Bros. Farm in Selbyville, Rob Emerson of Emerson Farms in Middletown and Allen Garey of Garey Farms.

I would like to personally thank Buddy Willey, George Petitgout, Ward Harris, Kyler Lecates, Chad Messick, Justin Jameson and Brian Hearn of our Carvel Farm Staff for their assistance in managing the trials. These trials would not have been possible without their contributions.

Methodology

All trials were conducted in a randomized, complete block design with four total replications. The final plot length of all trials was 17 ft. More experimental details such as population, plot width, planting/harvest dates, and tillage or cultural practices can be found in the following table. Temperature and rainfall information for the growing season can be accessed at the nearest test locations from DEOS <http://www.deos.udel.edu/>

C.V. and L.S.D.

The coefficient of variation (C.V.) is a measurement of the amount of uncontrollable variability due to differences in the soil, weather, fertility, etc. The acceptable CV level is dependent on the field of the research. Medicine and pharmaceutical research have stricter CV ranges than research in agricultural sciences due to more control over outside variables. The American Association for Clinical Chemistry in *Clinical Chemistry, Volume 35, Issue 4* defines for agricultural studies that CV<10 is very good, 10-20 is good, 20-30 is acceptable. Please note that the C.V. is expected to be higher at dryland locations.

The least significant difference (L.S.D.; computed at a 5% level of probability) is a tool to determine if two average values are significantly different. The difference between two varieties must exceed the L.S.D. value to be considered significantly different from one another.

HOW TO BEST USE SOYBEAN VARIETY TRIAL INFORMATION

Information presented in this summary may be useful in selecting soybean varieties for production in Delaware. To maximize the usefulness of this information, follow these suggestions:

1. Select the test location that best represents your production location. Generally, varieties are adaptable across Delaware but certain soil or climatic conditions, cultural practices, or insect/disease problems may limit the choice.
2. Multiple-year average (means) across the greatest number of years are the best predictors of performance. Refer to previous test reports for information to evaluate soybean varieties which are of interest to you. Comparison between your selected variety and the grand mean for your closest test location will be helpful in identifying superior varieties for your area.
3. Check the grand mean for the long-term averages and compare with your own production experience. If your yields have been consistently below these grand mean levels, you should evaluate each part of your management system for potential areas of improvement.

2023 Delaware Soybean Variety Trial Entries

Brand	Variety	Traits	Seed Treatment	Maturity
AGVenture	AV49A1E	Enlist E3	LumiGen	4.9
AGVenture	AV38A1E	Enlist E3	LumiGen	3.8
AGVenture	AV39Y3E	Enlist E3	LumiGen	3.9
AGVenture	AV47Y6E	Enlist E3	LumiGen	4.7
AGVenture	AV42A1E	Enlist E3	LumiGen	4.2
AGVenture	AV41Y5E	Enlist E3	LumiGen	4.1
AGVenture	AV45Y8E	Enlist E3	LumiGen	4.5
AGVenture	AV46A1E	Enlist E3	LumiGen	4.6
Dyna-Gro	S41EN72	Enlist E3	PLTM	4.1
Dyna-Gro	S42XF93S	XtendFlex/STS	PLTM	4.2
Dyna-Gro	S38XF22S	XtendFlex/STS	PLTM	3.8
Dyna-Gro	S48EN73	Enlist E3	PLTM	4.8
Dyna-Gro	S47XF23S	XtendFlex/STS	PLTM	4.7
Dyna-Gro	S49XF43S	XtendFlex/STS	PLTM	4.9
FS HiSoy	HS 45E32	Enlist E3/STS		4.5
FS HiSoy	HS 47E32	Enlist E3/STS		4.7
FS HiSoy	HS 43E30	Enlist E3/STS		4.3
FS HiSoy	HS 41E20	Enlist E3		4.1
FS HiSoy	HS 39E30	Enlist E3/STS		3.9
FS HiSoy	HS 39F32	XtendFlex/STS		3.9
Innotech	4983E3S	Enlist E3/STS	Coastal Proshield	4.9
Innotech	4545E3S	Enlist E3/STS	Coastal Proshield	4.5
Innvictis Seed	A4503XF	XtendFlex		4.5
Innvictis Seed	B4603E	Enlist E3		4.6
Innvictis Seed	B5013E	Enlist E3		5
Innvictis Seed	A4862XF	XtendFlex		4.8

Innictis Seed	A3992XF	XtendFlex		3.9
Innictis Seed	A5813XF	XtendFlex		5.8
Mid-Atlantic Seed	MAS4423E3	Enlist E3		4.4
Mid-Atlantic Seed	MAS4021E3	Enlist E3		4
Mid-Atlantic Seed	MAS4675E3/STS	Enlist E3/STS		4.6
Mid-Atlantic Seed	MAS3600E3/STS	Enlist E3/STS		3.6
Mid-Atlantic Seed	MAS4123E3	Enlist E3		4.1
Mid-Atlantic Seed	MAS3884GT/LL	GT/LL		3.8
Mid-Atlantic Seed	MAS4723E3/STS	Enlist E3/STS		4.7
Mid-Atlantic Seed	MAS4320E3/STS	Enlist E3/STS		4.3
Mid-Atlantic Seed	MAS4823E3	Enlist E3		4.8
Mid-Atlantic Seed	MAS4077GT/STS	GT/STS		4
Mid-Atlantic Seed	MAS3220E3	Enlist E3		3.2
Mid-Atlantic Seed	MAS4623E3	Enlist E3		4.6
NK Brand	NK48-H3XFS	XtendFlex/STS	CruiserMaxx APX/Saltro	4.8
NK Brand	NK46-B4XFS	XtendFlex/STS	CruiserMaxx APX/Saltro	4.6
NK Brand	NK42-A6E3S	Enlist E3	CruiserMaxx APX/Saltro	4.2
Perdue	P30ILO22	non-gmo, high oleic		3
Perdue	P41ILO22	non-gmo, high oleic		4.1
Perdue	P41IMO21	non-gmo, high oleic		4.1
Perdue	P45XP421	non-gmo, high protein		4.5
Perdue	P48MO21	non-gmo, high oleic		4.8
Revere	RV4821XFS	XtendFlex/STS	Coastal Proshield	4.8
Revere	RV4299XS	RR2YXtend/STS	Coastal Proshield	4.2
Revere	RV4606XFS	XtendFlex/STS	Coastal Proshield	4.6
Revere	RV3908XFS	XtendFlex/STS	Coastal Proshield	3.9
Seed Consultants	SC7444E	Enlist E3	LumiGen/Ilevo	4.4
Seed Consultants	SC7462E	Enlist E3	LumiGen/Ilevo	4.6

