2022 Michigan Soybean Performance Report

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Putting Your Checkoff To Work

MICHIGAN SOYBEAN COMMITTEE

The Soybean Checkoff
michigansoybean.org

The 2022 Michigan Soybean Performance Report is a result of a cooperative effort of the soybean breeding program at Michigan State University, Michigan State University Extension and the Michigan Soybean Committee. This information will help you to make informed critical choices for your 2023 soybean crop. This data can be accessed electronically at www.canr.msu.edu/varietytrials/soybean.

MICHIGAN STATE UNIVERSITY | Extension

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2022
MICHIGAN SOYBEAN PERFORMANCE REPORT

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This report provides information on the performance of Conventional and Roundup Ready soybean varieties in Michigan in 2022.

The presentation of data for the entries tested does not suggest approval or endorsement of varieties by Michigan State University (MSU).

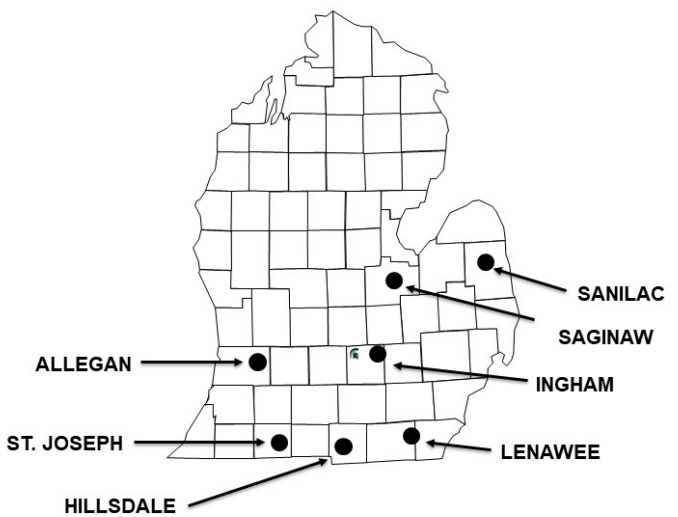
TESTING PROCEDURES

Seven locations are reported here. The Central locations for the Conventional and Roundup Ready trials include test sites in Allegan, Ingham, Saginaw, and Sanilac Counties. The Southern locations for the Conventional and Roundup Ready trials include test sites in Hillsdale, Ingham, Lenawee, and St. Joseph (irrigated) Counties.

Nineteen seed companies entered a total of 160 commercial varieties, not including the experimental MSU lines. The cooperators, planting dates, harvest dates, and other site details for the locations are listed below.

Seed was planted in 6-row plots, 15-inch row spacing at planting rate was 160,000 seeds/acre. Each plot was 17 feet long with a 3 foot alley. Alleys at the Sanilac and Allegan County locations were trimmed to 15 feet long to accommodate for the reel of one of the combines and wider alleys for field days. At each location, varieties were replicated three times in a Randomized Complete Block Design (RCBD). Only the center four rows were harvested. Experimental design, data management, and data analysis were conducted with Genovix, (Agronomix Software, Inc., Winnipeg, Canada).

2022 TEST SITE COUNTY LOCATIONS



TEST SITE INFORMATION

Lenawee County
Nearest city: Britton
Cooperator: David & Jason Woods
Planting date: 05/13/2022
Harvest date: 10/08/2022
Previous crop: Wheat
Soil type: Clay Loam
Fertilizer: 200 #/A K2O
Herbicides: Pre-emerge 12 oz. Authority MTZ, 1.5 pt./A Medal II – over the entire field
Conventional – 1 qt./A Basagran 32 oz./A Tapout
Roundup Ready Trials – 32 oz./A Tapout

Hillsdale County
Nearest city: Reading
Cooperator: Robert Lennard
Planting date: 05/23/2022
Harvest date: Conv. trials 10/15/2022, RR trials 10/16/2022
Previous crop: Corn
Soil type: Silty loam
Fertilizer: 250 #/A 11-52-90
Herbicides: Pre-emerge 12 oz. Authority MTZ, 1.5 pt./A Medal II
Conventional Trials – 1 qt./A Basagran, 5 oz./A Raptor
Roundup Ready Trials – 32 oz./A Roundup PowerMax

