



# Delaware Soybean Variety Trials 2022

Gunnar Isaacs  
Research Associate  
Variety Testing

Carvel Research and Education Center  
16483 County Seat Highway  
Georgetown, DE 19947



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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, Robbie Emerson of Emerson Farms in Middletown and Allen Garey of Garey Farms.

I would like to personally thank Buddy Willey, George Petitgout, Warren Willey, Ward Harris and Brian Hearn of our Carvel Farm Staff for their assistance in planting, harvesting, and 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.

## 2022 Delaware Soybean Variety Trial Entries

<b><u>Brand</u></b>	<b><u>Variety</u></b>	<b><u>Traits</u></b>	<b><u>Seed Treatment</u></b>	<b><u>Maturity</u></b>
AGVenture	AV47Y6E	Enlist E3		4.7
AGVenture	AV39Y3E	Enlist E3		3.9
AGVenture	AV41Y5E	Enlist E3		4.1
AGVenture	AV45Y8E	Enlist E3		4.5
Dyna-Gro	S48XF61S	XtendFlex/STS	Equity VIP/Saltro Vayantis	4.8
Dyna-Gro	S46ES91	Enlist E3/STS	Equity VIP/Saltro Vayantis	4.6
Dyna-Gro	S41EN72	Enlist E3	Equity VIP/Saltro Vayantis	4.1
Dyna-Gro	S45ES10	Enlist E3/STS	Equity VIP/Saltro Vayantis	4.5
Dyna-Gro	S48EN02	Enlist E3	Equity VIP/Saltro Vayantis	4.8
Dyna-Gro	S46XF31S	XtendFlex/STS	Equity VIP/Saltro Vayantis	4.6
Dyna-Gro	S42XF93S	XtendFlex/STS	Equity VIP/Saltro Vayantis	4.2
Dyna-Gro	S48EN73	Enlist E3	Equity VIP/Saltro Vayantis	4.8
Dyna-Gro	S47XF23S	XtendFlex/STS	Equity VIP/Saltro Vayantis	4.7
FS HiSoy	HS 50E21	Enlist E3	CruiserMaxx, Vibrance	5
FS HiSoy	HS 47E90	Enlist E3	CruiserMaxx, Vibrance	4.7
FS HiSoy	HS 41E20	Enlist E3	CruiserMaxx, Vibrance	4.1
FS HiSoy	HS 39E80	Enlist E3	CruiserMaxx, Vibrance	3.9
FS HiSoy	HS 46E92	Enlist E3	CruiserMaxx, Vibrance	4.6
FS HiSoy	HS 43E00	Enlist E3	CruiserMaxx, Vibrance	4.3
Innvictus Seed	A4662XF	XtendFlex		4.6
Innvictus Seed	B4112E	Enlist		4.1
Mid-Atlantic Seeds	MAS4721E3/STS	Enlist E3/STS		4.7
Mid-Atlantic Seeds	MAS3600E3/STS	Enlist E3/STS		3.6
Mid-Atlantic Seeds	MAS3884GT/LL	Enlist E3/GTLL		3.8
Mid-Atlantic Seeds	MAS4622E3			4.6
Mid-Atlantic Seeds	MAS4822E3			4.8
Mid-Atlantic Seeds	MAS4675E3STS	Enlist E3/STS		4.6
Mid-Atlantic Seeds	MAS4021E3	Enlist E3		4
Mid-Atlantic Seeds	MAS4320E31STS	Enlist E3/STS		4.3
Mid-Atlantic Seeds	MAS3022E3/STS			3.1

Mid-Atlantic Seeds	MAS3822E3/STS			3.9
MorSoy	MS 4640XF	XtendFlex	Avicta Complete/Inoculant	4.6
MorSoy	MS 5110E	Enlist	Avicta Complete/Inoculant	5.1
MorSoy	MS 5461E	Enlist	Avicta Complete/Inoculant	5.4
MorSoy	MS 5640XF	XtendFlex	Avicta Complete/Inoculant	5.6
MorSoy	MS 4852 XF	XtendFlex	Avicta Complete/Inoculant	4.8
NK Brand	NK43-P7E3S	Enlist E3	CruiserMaxx/Vibrance/Saltro	4.3
NK Brand	NK48-H3XFS	XtendFlex	CruiserMaxx/Vibrance/Saltro	4.8
Perdue	P41MO21	High Oleic		4.1
Perdue	P45XP421	High Oleic		4.5
Perdue	P48MO21	Hi-Protein		4.8
Perdue	P41ILO22	Non-GMO		4.1
Seed Consultants	SC7481E	Enlist	LumiGen/Ilevo	4.8
Seed Consultants	SC7462E	Enlist	LumiGen/Ilevo	4.6
Seed Consultants	SC7472E	Enlist	LumiGen/Ilevo	4.7
Seed Consultants	SC7421E	Enlist	LumiGen/Ilevo	4.2
Seed Consultants	SC7390E	Enlist	LumiGen/Ilevo	3.9
Seed Consultants	SC7412E	Enlist	LumiGen/Ilevo	4.1
Southern Harvest	SH 5223	Enlist E3	Maximize	5.2
Southern Harvest	SH 4622	Enlist E3	Maximize	4.6
Southern Harvest	SH 4022	Enlist E3	Maximize	4
Southern Harvest	SH 5523	Enlist E3	Maximize	5.5
USG	7392XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	3.9
USG	7461XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.6
USG	7420ETS	Enlist/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.2
USG	7431ET	Enlist	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.3
USG	7463XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.6
USG	7429ET	Enlist	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.2
USG	7472XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.7
USG	7461XTS	Xtend/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.6
USG	7472ETS	Enlist/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.7
USG	7451ET	Enlist	Ipconazole/Carboxin Metalaxyl Imidicloprid	4.5
USG	7353XFS	XtendFlex/STS	Ipconazole/Carboxin Metalaxyl Imidicloprid	3.5