Southern Harvest	SH 5321E3	Enlist E3	Vibrance Trio/Germate Plus	5.3
Southern Harvest	SH 4622E3	Enlist E3	Vibrance Trio/Germate Plus	4.6
Southern Harvest	SH 5124	Enlist E3	Vibrance Trio/Germate Plus	5.1
Southern Harvest	SH 4024	Enlist E3	Vibrance Trio/Germate Plus	4
USG	7494ETS	Enlist E3/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.9
USG	7434XF	XtendFlex	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.3
USG	7514ET	Enlist E3	Ipconazole/Carboxin Metalaxyl Imidicloprid	5.1
USG	7474XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.7
USG	7394XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	3.9
USG	7464ET	Enlist E3	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.6
USG	7472XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.7
USG	7424ETS	Enlist E3/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.2
USG	7472ETS	Enlist E3/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.7
USG	4824V	Conventional	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.8
Xitavo	XO 4894E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.8
Xitavo	XO 4772E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.7
Xitavo	XO 4048E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4
Xitavo	XO 4364E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.3
Xitavo	XO 3922E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	3.9
Xitavo	XO 4132E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.1
Xitavo	XO 4522E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.5
Xitavo	XO 4653E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	4.6
Xitavo	XO 3803E	Enlist E3	Poncho Votivo, llevo, Obvius Plus, Relenya	3.8

	Carvel Rec - Georgetown	Emerson Farms - Middletown
Number of Entries	77	77
Target Population	150,000 seeds/acre	150,000 seeds/acre
Plot Length	17 ft	17 ft
Plot Width	7.5 ft (3 rows harvested)	7.5 ft (3 rows harvested)
Spacing	4 rows, 30 inch	4 rows, 30 inch
Planter	SRES Monosem Air Planter	SRES Monosem Air Planter
Harvester	Almaco R1 combine	Almaco R1 combine
Grain Analysis	Harvest Master H2 Classic	Harvest Master H2 Classic
Number of Replications	4	4
Planting Date	5/17/2023	5/18/2023
Harvest Date	10/24/2023	11/2/2023
Soil Type	Pepperbox/Rosedale Loamy sand	Reybold- Queponco complex- Silt Loam
Previous Crop	corn	corn
Tillage Practices	disc	chisel plowed, disc
Fertilization	378lb/acre of 0-0-47 before planting, (180lb/acre of potash)	3 tons/acre of chicken manure
Herbicide	(Trivence 7oz/acre, Dual 1.5pt/acre) on 5/12 (Reflex 1.5pt/acre, Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 6/15	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 5/18 (Reflex 1.5pt/acre, Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 6/17
Insecticide/Fungicide	Warrior 2oz/acre 6/15	Warrior 2oz/acre on 6/17
Irrigation	Linear Irrigation	Dryland (none)

	Murray Brothers Farm - Dagsboro	Gary Farms - Kent
Number of Entries	77	77
Target Population	150,000 seeds/acre	150,000 seeds/acre
Plot Length	17 ft	17 ft
Plot Width	7.5 ft (3 rows harvested)	7.5 ft (3 rows harvested)
Spacing	4 rows, 30 inch	4 rows, 30 inch
Planter	SRES Monosem Air Planter	SRES Monosem Air Planter
Harvester	Almaco R1 combine	Almaco R1 combine
Grain Analysis	Harvest Master H2 Classic	Harvest Master H2 Classic
Number of Replications	4	4
Planting Date	6/1/2023	5/19/2023
Harvest Date	11/3/2023	10/27/2023
Soil Type	Mullica-Berryland Complex	Glassboro Sandy Loam
Previous Crop	corn	corn
Tillage Practices	disc	turbo tilled
Fertilization	n/a	n/a
Herbicide	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 6/1 (Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 7/7	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 5/19 (Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 6/16
Insecticide/Fungicide	Warrior 2oz/acre on 7/7	Warrior 2oz/acre on 6/16
Irrigation	Dryland (none)	Center Pivot