St. Joseph County - Irrigated
Nearest city: Mendon
Cooperator: Roger and Anne Gentz and Family
Planting date: 05/20/2022
Harvest date: 10/14/2022
Previous crop: Seed Corn
Soil type: Elston Sandy loam
Fertilizer: 250 #/A 0-0-60
Herbicides: Pre-emerge 12 oz. Authority MTZ, 1.5 pt./A Medal II
Roundup Ready Trials – 32 oz. Tapout over the entire field

Ingham County
Nearest city: Webberville
Cooperator: Walnut-Vu Farm
Planting date: 05-31-2022
Harvest date: 11/02/2022 to 11/03/2022
Previous crop: Corn
Soil type: Loam
Fertilizer: 300 #/A Potash
Herbicides: Pre-emerge 16 oz./A Authority MTZ, 1.33 pt./A Medal II
Conventional Trials – 1 qt./A Basagran, 5 oz./A Raptor
Roundup Ready Trials – 32 oz./A Roundup PowerMax, 32 oz./A Tapout

Allegan County
Nearest city: Wayland
Cooperator: Ann & Jeremy Biesbrock
Planting date: 05/17/2022
Harvest date: 10/21/2022 to 10/22/2022
Previous crop: Corn
Soil type: Matherton Loam
Fertilizer: 150 #/A Potash
Herbicides: Pre-emerge 16 oz. Authority MTZ, 1.33 pt./A Medal II

Saginaw County
Nearest city: Saginaw
Cooperator: Tom Hoff
Planting date: 05/10/2022
Harvest date: 10/07/2022
Previous crop: Corn
Soil type: Tappan-Londo Loam
Fertilizer: 200 #/A Potash
Herbicides: Pre-emerge 12 oz. Authority MTZ, 1.5 pt./A Medal II – over the entire field
Conventional Trials – 1 qt./A Basagran, 32 oz./A Tapout
Roundup Ready Trials – 32 oz./A Roundup PowerMax, 32 oz./A Tapout

Sanilac County
Nearest city: Sandusky
Cooperator: Gerstenberger Farms, Inc.
Planting date: 05/12/2022
Harvest date: 10/10/2022 and 10/15/2022
Previous crop: Corn
Soil type: Parkhill Clay Loam
Fertilizer: 200 #/A 0-0-60
Herbicides: Pre-emerge 1.5 #/A Lorox 50% D.F., 1.5 pt./A Medal II
Conventional Trials – 1 qt./A Basagran, 32 oz./A Tapout
Roundup Ready Trials – 32 oz./A Roundup PowerMax, 32 oz./A Tapout

GROWING CONDITIONS / COMMENTS

Wide swings in temperature and above average rainfall delayed early season field work for most of the state. Early in May, the weather turned mostly, warm and dry, allowing for planting to progress to pass long term averages. All of the MSU commercial soybean variety trials were planted between May 10th and May 30th.

The middle of summer was warm and sunnier than normal, as both the Saginaw Valley and thumb area became very dry. The Saginaw county plot was the driest of the yield locations and yields were slightly reduced but plot quality remained good. The Sanilac County location received enough moisture and experiment average yields were above 70 bu/acre despite some white mold. There were a few heavy rain events with wind scattered throughout the state causing heavy lodging at the Allegan location.

October was warmer and drier than normal which allowed for harvest to continue with few weather delays. All locations were harvested between October 7th and November 3rd. The Ingham county location had some variation on the east side of the field where the conventional trials were grown. The central conventional, south conventional, and south RR late trials for Ingham County are not published because of environmental variation. The Hillsdale and the St. Joseph (irrigated) locations had high yields and reached 80 bu/acre average on the south RR late trials.

USING THE DATA

Results are presented in Tables 1 through 6.

Yield: Yield is expressed as bushels per acre at 13% moisture and is reported as single and across site means for 2022. Two- and three-year means are also presented when applicable.

Height: Plant height, reported in inches, was measured at maturity from the soil surface to the tip of the main stem. The reported values are means of 4 reps at all sites.

Lodging: Lodging scores reflect the erectness of the plants before harvest. The reported values are means of 4 reps at all sites. Ratings are based on the following scale:

1= Almost all plants are erect.
2= All plants leaning slightly, or fewer than 25% of the plants are down.
3= All plants leaning moderately (45%), or 25% to 50% of the plants are down.
4= All plants leaning considerably, or 50% to 80% of the plants are down.
5= Almost all plants are down.