Xitavo	XO 3922E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	3.9
Xitavo	XO 4772E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	4.7
Xitavo	XO 4522E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	4.5
Xitavo	XO 4371E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	4.3
Xitavo	XO 4132E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	4.1
Xitavo	XO 3861E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	3.8
Xitavo	XO 3803E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	3.8
Xitavo	XO 4653E	Enlist E3	Poncho Votivo, Ilevo, Obvius Plus	4.6

	<b>Carvel Rec - Georgetown</b>	<b>Emerson Farms - Middletown</b>
<b>Number of Entries</b>	71	71
<b>Target Population</b>	150,000 seeds/acre	150,000 seeds/acre
<b>Plot Length</b>	17 ft	17 ft
<b>Plot Width</b>	7.5 ft (3 rows harvested)	7.5 ft (3 rows harvested)
<b>Spacing</b>	4 rows, 30 inch	4 rows, 30 inch
<b>Planter</b>	SRES Monosem Air Planter	SRES Monosem Air Planter
<b>Harvester</b>	Almaco R1 combine	Almaco R1 combine
<b>Grain Analysis</b>	Harvest Master H2 Classic	Harvest Master H2 Classic
<b>Number of Replications</b>	4	4
<b>Planting Date</b>	5/26/2022	5/31/2022
<b>Harvest Date</b>	11/6/2022	11/9/2022
<b>Soil Type</b>	Pepperbox/Rosedale Loamy sand	Reybold- Queponco complex- Silt Loam
<b>Previous Crop</b>	corn	corn
<b>Tillage Practices</b>	deep tillage(ripped), turbo tilled	disc
<b>Fertilization</b>	300lb/acre of 0-0-60 before planting, (180lb/acre of potash)	none
<b>Herbicide</b>	(Trivence 7oz/acre, Dual 1.5pt/acre) on 5/18 (Reflex 1.5pt/acre, Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 7/4	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 5/31 (Reflex 1.5pt/acre, Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 7/4
<b>Insecticide/Fungicide</b>	Warrior 2oz/acre 7/4	Warrior 2oz/acre on 7/4
<b>Irrigation</b>	Linear Irrigation	Dryland (none)

	<b>Murray Brothers Farm - Selbyville</b>	<b>Gary Farms - Kent</b>
<b>Number of Entries</b>	71	71
<b>Target Population</b>	150,000 seeds/acre	150,000 seeds/acre
<b>Plot Length</b>	17 ft	17 ft
<b>Plot Width</b>	7.5 ft (3 rows harvested)	7.5 ft (3 rows harvested)
<b>Spacing</b>	4 rows, 30 inch	4 rows, 30 inch
<b>Planter</b>	SRES Monosem Air Planter	SRES Monosem Air Planter
<b>Harvester</b>	Almaco R1 combine	Almaco R1 combine
<b>Grain Analysis</b>	Harvest Master H2 Classic	Harvest Master H2 Classic
<b>Number of Replications</b>	4	4
<b>Planting Date</b>	6/8/2022	7/6/2022
<b>Harvest Date</b>	11/7/2022	11/8/2022
<b>Soil Type</b>	Mullica-Berryland Complex	Glassboro Sandy Loam
<b>Previous Crop</b>	corn	wheat
<b>Tillage Practices</b>	turbo tilled	no-till
<b>Fertilization</b>	none	none
<b>Herbicide</b>	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 6/8 (Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 7/11	(Round-up 1qt/acre, Liberty 1qt/acre, Canopy 5oz/acre, Dual 1.5 pt/acre) on 7/6 (Anthem Maxx 3.25oz/acre, Clethodim 1pt/acre) on 8/10
<b>Insecticide/Fungicide</b>	Warrior 2oz/acre on 7/11	Warrior 2oz/acre on 8/10
<b>Irrigation</b>	Dryland (none)	Center Pivot

## 2022 Georgetown Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture (Harvest)</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Xitavo	1	<b>XO 3922E</b>	83.9	15.3	54.1	\$1,203.97
Dyna-Gro	2	<b>S41EN72</b>	81.0	15.1	54.5	\$1,162.35
Seed Consultants	3	<b>SC7472E</b>	80.9	15.2	55.8	\$1,160.92
Mid-Atlantic Seeds	4	<b>MAS4822E3</b>	79.5	15.5	54.7	\$1,140.83
Xitavo	5	<b>XO 4772E</b>	79.2	15.5	54.7	\$1,136.52
Dyna-Gro	6	<b>S46XF31S</b>	79.0	14.5	54.9	\$1,133.65
NK Brand	7	<b>NK48-H3XFS</b>	78.7	15.4	54.9	\$1,129.35
USG	8	<b>7461XFS</b>	78.4	14.7	55.4	\$1,125.04
Mid-Atlantic Seeds	9	<b>MAS3822E3/STS</b>	78.0	15.0	55.3	\$1,119.30
Xitavo	10	<b>XO 4522E</b>	77.9	15.2	54.1	\$1,117.87
Invictus Seed	11	<b>A4662XF</b>	77.9	15.5	55.4	\$1,117.87
Seed Consultants	12	<b>SC7421E</b>	77.8	14.8	54.7	\$1,116.43
Mid-Atlantic Seeds	13	<b>MAS4675E3STS</b>	77.7	15.2	53.2	\$1,115.00
Dyna-Gro	14	<b>S42XF93S</b>	77.6	14.9	55.6	\$1,113.56
Mid-Atlantic Seeds	15	<b>MAS4320E31STS</b>	76.9	14.8	55.1	\$1,103.52
Seed Consultants	16	<b>SC7462E</b>	76.0	15.3	55.8	\$1,090.60
FS HiSoy	17	<b>HS 47E90</b>	76.0	15.0	55.1	\$1,090.60
NK Brand	18	<b>NK43-P7E3S</b>	75.8	15.2	52.9	\$1,087.73
AGVenture	19	<b>AV47Y6E</b>	75.6	15.3	56.6	\$1,084.86
Dyna-Gro	20	<b>S45ES10</b>	75.3	15.2	55.7	\$1,080.56
MorSoy	21	<b>MS 5461E</b>	75.2	15.3	54.2	\$1,079.12
Xitavo	22	<b>XO 4132E</b>	75.1	15.2	54.1	\$1,077.69
Dyna-Gro	23	<b>S48EN02</b>	75.0	15.3	55.4	\$1,076.25
USG	24	<b>7353XFS</b>	75.0	15.4	54.4	\$1,076.25
Mid-Atlantic Seeds	25	<b>MAS4721E3/STS</b>	75.0	15.4	55.0	\$1,076.25
USG	26	<b>7463XFS</b>	74.8	15.0	55.1	\$1,073.38