2023 Georgetown Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Dyna-Gro	1	S47XF23S	89.2	15.0	54.4	\$1,189.04
Xitavo	2	XO 3803E	89.1	12.1	53.6	\$1,187.70
Innvictis Seed	3	A4503XF	88.3	12.4	55.5	\$1,177.04
Dyna-Gro	4	S49XF43S	87.8	12.9	55.3	\$1,170.37
FS HiSoy	5	HS 43E30	87.1	12.5	54.1	\$1,161.04
Revere	6	RV4299XS	86.0	13.1	53.7	\$1,146.38
AGVenture	7	AV41Y5E	85.8	11.7	54.1	\$1,143.71
NK Brand	8	NK48-H3XFS	85.2	12.8	54.7	\$1,135.72
Seed Consultants	9	SC7444E	84.7	12.0	55.7	\$1,129.05
Revere	10	RV3908XFS	84.0	13.3	53.9	\$1,119.72
Revere	11	RV4821XFS	83.6	12.8	54.0	\$1,114.39
Dyna-Gro	12	S38XF22S	83.3	12.4	54.5	\$1,110.39
Revere	13	RV4606XFS	83.2	12.0	53.9	\$1,109.06
NK Brand	14	NK46-B4XFS	82.5	13.6	55.8	\$1,099.73
Xitavo	15	XO 4364E	82.4	12.0	53.8	\$1,098.39
USG	16	7472ETS	82.3	12.6	54.8	\$1,097.06
AGVenture	17	AV46A1E	82.3	12.3	55.5	\$1,097.06
Mid-Atlantic Seeds	18	MAS4123E3	82.2	12.7	52.6	\$1,095.73
Innotech	19	4983E3S	81.9	13.0	55.0	\$1,091.73
Mid-Atlantic Seeds	20	MAS4077GT/STS	81.9	12.5	52.7	\$1,091.73
NK Brand	21	NK42-A6E3S	81.8	13.1	53.9	\$1,090.39
AGVenture	22	AV42A1E	81.8	12.3	54.4	\$1,090.39
AGVenture	23	AV47Y6E	81.6	12.3	55.0	\$1,087.73
Innotech	24	4545E3S	81.6	12.4	53.5	\$1,087.73
Xitavo	25	XO 4048E	81.5	12.9	53.0	\$1,086.40
AGVenture	26	AV38A1E	81.0	12.3	53.5	\$1,079.73

FS HiSoy	27	HS 47E32	80.9	12.0	53.9	\$1,078.40
Mid-Atlantic Seeds	28	MAS4623E3	80.7	12.3	54.5	\$1,075.73
FS HiSoy	29	HS 45E32	80.4	12.5	54.0	\$1,071.73
Dyna-Gro	30	S42XF93S	80.0	11.6	54.0	\$1,066.40
Innictis Seed	31	B5013E	79.9	13.2	55.5	\$1,065.07
Mid-Atlantic Seeds	32	MAS4675E3/STS	79.7	13.7	53.3	\$1,062.40
Southern Harvest	33	SH 4622E3	79.2	12.5	55.0	\$1,055.74
Xitavo	34	XO 4522E	79.2	12.7	54.0	\$1,055.74
Xitavo	35	XO 4653E	78.9	12.2	54.8	\$1,051.74
Southern Harvest	36	SH 4024	78.8	12.3	55.0	\$1,050.40
FS HiSoy	37	HS 41E20	78.7	12.0	52.6	\$1,049.07
Innictis Seed	38	A3992XF	78.4	11.9	53.8	\$1,045.07
Xitavo	39	XO 4132E	78.4	12.3	53.9	\$1,045.07
Innictis Seed	40	B4603E	78.2	12.5	55.8	\$1,042.41
Innictis Seed	41	A4862XF	78.1	12.6	54.9	\$1,041.07
Mid-Atlantic Seeds	42	MAS4423E3	77.8	12.6	56.5	\$1,037.07
USG	43	7394XFS	77.4	13.2	54.3	\$1,031.74
USG	44	7434XF	77.3	12.9	55.7	\$1,030.41
FS HiSoy	45	HS 39E30	77.3	12.9	51.7	\$1,030.41
Innictis Seed	46	A5813XF	77.2	25.8	33.2	\$1,029.08
Mid-Atlantic Seeds	47	MAS3884GT/LL	76.8	12.9	54.4	\$1,023.74
USG	48	7474XFS	76.7	12.6	52.8	\$1,022.41
FS HiSoy	49	HS 39F32	76.7	13.1	54.5	\$1,022.41
Perdue	50	P48MO21	76.5	13.3	53.2	\$1,019.75
USG	51	4824V	76.3	12.5	54.8	\$1,017.08
USG	52	7424ETS	76.2	13.1	54.6	\$1,015.75
USG	53	7464ET	76.1	13.3	55.7	\$1,014.41
Xitavo	54	XO 4894E	76.0	13.5	55.9	\$1,013.08

Seed Consultants	55	SC7462E	75.3	13.1	55.7	\$1,003.75
AGVenture	56	AV39Y3E	74.8	12.4	53.0	\$997.08
Dyna-Gro	57	S48EN73	74.7	12.0	54.3	\$995.75
Xitavo	58	XO 4772E	74.7	12.5	55.3	\$995.75
Mid-Atlantic Seeds	59	MAS4823E3	74.7	13.7	55.7	\$995.75
USG	60	7472XFS	74.6	12.9	55.8	\$994.42
USG	61	7494ETS	74.3	13.5	55.5	\$990.42
Mid-Atlantic Seeds	62	MAS4021E3	74.3	12.7	54.5	\$990.42
Mid-Atlantic Seeds	63	MAS4723E3/STS	74.0	13.1	55.0	\$986.42
Xitavo	64	XO 3922E	73.9	12.7	53.9	\$985.09
AGVenture	65	AV45Y8E	73.7	13.1	56.0	\$982.42
Southern Harvest	66	SH 5321E3	73.6	14.8	56.0	\$981.09
Mid-Atlantic Seeds	67	MAS3220E3	73.5	12.9	52.5	\$979.76
Dyna-Gro	68	S41EN72	73.1	12.5	53.4	\$974.42
Southern Harvest	69	SH 5124	73.1	13.9	53.7	\$974.42
Perdue	70	P41IMO21	72.5	12.0	53.5	\$966.43
Mid-Atlantic Seeds	71	MAS4320E3/STS	72.3	11.9	52.7	\$963.76
USG	72	7514ET	69.4	13.8	54.1	\$925.10
AGVenture	73	AV49A1E	67.8	12.8	55.5	\$903.77
Mid-Atlantic Seeds	74	MAS3600E3/STS	65.1	14.2	54.5	\$867.78
Perdue	75	P41ILO22	62.1	12.7	54.3	\$827.79
Perdue	76	P45XP421	61.1	14.3	56.2	\$814.46
Perdue	77	P30ILO22	55.7	12.9	53.3	\$742.48