Protein and Oil Content: Protein and oil content of the seed was determined using near-infrared reflectance and is expressed on a **DRY MATTER** basis. The analysis was done on seed from all 4 replications from the Ingham location. Protein and oil data is not available for the southern zone Roundup Ready trials because they were not harvested from the Ingham county location due to wet soil conditions.

Phytophthora Resistance: Information on the presence of Phytophthora resistance genes was provided by the organizations entering varieties. Varieties are denoted with:

- 1a are resistant to phytophthora Races 1, 2, 10, 11, 13-20, 24, 26 & 27.
- 1b are resistant to Races 1, 3-9, 13, 15, 18, 21, & 22.
- 1c are resistant to Races 1-3, 6-11, 13-15, 17, 21, 23, 24 & 26.
- 1k are resistant to Races 1-11, 13-15, 17, 18, 20-24 & 26.
- 3 are resistant to Races 1-5, 8 and 9.
- 6 are resistant to Races 1-4, 10, 12, 14-16, 18-21 & 25.
- 7 are resistant to Races 12, 16, 18 & 19.

Soybean Cyst Nematode Resistance (SCN): Seed companies that screen varieties for SCN resistance have indicated if the variety has known susceptibility or resistance:

- R – Resistant
- MR – Moderately Resistant
- S – Susceptible
- MS – Moderately Susceptible

These notations followed by a number indicate the identified cyst nematode race. The source of resistance was mostly PI88788 with some Peking and PI89722. Sources are found in parenthesis after the variety name in the variety list table.

SELECTING A VARIETY

Some of the varieties in the conventional trials have special traits such as a specific oil profile, which growers can sell for premium prices. Talk to the seed dealer about premium varieties. Seed dealers and their contact information are listed in the 'Index of Varieties and the 'Directory of Companies'.

LSD (least significant difference, found at the bottom of each data column) values are useful when comparing two varieties in the same table. If the difference between two varieties is less than the LSD value, this difference is probably due to chance or minor environmental differences. However, if the difference between two varieties is greater than the LSD, there is a 95% or greater probability that the difference in performance is due to the greater yield potential of one variety. Valid comparisons can only be made between averages in the same column. The C.V. (coefficient of variation, found at the bottom of each data column) is indicative of the trial precision. Lower C.V. values indicate more precise trials.

The primary consideration in selecting a variety is yield. When evaluating a variety, consider yield performance over locations and across several years, if available. Considerations other than yield are also important in selecting a variety. It is especially important to select a variety that will mature before the first frost in the fall.

The degree of lodging varies among varieties. Lodging ratings should be used to evaluate potential harvest losses. Growers who have experienced lodging in the past and have had harvest problems may want to select a more lodging-resistant variety. Alternatively, a variety susceptible to lodging may be planted at a slightly lower population to increase standability.

Growers should note seed size when selecting planting rates. Planting rates should be based on number of seeds per acre and not on pounds per acre. It often benefits growers to select a few good varieties for planting each year. Yield determination and careful field evaluation during the growing season will add to the grower's knowledge of variety performance and allow for better selection.

HERBICIDE TRAITS

The column in the chart labeled HERB contains the variety herbicide resistance.

- Conv=conventional
- LL=Liberty Link
- RR1=Roundup Ready
- RR2X=Roundup Ready 2 Extend
- XF=Extend Flex
- E3=Enlist E3
- GT27=Glyphosate Tolerant
- LLGT27=Liberty Link and Glyphosate Tolerant

SEED TREATMENT

Treated soybean seed submitted for Michigan State University's Soybean Performance Trials are noted by abbreviation in the 'TMT' column. Questions concerning treatments should be directed to the seed company. Contact information can be found in the 'Directory of Companies'.