USG	27	<b>7451ET</b>	74.7	15.0	53.3	\$1,071.95
MorSoy	28	<b>MS 4640XF</b>	74.1	15.1	55.1	\$1,063.34
MorSoy	29	<b>MS 5110E</b>	74.1	15.6	55.1	\$1,063.34
Xitavo	30	<b>XO 3803E</b>	74.0	14.9	54.6	\$1,061.90
Seed Consultants	31	<b>SC7481E</b>	73.8	14.6	54.3	\$1,059.03
AGVenture	32	AV39Y3E	73.3	15.1	53.7	\$1,051.86
MorSoy	33	MS 4852 XF	73.2	14.9	54.2	\$1,050.42
Dyna-Gro	34	S48XF61S	73.1	14.3	54.1	\$1,048.99
Xitavo	35	XO 4653E	72.8	15.3	55.9	\$1,044.68
AGVenture	36	AV41Y5E	72.4	14.7	55.0	\$1,038.94
Dyna-Gro	37	S48EN73	72.3	15.2	54.9	\$1,037.51
Perdue	38	P48MO21	71.9	15.3	55.1	\$1,031.77
Dyna-Gro	39	S47XF23S	71.5	15.0	54.5	\$1,026.03
AGVenture	40	AV45Y8E	71.3	15.1	56.1	\$1,023.16
Innictus Seed	41	B4112E	71.1	15.4	54.8	\$1,020.29
Mid-Atlantic Seeds	42	MAS3884GT/LL	70.5	15.2	56.1	\$1,011.68
FS HiSoy	43	HS 46E92	70.1	15.7	54.7	\$1,005.94
USG	44	7431ET	69.9	15.3	54.6	\$1,003.07
Mid-Atlantic Seeds	45	MAS4021E3	69.7	15.1	54.1	\$1,000.20
Southern Harvest	46	SH 4022	69.6	14.8	53.8	\$998.76
USG	47	7420ETS	69.1	15.0	55.1	\$991.59
USG	48	7472XFS	69.1	15.5	56.7	\$991.59
Dyna-Gro	49	S46ES91	69.0	15.3	55.1	\$990.15
USG	50	7461XTS	68.5	15.4	55.6	\$982.98
Seed Consultants	51	SC7412E	68.2	14.7	54.8	\$978.67
MorSoy	52	MS 5640XF	68.1	15.2	57.1	\$977.24
Xitavo	53	XO 4371E	67.9	15.1	55.1	\$974.37
FS HiSoy	54	HS 50E21	67.8	15.0	55.2	\$972.93

Southern Harvest	55	SH 5523	67.5	15.6	55.4	\$968.63
Mid-Atlantic Seeds	56	MAS4622E3	67.2	15.2	54.8	\$964.32
FS HiSoy	57	HS 43E00	66.9	15.1	55.0	\$960.02
Mid-Atlantic Seeds	58	MAS3600E3/STS	66.6	15.1	54.8	\$955.71
USG	59	7472ETS	66.2	15.0	54.6	\$949.97
USG	60	7392XFS	65.8	15.1	54.1	\$944.23
Perdue	61	P45XP421	65.3	16.6	57.6	\$937.06
Seed Consultants	62	SC7390E	65.2	15.3	55.4	\$935.62
Southern Harvest	63	SH 5223	65.0	15.2	56.1	\$932.75
Xitavo	64	XO 3861E	64.6	14.6	54.0	\$927.01
USG	65	7429ET	62.9	15.1	56.1	\$902.62
FS HiSoy	66	HS 39E80	62.1	15.1	53.5	\$891.14
FS HiSoy	67	HS 41E20	61.2	14.6	54.3	\$878.22
Mid-Atlantic Seeds	68	MAS3022E3/STS	60.3	14.5	52.5	\$865.31
Perdue	69	P41MO21	58.4	15.2	55.3	\$838.04
Southern Harvest	70	SH 4622	57.3	14.9	55.1	\$822.26
Perdue	71	P41ILO22	54.5	15.3	55.6	\$782.08