Bolded varieties do not statistically differ from top yielding variety

LSD P=.05

8.8

All yield data adjusted to 13.5% moisture

CV

8.09

Mean

78 (bu)

*Gross Income/acre is based off of commodity pricing for dry grain and does not factor in moisture/drying doc

Local Soybean Commodity Pricing as of report - \$13.33

2023 Dagsboro Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
NK Brand	1	NK42-A6E3S	87.0	12.1	55.0	\$1,159.71
Seed Consultants	2	SC7444E	86.5	12.6	56.1	\$1,153.05
Dyna-Gro	3	S42XF93S	83.7	12.0	55.0	\$1,115.72
AGVenture	4	AV46A1E	82.5	12.4	56.1	\$1,099.73
AGVenture	5	AV41Y5E	81.1	12.1	55.4	\$1,081.06
Mid-Atlantic Seeds	6	MAS4723E3/STS	81.1	13.0	55.1	\$1,081.06
Dyna-Gro	7	S49XF43S	80.7	12.5	55.5	\$1,075.73
Xitavo	8	XO 4132E	80.6	12.4	55.2	\$1,074.40
AGVenture	9	AV38A1E	80.6	11.9	55.0	\$1,074.40
Innictis Seed	10	A3992XF	80.1	12.1	54.9	\$1,067.73
FS HiSoy	11	HS 45E32	80.1	12.5	54.5	\$1,067.73
Mid-Atlantic Seeds	12	MAS3884GT/LL	80.0	12.2	56.2	\$1,066.40
AGVenture	13	AV45Y8E	79.2	12.6	57.0	\$1,055.74
Dyna-Gro	14	S47XF23S	79.1	11.8	55.5	\$1,054.40
FS HiSoy	15	HS 43E30	79.1	12.5	55.7	\$1,054.40
NK Brand	16	NK46-B4XFS	79.0	12.7	55.5	\$1,053.07
Xitavo	17	XO 4522E	79.0	12.6	55.0	\$1,053.07
Mid-Atlantic Seeds	18	MAS4823E3	78.8	12.7	55.9	\$1,050.40
Xitavo	19	XO 3803E	78.5	12.7	54.7	\$1,046.41
Xitavo	20	XO 4364E	78.3	12.3	55.7	\$1,043.74
NK Brand	21	NK48-H3XFS	78.2	11.9	55.8	\$1,042.41
Southern Harvest	22	SH 4024	78.1	12.7	54.9	\$1,041.07
USG	23	7464ET	77.9	12.5	56.8	\$1,038.41
AGVenture	24	AV47Y6E	77.9	12.4	56.4	\$1,038.41
Dyna-Gro	25	S48EN73	77.6	12.3	55.2	\$1,034.41
Revere	26	RV4821XFS	77.3	12.6	55.5	\$1,030.41

Innvictis Seed	27	A4862XF	76.8	12.4	55.7	\$1,023.74
AGVenture	28	AV39Y3E	76.8	12.2	54.9	\$1,023.74
Seed Consultants	29	SC7462E	76.7	13.0	56.6	\$1,022.41
Mid-Atlantic Seeds	30	MAS4423E3	76.4	12.6	56.7	\$1,018.41
Innvictis Seed	31	A4503XF	76.3	12.6	55.4	\$1,017.08
Revere	32	RV4606XFS	76.3	11.9	55.7	\$1,017.08
USG	33	7494ETS	76.2	12.7	55.6	\$1,015.75
Southern Harvest	34	SH 5124	76.2	12.1	56.3	\$1,015.75
Mid-Atlantic Seeds	35	MAS4123E3	76.1	12.5	55.7	\$1,014.41
Xitavo	36	XO 4653E	75.7	12.1	56.2	\$1,009.08
AGVenture	37	AV42A1E	75.5	12.4	54.9	\$1,006.42
Innotech	38	4983E3S	75.5	12.4	56.2	\$1,006.42
Xitavo	39	XO 3922E	75.4	12.7	55.1	\$1,005.08
Dyna-Gro	40	S38XF22S	75.2	12.6	55.5	\$1,002.42
AGVenture	41	AV49A1E	74.9	11.5	56.9	\$998.42
USG	42	7424ETS	74.8	12.6	56.0	\$997.08
Mid-Atlantic Seeds	43	MAS4675E3/STS	74.8	12.9	55.4	\$997.08
Innotech	44	4545E3S	74.6	12.7	55.7	\$994.42
Revere	45	RV4299XS	74.5	12.4	55.5	\$993.09
USG	46	7474XFS	74.4	12.2	55.1	\$991.75
USG	47	7394XFS	74.3	12.1	55.9	\$990.42
USG	48	7514ET	74.2	12.5	56.0	\$989.09
USG	49	7434XF	74.1	12.5	56.1	\$987.75
FS HiSoy	50	HS 41E20	74.1	12.3	54.8	\$987.75
Dyna-Gro	51	S41EN72	74.0	12.3	55.1	\$986.42
FS HiSoy	52	HS 47E32	73.9	12.7	56.1	\$985.09
Mid-Atlantic Seeds	53	MAS4623E3	73.2	12.6	56.4	\$975.76
Mid-Atlantic Seeds	54	MAS4021E3	73.1	13.0	55.0	\$974.42