Code	Treatment
ACL	Acceleron-Insecticide
AA Elite	Ag Armour Elite
Agr	Agri Max-Fung-Insecticide
CM	Cruiser Maxx-Insecticide
Cue	Cue-isoflavone compound
DFender	Defender-Fungicide
ECL-Trio	Eclipse Trio-Fungicide
Ecl-US-Q	EclipseUS quad IM-Fungicide
EG	EverGolEnergy-Fungicide
Encase	Encase-Root growth
Eq-VIP	Equity VIP-Insecticide/Fungicide
G	Gaucho-Insecticide
I	ILeVO-Nematicide
N-H	Inhibit
Lum	Lumisena-Fungicide
N	NForce-Nitrogen Fixing Bacterium
Obv	Obvius Plus-Fungicide
P	Poncho-Insecticide/Nematicide
Rel	Relena-Fungicide
Sa	Saltro-Nematicide
Titan	Titan-Insecticide
Vib	Vibrance Maxx-Fungicide
V	Votivo-Insecticide/Nematicide
Vay	Vayantis-Fungicide

2022 DIRECTORY OF COMPANIES

BRAND	COMPANY NAME AND ADDRESS
AG ARMOUR	AG Armour Seeds Inc. 8236 N. Williams Rd. St. Johns, MI 48879 www.ag.armourseeds.com
BENSON HILL	Benson Hill Seeds 8714 Hwy T38 North Grinnell, IA 50112 www.bensonhillseeds.com
DAIRYLAND	Dairyland Seed P.O. Box 958 West Bend, IN 53095 www.dairylandseed.com
DF SEEDS	DF Seeds, LLC P.O. Box 159 Dansville, MI 48819 www.dfseeds.com
DYNA-GRO	Dyna-Gro Seed, Nutrien Ag Solutions 4648 S Garfield Rd. Auburn, MI 48611 www.dynagroseed.com
GDM SEEDS	GDM Seeds 3414 Big Pine Trail Champaign, IL 61822 VirtueSeeds.com
GOLDEN HARVEST	Syngenta Seeds Inc. 2001 Butterfield Rd, Suite 1600 Downers Grove, IL 60515 www.goldenharvestseeds.com
GROWMARK	GROWMARK Inc. 1701 Towanda Ave. Bloomington, IL 61701 fssystem.com/Agriculture/FS-Seeds
KEY	AGRA Solutions, LLC 23778 Jennings Delphos Rd. Delphos, OH 45833 www.agrasolutions.com
LG SEEDS	LG Seeds 1122 E 169th Street Westfield, IN 46074 www.lgseeds.com
M&W SEEDS	M&W Seeds 8443 Wilcox Rd. Eaton Rapids, MI 48827 www.mwseeds.com
MCIA	Michigan Crop Improvement Assn. 2905 Jolly Rd. Okemos, MI 48864 www.michcrop.com
NK SEEDS	Syngenta Seeds Inc. 2001 Butterfield Rd, Suite 1600 Downers Grove, IL 60515 www.syngenta-us.com/seeds/nk
RENK SEED	Renk Seed 6809 Wilburn Rd. Sun Prairie, WI 53590 www.renkseed.com
SOUTHWEST	Southwest Seeds Inc. 19686 Scane Rd. Ridgetown, Ontario N0P 2C0 www.secan.com/members/southwest-seeds-inc
STAR OF THE WEST	Star of the West 121 E. Tuscola St. Frankenmuth, MI 48734 www.staroftheWest.com
WELLMAN SEEDS	Wellman Seeds, Inc. Jennings Delphos Rd. Delphos, OH 45833 www.wellmanseeds.com
XITAVO	Xitavo 103 Avenue D West Point, IA 52656 www.xitavosoybeanseed.com
ZEELAND FARM SERVICES	Zeeland Farm Services 2525 84th Ave Zeeland, MI 49464 www.zfsinc.com