**Bolded varieties do not statistically differ from top yielding variety** LSD P=.05 10.13

All yield data adjusted to 13.5% moisture CV 10

Mean 71.6

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

Local Soybean Commodity Pricing - \$14.35

## 2022 Selbyville Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture (Harvest)</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Dyna-Gro	1	<b>S48EN02</b>	75.0	15.3	57.0	\$1,076.25
USG	2	<b>7472XFS</b>	73.5	15.5	56.8	\$1,054.73
Dyna-Gro	3	<b>S48XF61S</b>	71.2	14.7	56.6	\$1,021.72
Southern Harvest	4	<b>SH 4022</b>	71.1	14.8	56.4	\$1,020.29
Innictus Seed	5	<b>A4662XF</b>	70.3	15.0	57.1	\$1,008.81
Xitavo	6	<b>XO 4522E</b>	69.5	15.2	56.1	\$997.33
Seed Consultants	7	<b>SC7462E</b>	69.4	15.6	57.5	\$995.89
Xitavo	8	<b>XO 3803E</b>	68.9	15.4	57.2	\$988.72
Seed Consultants	9	<b>SC7412E</b>	68.4	15.4	56.6	\$981.54
Mid-Atlantic Seeds	10	<b>MAS3884GT/LL</b>	67.7	15.6	57.5	\$971.50
USG	11	<b>7429ET</b>	66.8	15.4	57.4	\$958.58
Xitavo	12	<b>XO 4132E</b>	66.7	14.9	56.3	\$957.15
Dyna-Gro	13	<b>S47XF23S</b>	66.4	15.3	56.6	\$952.84
USG	14	<b>7392XFS</b>	65.8	15.4	56.2	\$944.23
NK Brand	15	<b>NK48-H3XFS</b>	65.3	15.7	57.3	\$937.06
AGVenture	16	<b>AV45Y8E</b>	65.0	15.8	57.8	\$932.75
AGVenture	17	<b>AV47Y6E</b>	64.7	15.2	58.0	\$928.45
Dyna-Gro	18	<b>S41EN72</b>	64.6	15.4	56.4	\$927.01
Xitavo	19	<b>XO 4772E</b>	64.5	15.5	56.5	\$925.58
USG	20	7461XTS	64.4	16.0	57.0	\$924.14
FS HiSoy	21	HS 47E90	64.3	15.9	57.2	\$922.71
MorSoy	22	MS 4852 XF	63.7	15.1	57.1	\$914.10
USG	23	7451ET	63.4	15.9	56.6	\$909.79
Perdue	24	P41MO21	63.0	15.1	57.0	\$904.05
USG	25	7353XFS	62.8	15.4	56.7	\$901.18
Mid-Atlantic Seeds	26	MAS4622E3	62.8	16.0	56.7	\$901.18

FS HiSoy	27	HS 41E20	62.2	15.4	56.7	\$892.57
Xitavo	28	XO 4371E	62.0	15.2	56.9	\$889.70
Southern Harvest	29	SH 5223	61.8	15.1	57.5	\$886.83
Mid-Atlantic Seeds	30	MAS4721E3/STS	61.8	15.7	57.2	\$886.83
Dyna-Gro	31	S42XF93S	61.4	16.0	56.9	\$881.09
Seed Consultants	32	SC7421E	61.2	15.1	57.1	\$878.22
Xitavo	33	XO 3922E	61.2	15.2	56.9	\$878.22
Dyna-Gro	34	S45ES10	61.1	15.4	57.0	\$876.79
Seed Consultants	35	SC7472E	60.6	16.2	58.0	\$869.61
MorSoy	36	MS 5461E	60.6	15.3	56.6	\$869.61
AGVenture	37	AV41Y5E	60.6	15.4	57.0	\$869.61
NK Brand	38	NK43-P7E3S	60.5	15.8	55.3	\$868.18
Xitavo	39	XO 3861E	60.5	15.5	55.9	\$868.18
Innvictus Seed	40	B4112E	60.5	15.7	56.9	\$868.18
FS HiSoy	41	HS 46E92	60.5	15.5	56.8	\$868.18
Mid-Atlantic Seeds	42	MAS4021E3	60.5	15.6	56.7	\$868.18
Mid-Atlantic Seeds	43	MAS3822E3/STS	60.4	15.1	56.9	\$866.74
USG	44	7420ETS	60.3	15.4	57.3	\$865.31
Seed Consultants	45	SC7481E	60.1	15.7	56.1	\$862.44
MorSoy	46	MS 5640XF	60.1	15.5	57.6	\$862.44
USG	47	7472ETS	59.5	15.1	56.4	\$853.83
Dyna-Gro	48	S46XF31S	58.6	15.2	56.9	\$840.91
Dyna-Gro	49	S46ES91	58.5	15.7	57.0	\$839.48
USG	50	7431ET	58.2	15.2	56.7	\$835.17
AGVenture	51	AV39Y3E	58.2	15.4	56.5	\$835.17
MorSoy	52	MS 4640XF	57.8	15.3	57.1	\$829.43
Mid-Atlantic Seeds	53	MAS3022E3/STS	57.3	15.7	55.4	\$822.26
Perdue	54	P48MO21	56.9	15.7	58.0	\$816.52