USG	55	4824V	72.7	11.8	55.9	\$969.09
Innvictis Seed	56	B4603E	72.6	12.6	56.3	\$967.76
Xitavo	57	XO 4894E	72.2	12.5	55.8	\$962.43
Xitavo	58	XO 4772E	72.2	12.5	55.6	\$962.43
FS HiSoy	59	HS 39E30	72.0	12.6	55.2	\$959.76
Revere	60	RV3908XFS	71.6	12.5	54.1	\$954.43
USG	61	7472XFS	71.1	12.4	55.7	\$947.76
Mid-Atlantic Seeds	62	MAS4320E3/STS	71.1	12.0	55.6	\$947.76
Innvictis Seed	63	B5013E	70.5	12.7	55.6	\$939.77
Perdue	64	P48MO21	70.3	12.5	56.8	\$937.10
Southern Harvest	65	SH 4622E3	70.0	12.5	54.6	\$933.10
Perdue	66	P41IMO21	69.7	12.1	56.0	\$929.10
Innvictis Seed	67	A5813XF	69.1	12.7	56.1	\$921.10
Xitavo	68	XO 4048E	69.1	12.0	55.6	\$921.10
FS HiSoy	69	HS 39F32	68.7	12.0	55.9	\$915.77
Southern Harvest	70	SH 5321E3	68.5	12.6	55.8	\$913.11
Mid-Atlantic Seeds	71	MAS3220E3	68.1	12.6	55.4	\$907.77
Mid-Atlantic Seeds	72	MAS4077GT/STS	67.3	12.7	54.9	\$897.11
USG	73	7472ETS	67.2	12.7	55.5	\$895.78
Mid-Atlantic Seeds	74	MAS3600E3/STS	66.4	12.4	55.7	\$885.11
Perdue	75	P41ILO22	65.1	12.6	56.0	\$867.78
Perdue	76	P45XP421	61.5	13.2	56.4	\$819.80
Perdue	77	P30ILO22	60.6	12.5	54.6	\$807.80

Bolded varieties do not statistically differ from top yielding variety

LSD P=.05

9.25

All yield data adjusted to 13.5% moisture

CV

8.86

Mean

75 (bu)

*Gross Income/acre is based off of commodity pricing for dry grain and does not factor in moisture/drying doc

Local Soybean Commodity Pricing as of report - \$13.33

2023 Middletown Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
NK Brand	1	NK48-H3XFS	63.1	11.9	56.2	\$841.12
FS HiSoy	2	HS 43E30	62.9	11.8	55.9	\$838.46
NK Brand	3	NK46-B4XFS	62.2	12.4	56.8	\$829.13
USG	4	4824V	62.2	11.6	57.0	\$829.13
Dyna-Gro	5	S49XF43S	62	11.1	56.8	\$826.46
AGVenture	6	AV47Y6E	60.4	11.8	55.6	\$805.13
NK Brand	7	NK42-A6E3S	59.9	11.5	54.7	\$798.47
AGVenture	8	AV49A1E	59.5	11.1	56.0	\$793.14
Innvictis Seed	9	A4862XF	59.3	12.5	57.0	\$790.47
USG	10	7494ETS	59	12.2	56.5	\$786.47
Mid-Atlantic Seeds	11	MAS4623E3	58.6	11.8	55.4	\$781.14
Revere	12	RV4821XFS	58.4	11.6	55.9	\$778.47
AGVenture	13	AV41Y5E	58.4	11.4	55.9	\$778.47
Xitavo	14	XO 4894E	58.3	12.1	55.8	\$777.14
AGVenture	15	AV46A1E	57.5	11.6	54.9	\$766.48
Revere	16	RV4606XFS	57.4	11.6	56.1	\$765.14
Dyna-Gro	17	S38XF22S	56.9	11.1	56.1	\$758.48
Innvictis Seed	18	A5813XF	56.5	12.3	56.9	\$753.15
Xitavo	19	XO 4772E	56.4	12.0	55.6	\$751.81
USG	20	7394XFS	56.1	12.3	56.6	\$747.81
FS HiSoy	21	HS 41E20	56	11.6	54.9	\$746.48
Revere	22	RV3908XFS	55.9	12.1	55.3	\$745.15
Innotech	23	4545E3S	55.9	12.0	55.5	\$745.15
AGVenture	24	AV39Y3E	55.8	12.4	55.9	\$743.81
USG	25	7514ET	55.2	11.5	56.0	\$735.82
AGVenture	26	AV38A1E	55.1	12.5	55.7	\$734.48

Xitavo	27	XO 3922E	55	12.8	55.0	\$733.15
Mid-Atlantic Seeds	28	MAS3220E3	55	11.7	55.4	\$733.15
Xitavo	29	XO 3803E	54.9	12.1	56.0	\$731.82
Mid-Atlantic Seeds	30	MAS4423E3	54.9	11.1	56.1	\$731.82
Innvictis Seed	31	A4503XF	54.8	11.1	56.1	\$730.48
Mid-Atlantic Seeds	32	MAS4123E3	54.8	12.0	56.1	\$730.48
USG	33	7464ET	54.7	11.5	55.7	\$729.15
USG	34	7434XF	54.4	11.7	57.1	\$725.15
USG	35	7472XFS	54.4	11.9	56.4	\$725.15
Mid-Atlantic Seeds	36	MAS4823E3	54.4	11.4	56.1	\$725.15
USG	37	7474XFS	54	11.8	56.6	\$719.82
FS HiSoy	38	HS 39F32	53.6	12.1	56.2	\$714.49
Perdue	39	P48MO21	53.2	12.4	56.9	\$709.16
Dyna-Gro	40	S47XF23S	53.1	11.3	55.8	\$707.82
Innvictis Seed	41	B5013E	53	11.7	56.1	\$706.49
Innotech	42	4983E3S	52.8	11.7	56.4	\$703.82
Revere	43	RV4299XS	52.4	12.1	56.2	\$698.49
Perdue	44	P41ILO22	51.6	12.4	55.9	\$687.83
Southern Harvest	45	SH 5321E3	51.5	11.5	56.5	\$686.50
Xitavo	46	XO 4132E	51.4	12.4	53.5	\$685.16
FS HiSoy	47	HS 39E30	50.9	11.4	55.6	\$678.50
Perdue	48	P41IMO21	50.8	11.7	54.1	\$677.16
Mid-Atlantic Seeds	49	MAS4320E3/STS	50.8	11.6	55.6	\$677.16
AGVenture	50	AV45Y8E	50.3	12.9	56.8	\$670.50
Seed Consultants	51	SC7462E	50	11.7	56.5	\$666.50
Xitavo	52	XO 4048E	49.4	12.2	56.3	\$658.50
Xitavo	53	XO 4653E	49.3	11.5	54.4	\$657.17
Mid-Atlantic Seeds	54	MAS4021E3	49.3	11.2	55.6	\$657.17

Southern Harvest	55	SH 4024	49.1	12.1	56.6	\$654.50
Dyna-Gro	56	S42XF93S	49	12.1	56.4	\$653.17
Innictis Seed	57	B4603E	48.9	12.0	56.4	\$651.84
Mid-Atlantic Seeds	58	MAS4675E3/STS	48.9	11.5	55.4	\$651.84
Perdue	59	P45XP421	48.8	12.9	56.8	\$650.50
Mid-Atlantic Seeds	60	MAS3884GT/LL	48.7	11.9	56.0	\$649.17
USG	61	7424ETS	48.6	12.0	57.0	\$647.84
FS HiSoy	62	HS 45E32	48.3	12.4	55.7	\$643.84
Southern Harvest	63	SH 5124	48	12.2	56.7	\$639.84
Mid-Atlantic Seeds	64	MAS3600E3/STS	47.8	12.4	56.0	\$637.17
Innictis Seed	65	A3992XF	47.7	11.6	55.2	\$635.84
Seed Consultants	66	SC7444E	46.9	12.0	55.8	\$625.18
Perdue	67	P30ILO22	46.7	11.4	55.2	\$622.51
AGVenture	68	AV42A1E	46.6	12.1	55.2	\$621.18
USG	69	7472ETS	46.4	11.6	55.8	\$618.51
Xitavo	70	XO 4364E	46.1	12.9	56.8	\$614.51
Southern Harvest	71	SH 4622E3	45.6	12.5	56.1	\$607.85
Dyna-Gro	72	S41EN72	45.2	12.2	54.7	\$602.52
Mid-Atlantic Seeds	73	MAS4723E3/STS	45.1	12.0	56.1	\$601.18
Dyna-Gro	74	S48EN73	44.6	12.4	56.5	\$594.52
Mid-Atlantic Seeds	75	MAS4077GT/STS	44.5	12.4	55.8	\$593.19
FS HiSoy	76	HS 47E32	43.2	11.9	56.2	\$575.86
Xitavo	77	XO 4522E	42.7	12.0	55.0	\$569.19

Bolded varieties do not statistically differ from top yielding variety

LSD P=.05

12.74

All yield data adjusted to 13.5% moisture

CV

11.19

Mean

52.87 (bu)

*Gross Income/acre is based off of commodity pricing for dry grain and does not factor in moisture/drying doc

Local Soybean Commodity Pricing as of report - \$13.33

2023 Kent Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Seed Consultants	1	SC7444E	92.2	13.3	55.4	\$1,229.03
Southern Harvest	2	SH 5124	89.2	13.7	54.9	\$1,189.04
Xitavo	3	XO 4132E	88.1	13.4	54.6	\$1,174.37
NK Brand	4	NK48-H3XFS	87.3	13.1	55.6	\$1,163.71
USG	5	7474XFS	87.3	13.5	54.8	\$1,163.71
Mid-Atlantic Seeds	6	MAS4021E3	87.2	12.5	54.2	\$1,162.38
Dyna-Gro	7	S47XF23S	87.1	12.8	55.2	\$1,161.04
Revere	8	RV4606XFS	86.9	14.2	55.3	\$1,158.38
AGVenture	9	AV42A1E	86.8	14.5	54.4	\$1,157.04
Xitavo	10	XO 3922E	86.6	14.1	55.0	\$1,154.38
USG	11	7464ET	86.3	13.0	56.2	\$1,150.38
FS HiSoy	12	HS 39E30	86.3	13.8	54.6	\$1,150.38
Xitavo	13	XO 4522E	86.2	13.6	54.8	\$1,149.05
USG	14	7394XFS	86.1	14.4	55.5	\$1,147.71
Innvictis Seed	15	A4503XF	85.7	14.3	55.5	\$1,142.38
AGVenture	16	AV46A1E	85.4	13.3	55.3	\$1,138.38
Innvictis Seed	17	B5013E	84.9	13.1	54.9	\$1,131.72
NK Brand	18	NK46-B4XFS	84.6	13.7	55.1	\$1,127.72
Mid-Atlantic Seeds	19	MAS4675E3/STS	84.3	13.9	55.4	\$1,123.72
Seed Consultants	20	SC7462E	84.1	14.7	57.0	\$1,121.05
Dyna-Gro	21	S41EN72	83.8	14.4	54.4	\$1,117.05
NK Brand	22	NK42-A6E3S	83.6	14.5	54.4	\$1,114.39
Revere	23	RV4299XS	83.5	13.2	54.9	\$1,113.06
Xitavo	24	XO 4048E	83.4	12.7	53.7	\$1,111.72
USG	25	7494ETS	82.6	13.6	55.2	\$1,101.06
Innvictis Seed	26	B4603E	82.3	12.4	55.0	\$1,097.06