Mid-Atlantic Seeds	55	MAS3600E3/STS	56.6	15.5	56.5	\$812.21
FS HiSoy	56	HS 39E80	56.4	15.5	55.4	\$809.34
FS HiSoy	57	HS 43E00	55.6	15.9	56.9	\$797.86
Southern Harvest	58	SH 5523	55.3	16.4	56.0	\$793.56
Dyna-Gro	59	S48EN73	54.9	15.7	57.7	\$787.82
Xitavo	60	XO 4653E	54.8	15.2	57.6	\$786.38
MorSoy	61	MS 5110E	54.7	15.7	57.2	\$784.95
Perdue	62	P41ILO22	54.7	15.6	56.9	\$784.95
Mid-Atlantic Seeds	63	MAS4320E31STS	53.0	15.9	57.5	\$760.55
USG	64	7461XFS	52.7	15.7	57.9	\$756.25
USG	65	7463XFS	52.2	15.8	57.7	\$749.07
Seed Consultants	66	SC7390E	51.4	16.3	57.2	\$737.59
Southern Harvest	67	SH 4622	51.4	15.5	57.0	\$737.59
Mid-Atlantic Seeds	68	MAS4675E3STS	51.0	16.7	58.5	\$731.85
Mid-Atlantic Seeds	69	MAS4822E3	47.5	15.9	57.5	\$681.63
FS HiSoy	70	HS 50E21	47.4	15.8	59.0	\$680.19
Perdue	71	P45XP421	47.2	16.4	59.1	\$677.32

**Bolded varieties do not statistically differ from top yielding variety** LSD P=.05 10.51

All yield data adjusted to 13.5% moisture CV 10.62

Mean 60.8

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

Local Soybean Commodity Pricing - \$14.35

## 2022 Middletown Full Season Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture (Harvest)</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Innventus Seed	1	<b>A4662XF</b>	52.3	11.1	55.7	\$750.51
Seed Consultants	2	<b>SC7472E</b>	46.7	11.2	55.8	\$670.15
NK Brand	3	<b>NK43-P7E3S</b>	45.0	10.5	53.3	\$645.75
MorSoy	4	<b>MS 5461E</b>	44.4	12.7	56.7	\$637.14
Seed Consultants	5	<b>SC7462E</b>	44.0	11.6	56.9	\$631.40
Dyna-Gro	6	<b>S42XF93S</b>	43.8	11.1	55.4	\$628.53
Dyna-Gro	7	<b>S47XF23S</b>	42.6	11.4	55.1	\$611.31
USG	8	<b>7461XTS</b>	42.4	11.6	56.0	\$608.44
MorSoy	9	<b>MS 4640XF</b>	42.4	11.3	56.0	\$608.44
Mid-Atlantic Seeds	10	<b>MAS4021E3</b>	42.3	11.0	55.3	\$607.01
Seed Consultants	11	<b>SC7481E</b>	41.8	11.1	55.0	\$599.83
Xitavo	12	<b>XO 4132E</b>	41.8	10.8	56.0	\$599.83
Dyna-Gro	13	<b>S48EN02</b>	41.7	10.8	53.6	\$598.40
MorSoy	14	<b>MS 5640XF</b>	41.3	11.9	54.4	\$592.66
FS HiSoy	15	<b>HS 41E20</b>	41.3	11.1	55.5	\$592.66
Perdue	16	<b>P41MO21</b>	41.2	10.2	52.8	\$591.22
Dyna-Gro	17	<b>S46XF31S</b>	41.0	11.4	54.4	\$588.35
Dyna-Gro	18	<b>S48XF61S</b>	40.9	11.7	54.4	\$586.92
FS HiSoy	19	<b>HS 39E80</b>	40.7	10.7	54.5	\$584.05
Xitavo	20	XO 4772E	40.4	11.2	55.8	\$579.74
Xitavo	21	XO 4522E	40.4	11.4	55.5	\$579.74
Southern Harvest	22	SH 4622	40.0	11.0	54.2	\$574.00
Perdue	23	P41ILO22	40.0	10.9	55.6	\$574.00
FS HiSoy	24	HS 47E90	39.4	10.9	55.1	\$565.39
Dyna-Gro	25	S41EN72	38.6	10.9	54.0	\$553.91
Southern Harvest	26	SH 4022	38.6	11.1	55.5	\$553.91

NK Brand	27	NK48-H3XFS	38.3	10.7	53.1	\$549.61
FS HiSoy	28	HS 50E21	37.7	12.4	50.4	\$541.00
AGVenture	29	AV45Y8E	37.7	11.0	58.3	\$541.00
Xitavo	30	XO 4653E	37.6	11.1	55.2	\$539.56
Seed Consultants	31	SC7421E	36.9	11.3	55.5	\$529.52
USG	32	7463XFS	36.4	11.4	54.8	\$522.34
Seed Consultants	33	SC7412E	36.1	10.9	55.6	\$518.04
Dyna-Gro	34	S48EN73	36.1	11.6	55.2	\$518.04
AGVenture	35	AV41Y5E	35.6	10.6	54.5	\$510.86
Mid-Atlantic Seeds	36	MAS3822E3/STS	35.2	10.9	55.3	\$505.12
Perdue	37	P48MO21	35.1	10.3	54.5	\$503.69
MorSoy	38	MS 4852 XF	35.1	11.6	54.5	\$503.69
Dyna-Gro	39	S45ES10	35.0	11.0	55.1	\$502.25
USG	40	7472XFS	34.9	11.4	54.7	\$500.82
Southern Harvest	41	SH 5523	34.9	14.0	54.0	\$500.82
USG	42	7461XFS	34.4	11.3	55.1	\$493.64
Mid-Atlantic Seeds	43	MAS4675E3STS	34.0	11.2	50.8	\$487.90
Mid-Atlantic Seeds	44	MAS4822E3	33.9	11.7	55.1	\$486.47
AGVenture	45	AV47Y6E	33.9	11.2	55.3	\$486.47
USG	46	7429ET	33.6	10.5	54.7	\$482.16
Mid-Atlantic Seeds	47	MAS4721E3/STS	33.3	11.3	56.0	\$477.86
USG	48	7451ET	32.9	11.7	56.3	\$472.12
USG	49	7472ETS	32.5	11.3	54.8	\$466.38
Perdue	50	P45XP421	32.0	12.3	54.9	\$459.20
Xitavo	51	XO 3922E	32.0	11.8	53.9	\$459.20
Mid-Atlantic Seeds	52	MAS3600E3/STS	31.5	10.5	54.3	\$452.03
FS HiSoy	53	HS 43E00	31.4	11.3	55.4	\$450.59
AGVenture	54	AV39Y3E	31.3	10.1	52.9	\$449.16

MorSoy	55	MS 5110E	30.8	11.7	56.7	\$441.98
Mid-Atlantic Seeds	56	MAS4320E31STS	30.7	11.0	55.5	\$440.55
USG	57	7431ET	30.2	11.1	55.3	\$433.37
Innvincus Seed	58	B4112E	30.1	11.0	55.2	\$431.94
Mid-Atlantic Seeds	59	MAS4622E3	29.6	11.0	52.1	\$424.76
Southern Harvest	60	SH 5223	29.1	12.4	56.0	\$417.59
Seed Consultants	61	SC7390E	28.8	11.1	54.9	\$413.28
FS HiSoy	62	HS 46E92	28.8	10.9	54.6	\$413.28
USG	63	7353XFS	28.6	10.3	54.0	\$410.41
USG	64	7392XFS	28.2	11.1	54.7	\$404.67
Xitavo	65	XO 3861E	27.7	10.3	53.4	\$397.50
Mid-Atlantic Seeds	66	MAS3884GT/LL	27.1	11.7	55.2	\$388.89
Mid-Atlantic Seeds	67	MAS3022E3/STS	27.1	10.3	53.8	\$388.89
Dyna-Gro	68	S46ES91	27.0	11.4	50.9	\$387.45
Xitavo	69	XO 4371E	26.7	11.1	55.9	\$383.15
USG	70	7420ETS	24.8	10.9	54.9	\$355.88
Xitavo	71	XO 3803E	22.8	10.3	53.3	\$327.18

Bolded varieties do not statistically differ from top yielding variety

LSD P=.05 11.69

All yield data adjusted to 13.5% moisture

CV 11.15

Mean 35.8

Dryland Crop underwent multiple periods of little to no rain

during later growth stages likely resulting in the yield reductions

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

Local Soybean Commodity Pricing - \$14.35

## 2022 Kent Double-Crop Soybean Variety Trial

<u>Brand</u>	<u>Rank</u>	<u>Variety</u>	<u>Yield (Bu)</u>	<u>Moisture (Harvest)</u>	<u>Test Weight</u>	<u>Gross Income/Acre*</u>
Mid-Atlantic Seeds	1	<b>MAS3822E3/STS</b>	65.1	11.7	57.3	\$934.19
USG	2	<b>7353XFS</b>	65.0	12.2	57.5	\$932.75
AGVenture	3	<b>AV41Y5E</b>	63.5	11.2	56.2	\$911.23
Dyna-Gro	4	<b>S47XF23S</b>	63.2	11.6	55.9	\$906.92
Dyna-Gro	5	<b>S48XF61S</b>	62.0	11.9	56.1	\$889.70
Mid-Atlantic Seeds	6	<b>MAS3600E3/STS</b>	61.9	12.0	56.6	\$888.27
NK Brand	7	<b>NK43-P7E3S</b>	61.2	11.7	56.2	\$878.22
Innventus Seed	8	<b>B4112E</b>	60.8	11.7	55.8	\$872.48
Dyna-Gro	9	<b>S42XF93S</b>	60.5	11.9	56.5	\$868.18
FS HiSoy	10	<b>HS 43E00</b>	60.5	11.5	56.9	\$868.18
USG	11	<b>7392XFS</b>	60.2	12.0	56.8	\$863.87
Xitavo	12	<b>XO 4371E</b>	60.2	11.8	56.7	\$863.87
Xitavo	13	<b>XO 3861E</b>	60.1	11.5	56.6	\$862.44
Seed Consultants	14	<b>SC7462E</b>	60.0	12.0	56.2	\$861.00
Xitavo	15	<b>XO 4132E</b>	60.0	11.6	56.8	\$861.00
Innventus Seed	16	<b>A4662XF</b>	59.5	11.7	56.3	\$853.83
Mid-Atlantic Seeds	17	<b>MAS4622E3</b>	59.5	11.6	56.0	\$853.83
FS HiSoy	18	<b>HS 47E90</b>	59.4	11.7	57.1	\$852.39
Xitavo	19	<b>XO 3922E</b>	59.3	12.0	56.7	\$850.96
Dyna-Gro	20	<b>S45ES10</b>	59.2	11.6	56.3	\$849.52
Mid-Atlantic Seeds	21	<b>MAS4721E3/STS</b>	58.9	11.8	56.8	\$845.22
FS HiSoy	22	<b>HS 41E20</b>	58.3	11.7	56.9	\$836.61
Southern Harvest	23	<b>SH 4022</b>	58.2	11.9	56.7	\$835.17
MorSoy	24	<b>MS 4852 XF</b>	57.7	12.1	55.4	\$828.00
Xitavo	25	<b>XO 4522E</b>	57.6	11.3	55.7	\$826.56
Xitavo	26	<b>XO 4653E</b>	57.5	11.7	56.9	\$825.13