Innvictis Seed	27	A4862XF	82.3	15.5	54.9	\$1,097.06
Dyna-Gro	28	S49XF43S	82.1	14.2	55.3	\$1,094.39
USG	29	7472ETS	82.1	13.3	55.1	\$1,094.39
FS HiSoy	30	HS 41E20	82.1	13.3	54.8	\$1,094.39
Mid-Atlantic Seeds	31	MAS4123E3	81.8	14.5	55.1	\$1,090.39
FS HiSoy	32	HS 45E32	81.7	14.4	56.0	\$1,089.06
Southern Harvest	33	SH 4622E3	81.3	13.6	55.0	\$1,083.73
AGVenture	34	AV38A1E	81.3	13.4	54.5	\$1,083.73
Innvictis Seed	35	A5813XF	80.5	14.2	55.5	\$1,073.07
FS HiSoy	36	HS 43E30	80.1	13.1	56.3	\$1,067.73
Xitavo	37	XO 4894E	80.0	14.2	54.0	\$1,066.40
Revere	38	RV3908XFS	80.0	12.6	52.8	\$1,066.40
AGVenture	39	AV45Y8E	80.0	14.0	56.4	\$1,066.40
Mid-Atlantic Seeds	40	MAS4623E3	79.9	13.1	55.4	\$1,065.07
Dyna-Gro	41	S48EN73	79.8	13.3	55.3	\$1,063.73
Mid-Atlantic Seeds	42	MAS4077GT/STS	79.8	14.5	54.7	\$1,063.73
Innotech	43	4983E3S	79.3	13.8	55.3	\$1,057.07
AGVenture	44	AV47Y6E	79.1	14.7	56.2	\$1,054.40
USG	45	7472XFS	78.9	13.8	56.1	\$1,051.74
Perdue	46	P41ILO22	78.9	14.1	54.8	\$1,051.74
Dyna-Gro	47	S38XF22S	78.6	14.8	55.9	\$1,047.74
Mid-Atlantic Seeds	48	MAS4320E3/STS	78.3	15.7	55.8	\$1,043.74
Innvictis Seed	49	A3992XF	78.2	12.8	54.3	\$1,042.41
Mid-Atlantic Seeds	50	MAS4823E3	78.2	13.1	54.9	\$1,042.41
Innotech	51	4545E3S	78.0	14.3	54.9	\$1,039.74
Mid-Atlantic Seeds	52	MAS3884GT/LL	78.0	13.3	54.7	\$1,039.74
Xitavo	53	XO 4772E	77.9	14.2	53.4	\$1,038.41
AGVenture	54	AV41Y5E	77.6	14.7	55.1	\$1,034.41

Mid-Atlantic Seeds	55	MAS4723E3/STS	77.5	14.4	54.7	\$1,033.08
USG	56	7434XF	77.3	13.6	55.8	\$1,030.41
USG	57	4824V	76.8	13.1	55.5	\$1,023.74
USG	58	7424ETS	76.3	13.5	55.5	\$1,017.08
Xitavo	59	XO 4364E	75.8	13.1	55.9	\$1,010.41
AGVenture	60	AV49A1E	75.5	12.8	55.6	\$1,006.42
Xitavo	61	XO 4653E	75.3	12.8	55.4	\$1,003.75
Mid-Atlantic Seeds	62	MAS3600E3/STS	75.3	14.8	54.8	\$1,003.75
Xitavo	63	XO 3803E	74.8	14.5	54.5	\$997.08
Mid-Atlantic Seeds	64	MAS4423E3	74.7	13.4	56.0	\$995.75
FS HiSoy	65	HS 47E32	74.6	14.5	55.1	\$994.42
Southern Harvest	66	SH 4024	74.5	13.4	55.4	\$993.09
FS HiSoy	67	HS 39F32	73.6	14.3	55.2	\$981.09
USG	68	7514ET	73.5	15.1	55.6	\$979.76
AGVenture	69	AV39Y3E	72.3	13.9	55.2	\$963.76
Mid-Atlantic Seeds	70	MAS3220E3	72.0	13.6	54.2	\$959.76
Dyna-Gro	71	S42XF93S	71.5	13.4	55.4	\$953.10
Revere	72	RV4821XFS	69.1	13.5	54.3	\$921.10
Perdue	73	P48MO21	67.5	13.3	55.3	\$899.78
Perdue	74	P41IMO21	67.1	13.6	53.8	\$894.44
Perdue	75	P30ILO22	62.5	13.0	54.4	\$833.13
Perdue	76	P45XP421	61.3	15.1	55.4	\$817.13
Southern Harvest	77	SH 5321E3	60.9	15.8	55.4	\$811.80

Bolded varieties do not statistically differ from top yielding variety

LSD P=.05

13.03

All yield data adjusted to 13.5% moisture

CV

10.75

Mean

79.6 (bu)

*Gross Income/acre is based off of commodity pricing for dry grain and does not factor in moisture/drying doc

Local Soybean Commodity Pricing as of report - \$13.33

Varietal Seed Emergence/Vigor Ratings

<u>Brand</u>	<u>Variety</u>	<u>Georgetown</u>	<u>Dagsboro</u>	<u>Middletown</u>	<u>Kent</u>	<u>4 Trial Average</u>
AGVenture	AV49A1E	3.3	3.5	3.8	3.3	3.5
AGVenture	AV38A1E	3.8	3.5	3.5	3.8	3.7
AGVenture	AV39Y3E	3.8	3.5	3.5	3.5	3.6
AGVenture	AV47Y6E	3.8	3.8	3.8	3.8	3.8
AGVenture	AV42A1E	3.5	3.5	3.0	4.0	3.5
AGVenture	AV41Y5E	3.8	3.8	3.8	3.5	3.7
AGVenture	AV45Y8E	3.5	3.8	3.3	4.0	3.7
AGVenture	AV46A1E	3.8	4.0	3.8	4.0	3.9
Dyna-Gro	S41EN72	3.5	3.5	3.0	3.8	3.5
Dyna-Gro	S42XF93S	3.8	4.0	3.3	3.5	3.7
Dyna-Gro	S38XF22S	3.8	3.5	3.5	3.5	3.6
Dyna-Gro	S48EN73	3.5	3.8	3.0	3.5	3.5
Dyna-Gro	S47XF23S	4.0	3.8	3.5	3.8	3.8
Dyna-Gro	S49XF43S	4.0	4.0	3.8	3.8	3.9
FS HiSoy	HS 45E32	3.8	3.8	3.3	3.8	3.7
FS HiSoy	HS 47E32	3.8	3.3	3.3	3.5	3.5
FS HiSoy	HS 43E30	4.0	3.8	3.8	3.8	3.9
FS HiSoy	HS 41E20	3.5	3.3	3.5	4.0	3.6
FS HiSoy	HS 39E30	3.5	3.3	3.5	4.0	3.6
FS HiSoy	HS 39F32	3.5	3.3	3.5	3.5	3.5
Innotech	4983E3S	3.8	3.3	3.5	3.8	3.6