Mid-Atlantic Seeds	27	MAS3884GT/LL	57.2	12.0	57.1	\$820.82
USG	28	7429ET	57.0	11.5	56.7	\$817.95
AGVenture	29	AV39Y3E	56.5	11.5	55.7	\$810.78
USG	30	7461XTS	56.4	11.8	56.6	\$809.34
Mid-Atlantic Seeds	31	MAS4320E31STS	56.3	11.8	56.7	\$807.91
Dyna-Gro	32	S41EN72	56.0	11.5	55.8	\$803.60
USG	33	7472XFS	55.4	12.0	56.8	\$794.99
Seed Consultants	34	SC7472E	54.3	11.7	57.3	\$779.21
Seed Consultants	35	SC7390E	54.2	12.0	56.9	\$777.77
Dyna-Gro	36	S46XF31S	53.4	11.6	56.5	\$766.29
USG	37	7472ETS	53.4	11.0	55.0	\$766.29
Seed Consultants	38	SC7412E	53.3	11.5	56.6	\$764.86
Mid-Atlantic Seeds	39	MAS3022E3/STS	53.3	11.6	55.7	\$764.86
Xitavo	40	XO 4772E	53.0	11.3	55.1	\$760.55
USG	41	7420ETS	52.8	12.0	57.1	\$757.68
USG	42	7431ET	52.8	11.7	57.1	\$757.68
FS HiSoy	43	HS 39E80	52.8	11.7	56.1	\$757.68
Xitavo	44	XO 3803E	52.8	11.6	58.0	\$757.68
Mid-Atlantic Seeds	45	MAS4021E3	52.7	11.6	56.4	\$756.25
Dyna-Gro	46	S46ES91	52.6	12.1	56.4	\$754.81
Mid-Atlantic Seeds	47	MAS4675E3STS	52.6	12.0	56.5	\$754.81
USG	48	7463XFS	52.5	11.4	57.6	\$753.38
AGVenture	49	AV47Y6E	52.2	11.7	57.1	\$749.07
Seed Consultants	50	SC7481E	51.6	12.0	57.0	\$740.46
Southern Harvest	51	SH 4622	51.5	11.1	55.6	\$739.03
Seed Consultants	52	SC7421E	51.4	11.8	56.7	\$737.59
AGVenture	53	AV45Y8E	51.4	12.2	57.8	\$737.59
Perdue	54	P41ILO22	51.2	11.8	57.0	\$734.72

MorSoy	55	MS 4640XF	50.9	11.7	56.3	\$730.42
FS HiSoy	56	HS 46E92	50.8	12.0	56.0	\$728.98
FS HiSoy	57	HS 50E21	50.3	11.4	56.0	\$721.81
USG	58	7451ET	49.6	11.8	56.4	\$711.76
NK Brand	59	NK48-H3XFS	49.3	11.3	55.9	\$707.46
Dyna-Gro	60	S48EN73	49.3	11.5	55.9	\$707.46
Perdue	61	P41MO21	49.2	12.1	57.2	\$706.02
USG	62	7461XFS	48.5	11.9	56.8	\$695.98
Southern Harvest	63	SH 5223	47.2	12.1	57.1	\$677.32
MorSoy	64	MS 5110E	47.1	12.2	56.3	\$675.89
Mid-Atlantic Seeds	65	MAS4822E3	47.1	11.3	54.5	\$675.89
Dyna-Gro	66	S48EN02	46.2	11.6	56.1	\$662.97
Perdue	67	P48MO21	45.0	12.3	57.6	\$645.75
Perdue	68	P45XP421	42.5	13.4	57.3	\$609.88
MorSoy	69	MS 5461E	38.5	13.6	55.5	\$552.48
Southern Harvest	70	SH 5523	35.8	14.0	55.0	\$513.73
MorSoy	71	MS 5640XF	29.8	12.6	58.2	\$427.63

**Bolded varieties do not statistically differ from top yielding variety** LSD P=.05

8.05

All yield data adjusted to 13.5% moisture

CV 10.64

Mean 54.2

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

Local Soybean Commodity Pricing - \$14.35

## Varietal Seed Emergence/Vigor Ratings

<u>Brand</u>	<u>Variety</u>	<u>Georgetown</u>	<u>Middletown</u>	<u>Kent</u>	<u>Selbyville</u>	<u>4 Trial Average</u>
AGVenture	AV39Y3E	4.0	3.5	3.5	4.0	<b>3.8</b>
AGVenture	AV41Y5E	4.0	3.5	3.8	3.5	<b>3.7</b>
AGVenture	AV45Y8E	4.0	3.3	3.5	4.0	<b>3.7</b>
AGVenture	AV47Y6E	4.0	3.5	3.5	4.0	<b>3.8</b>
Dyna-Gro	S41EN72	4.0	3.5	3.5	4.0	<b>3.8</b>
Dyna-Gro	S42XF93S	4.0	4.0	4.0	4.0	<b>4.0</b>
Dyna-Gro	S45ES10	4.0	3.3	3.8	3.3	<b>3.6</b>
Dyna-Gro	S46ES91	3.3	3.3	3.5	4.0	<b>3.5</b>
Dyna-Gro	S46XF31S	4.0	4.0	3.8	4.0	<b>4.0</b>
Dyna-Gro	S47XF23S	3.8	3.8	3.8	3.5	<b>3.7</b>
Dyna-Gro	S48EN02	4.0	3.5	3.3	4.0	<b>3.7</b>
Dyna-Gro	S48EN73	3.8	3.5	3.3	3.5	<b>3.5</b>
Dyna-Gro	S48XF61S	3.5	3.8	3.8	3.8	<b>3.7</b>
FS HiSoy	HS 39E80	3.5	3.5	3.0	4.0	<b>3.5</b>
FS HiSoy	HS 41E20	3.5	3.5	3.8	3.8	<b>3.7</b>
FS HiSoy	HS 43E00	3.5	3.3	3.8	3.3	<b>3.5</b>
FS HiSoy	HS 46E92	3.5	3.3	3.0	3.8	<b>3.4</b>
FS HiSoy	HS 47E90	4.0	3.5	3.8	4.0	<b>3.8</b>
FS HiSoy	HS 50E21	3.3	3.0	3.0	4.0	<b>3.3</b>
Innvictus Seed	A4662XF	4.0	4.0	4.0	4.0	<b>4.0</b>
Innvictus Seed	B4112E	3.5	3.3	4.0	3.8	<b>3.7</b>

Mid-Atlantic Seeds	MAS3022E3/STS	3.0	3.0	3.0	4.0	<b>3.3</b>
Mid-Atlantic Seeds	MAS3600E3/STS	3.3	3.0	3.5	3.8	<b>3.4</b>
Mid-Atlantic Seeds	MAS3822E3/STS	4.0	3.8	3.8	4.0	<b>3.9</b>
Mid-Atlantic Seeds	MAS3884GT/LL	4.0	3.8	3.8	4.0	<b>3.9</b>
Mid-Atlantic Seeds	MAS4021E3	3.8	3.5	3.5	4.0	<b>3.7</b>
Mid-Atlantic Seeds	MAS4320E3STS	4.0	3.5	3.5	3.8	<b>3.7</b>
Mid-Atlantic Seeds	MAS4622E3	3.3	3.3	3.5	3.5	<b>3.4</b>
Mid-Atlantic Seeds	MAS4675E3STS	4.0	3.3	3.0	4.0	<b>3.6</b>
Mid-Atlantic Seeds	MAS4721E3/STS	4.0	3.5	3.8	4.0	<b>3.8</b>
Mid-Atlantic Seeds	MAS4822E3	4.0	3.0	3.0	4.0	<b>3.5</b>
MorSoy	MS 4640XF	4.0	4.0	3.8	3.8	<b>3.9</b>
MorSoy	MS 4852 XF	3.5	3.0	3.8	3.8	<b>3.5</b>
MorSoy	MS 5110E	4.0	3.3	3.5	4.0	<b>3.7</b>
MorSoy	MS 5461E	3.8	3.3	3.0	4.0	<b>3.5</b>
MorSoy	MS 5640XF	3.0	3.5	3.3	3.8	<b>3.4</b>
NK Brand	NK43-P7E3S	4.0	4.0	3.8	4.0	<b>4.0</b>
NK Brand	NK48-H3XFS	4.0	3.8	3.8	3.8	<b>3.9</b>
Perdue	P41ILO22	3.3	3.5	3.3	4.0	<b>3.5</b>
Perdue	P41MO21	3.3	3.3	3.3	3.5	<b>3.4</b>
Perdue	P45XP421	3.8	3.0	3.3	4.0	<b>3.5</b>
Perdue	P48MO21	3.8	3.3	3.5	3.8	<b>3.6</b>
Seed Consultants	SC7390E	3.5	3.5	3.0	4.0	<b>3.5</b>
Seed Consultants	SC7412E	3.8	3.3	3.0	3.8	<b>3.5</b>
Seed Consultants	SC7421E	4.0	3.5	3.0	3.8	<b>3.6</b>

Seed Consultants	SC7462E	4.0	4.0	4.0	4.0	<b>4.0</b>
Seed Consultants	SC7472E	4.0	3.8	3.3	3.8	<b>3.7</b>
Seed Consultants	SC7481E	3.8	3.5	3.3	3.5	<b>3.5</b>
Southern Harvest	SH 4022	3.3	3.3	3.8	3.3	<b>3.4</b>
Southern Harvest	SH 4622	2.8	3.0	2.8	2.5	<b>2.8</b>
Southern Harvest	SH 5223	3.0	3.3	3.0	3.3	<b>3.2</b>
Southern Harvest	SH 5523	3.3	3.3	3.0	3.5	<b>3.3</b>
USG	7353XFS	4.0	3.0	3.8	3.8	<b>3.7</b>
USG	7392XFS	3.8	3.3	4.0	4.0	<b>3.8</b>
USG	7420ETS	3.5	3.0	3.3	3.8	<b>3.4</b>
USG	7429ET	3.5	3.0	3.3	3.3	<b>3.3</b>
USG	7431ET	3.3	3.0	3.0	3.8	<b>3.3</b>
USG	7451ET	4.0	3.8	3.8	4.0	<b>3.9</b>
USG	7461XFS	4.0	3.8	3.8	4.0	<b>3.9</b>
USG	7461XTS	3.8	3.8	3.5	3.8	<b>3.7</b>
USG	7463XFS	4.0	3.5	3.8	4.0	<b>3.8</b>
USG	7472ETS	3.8	3.5	3.8	3.8	<b>3.7</b>
USG	7472XFS	3.5	3.0	3.5	4.0	<b>3.5</b>
Xitavo	XO 3803E	4.0	3.5	3.8	4.0	<b>3.8</b>
Xitavo	XO 3861E	3.3	3.0	3.8	3.5	<b>3.4</b>
Xitavo	XO 3922E	4.0	3.3	3.8	3.0	<b>3.5</b>
Xitavo	XO 4132E	4.0	4.0	3.8	3.0	<b>3.7</b>
Xitavo	XO 4371E	3.0	3.0	3.5	2.8	<b>3.1</b>
Xitavo	XO 4522E	4.0	3.5	3.5	3.8	<b>3.7</b>

Xitavo	XO 4653E	3.5	3.0	3.8	3.5	<b>3.5</b>
Xitavo	XO 4772E	3.8	3.0	3.5	3.5	<b>3.5</b>

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 Vigo

**3=** Good Emergence, Good Vigor

**4=** Excellent Emergence, High Vigor