Innotech	4545E3S	3.8	3.3	3.5	3.5	3.5
Innvictis Seed	A4503XF	4.0	3.5	3.5	4.0	3.8
Innvictis Seed	B4603E	3.5	3.3	3.3	3.8	3.5
Innvictis Seed	B5013E	3.8	3.5	3.3	3.8	3.6
Innvictis Seed	A4862XF	3.5	3.8	3.5	3.8	3.7
Innvictis Seed	A3992XF	3.5	3.8	3.3	3.5	3.5
Innvictis Seed	A5813XF	3.3	3.3	3.5	3.8	3.5
Mid-Atlantic Seed	MAS4423E3	3.3	3.3	3.3	3.3	3.3
Mid-Atlantic Seed	MAS4021E3	3.3	3.3	3.0	4.0	3.4
Mid-Atlantic Seed	MAS4675E3/STS	3.3	3.0	2.8	3.8	3.2
Mid-Atlantic Seed	MAS3600E3/STS	3.3	3.3	3.0	3.3	3.2
Mid-Atlantic Seed	MAS4123E3	4.0	3.5	3.0	3.8	3.6
Mid-Atlantic Seed	MAS3884GT/LL	3.5	3.8	3.0	3.5	3.5
Mid-Atlantic Seed	MAS4723E3/STS	3.0	3.8	2.8	3.5	3.3
Mid-Atlantic Seed	MAS4320E3/STS	3.3	3.3	3.3	3.5	3.4
Mid-Atlantic Seed	MAS4823E3	3.5	3.8	3.3	3.3	3.5
Mid-Atlantic Seed	MAS4077GT/STS	4.0	3.3	2.8	3.5	3.4
Mid-Atlantic Seed	MAS3220E3	3.0	3.3	3.5	3.0	3.2
Mid-Atlantic Seed	MAS4623E3	4.0	3.5	3.5	3.5	3.6
NK Brand	NK48-H3XFS	4.0	4.0	4.0	4.0	4.0
NK Brand	NK46-B4XFS	4.0	4.0	4.0	4.0	4.0
NK Brand	NK42-A6E3S	3.8	4.0	3.8	3.8	3.9
Perdue	P30ILO22	2.8	3.0	3.3	3.0	3.0

Perdue	P41ILO22	3.0	3.3	3.5	3.5	3.3
Perdue	P41IMO21	3.0	3.3	3.5	3.3	3.3
Perdue	P45XP421	2.8	3.3	3.3	3.0	3.1
Perdue	P48MO21	3.3	3.5	3.5	3.5	3.5
Revere	RV4821XFS	3.8	3.5	3.5	3.3	3.5
Revere	RV4299XS	4.0	3.5	3.5	4.0	3.8
Revere	RV4606XFS	3.8	3.8	3.5	4.0	3.8
Revere	RV3908XFS	3.8	3.5	3.5	3.8	3.7
Seed Consultants	SC7444E	4.0	4.0	3.5	4.0	3.9
Seed Consultants	SC7462E	3.3	3.8	3.3	3.8	3.6
Southern Harvest	SH 5321E3	3.3	3.5	3.5	3.3	3.4
Southern Harvest	SH 4622E3	3.5	3.5	3.0	3.8	3.5
Southern Harvest	SH 5124	3.3	3.5	3.3	4.0	3.5
Southern Harvest	SH 4024	3.5	3.8	3.3	3.3	3.5
USG	7494ETS	3.3	3.8	3.8	3.8	3.7
USG	7434XF	3.3	3.5	3.0	3.5	3.3
USG	7514ET	3.0	3.5	3.5	3.0	3.3
USG	7474XFS	3.5	3.5	3.3	4.0	3.6
USG	7394XFS	3.3	3.5	3.5	4.0	3.6
USG	7464ET	3.3	3.8	3.5	4.0	3.7
USG	7472XFS	3.0	3.3	3.3	3.3	3.2
USG	7424ETS	3.3	3.5	3.0	3.3	3.3
USG	7472ETS	4.0	3.5	3.0	3.8	3.6

USG	4824V	3.5	3.3	3.8	3.3	3.5
Xitavo	XO 4894E	3.3	3.5	3.5	3.5	3.5
Xitavo	XO 4772E	3.3	3.5	3.5	3.5	3.5
Xitavo	XO 4048E	3.8	3.5	3.0	3.8	3.5
Xitavo	XO 4364E	4.0	3.5	2.8	3.5	3.5
Xitavo	XO 3922E	3.3	3.5	3.3	4.0	3.5
Xitavo	XO 4132E	3.5	4.0	3.3	4.0	3.7
Xitavo	XO 4522E	3.5	4.0	2.8	4.0	3.6
Xitavo	XO 4653E	3.8	3.5	3.0	3.5	3.5
Xitavo	XO 3803E	4.0	4.0	3.3	3.3	3.7

All variety replications were given a seed emergence/vigor rating that was then averaged for each location. The location ratings were then averaged to give a state wide rating.

Seed Emergence/ Vigor Rating Scale

1= Poor Emergence, Poor Vigor

2= Delayed/Moderate Emergence, Moderate Vigor

3= Good Emergence, Good Vigor

4= Excellent Emergence, High Vigor