TABLE 1. 2022 MICHIGAN CENTRAL CONVENTIONAL SOYBEAN VARIETY TRIAL REPORT

								YIELD (BU/AC)			2022 AVERAGE						
BRAND	VARIETY	Maturity Group	Herb Tech	TMT[1]	Phyto Res	SCN	Aphid Res	2022 AVG	21-22 AVG	20-22 AVG	Allegan	Saginaw	Sanilac	Height	Lodging	Protein	Oil
Benson Hill	E16UP133	1.6	Conv	untreated	1k	R		54.3			55.6	45.4	62.1	34	1.1	44.5	19.4
Benson Hill	N21D001	2.1	Conv	untreated	1k	R		59.4			53.6	55.0	69.6	36	1.0	43.2	20.3
Benson Hill	N2358	2.3	Conv	untreated	1c	R		55.9			48.7	51.6	67.2	37	1.6	46.5	19.4
Dairyland	DSR-2023	2.0	Conv	EG,G,I,Lum	1c	R		**67.5**			**63.1**	**63.0**	**76.5**	37	1.2	40.7	21.4
Dairyland	DSR-2502	2.5	Conv	EG,G,I,Lum	1k			63.9			**61.1**	58.6	72.0	35	1.0	39.4	21.5
Dairyland	DSR-2830	2.8	Conv	EG,G,I,Lum	1c	R		64.0			**66.7**	58.5	66.7	42	1.7	40.4	21.3
DF Seeds	DF 151 N	1.5	Conv	DFender	1k	R		**68.5**	74.1	64.2	**62.1**	**62.4**	**80.9**	33	1.8	39.8	21.3
DF Seeds	DF 155 F	2.5	Conv	DFender	1k	S		56.9	62.5	62.1	52.4	49.1	69.1	39	2.1	41.9	21.1
DF Seeds	DF 187 N	1.8	Conv	DFender		R		63.8	68.6	63.3	56.1	**60.6**	74.8	37	1.7	40.9	20.3
DF Seeds	DF 203 N	2.0	Conv	DFender	1k	R		**68.4**			**64.5**	59.9	**80.8**	32	1.4	39.4	22.0
DF Seeds	DF 210 N	2.1	Conv	DFender	1k	R		**65.5**	71.1	68.6	**64.5**	58.9	73.1	37	1.4	37.5	22.2
DF Seeds	DF 231 N	2.3	Conv	DFender	3a	R		**65.1**	71.6	68.7	58.6	**61.3**	75.3	36	1.2	39.6	21.5
DF Seeds	DF 260 N	2.6	Conv	DFender	1k	R		**70.5**	74.4		**65.9**	***69.5**	**76.0**	35	1.8	37.4	22.9
DF Seeds	DF 262 N F	2.6	Conv	DFender	1k	R		57.1	60.0		47.5	55.5	68.4	36	1.8	43.7	19.5
Dyna-Gro	S2409N	2.4	Conv	Eq-VIP,Sa,Vay		MR		**67.6**	73.5		**61.2**	**60.8**	**80.9**	35	1.4	40.4	21.4
Growmark	HS 15C00	1.5	Conv	ACL,Sa,Cue	1k	R		^			**62.0**	^	***82.6**	^	^	39.5	21.7
Growmark	HS 28C20	2.8	Conv	ACL,Sa,Cue	1c	R		***71.1**			***70.1**	**63.9**	**79.4**	37	1.9	39.3	20.7
LG Seeds	LGS1684	1.6	Conv	Agr F/I + I	1k	N		**67.5**	71.0			**61.8**	**75.9**	33	1.3	40.4	21.2
LG Seeds	LGS2020	2.0	Conv	Agr F/I + I	1k	R		**68.0**	75.9	22.7	**68.4**	**61.9**	73.7	32	1.6	39.4	22.0
LG Seeds	LGS2329	2.3	Conv	Agr F/I + I	1k	R		**65.8**			60.5	**61.0**	**75.9**	36	1.2	37.6	21.8
MSU	E07158-T	2.3	Conv	DFender-N-I				48.9	48.8	54.1	42.1	44.8	59.7	39	2.2	45.7	19.3
MSU	E11128T	2.5	Conv	DFender-N-I		R		54.5	57.5	58.2	45.7	53.0	64.9	35	1.8	43.6	19.6
MSU	E12076T-03	2.2	Conv	DFender-N-I		R		**65.1**	67.9	65.7	60.5	58.6	**76.2**	36	2.1	38.5	21.4
MSU	E13268	1.7	Conv	DFender-N-I	1c			59.6	66.2	64.5	59.4	47.4	71.9	33	1.7	40.4	21.8
MSU	E14077	2.4	Conv	DFender-N-I	1k	R		63.7	68.4	59.3	59.2	57.1	74.8	38	1.8	39.2	22.3
MSU	E15165T	2.0	Conv	DFender-N-I	1c	R		56.8	63.2		50.0	49.3	71.1	37	2.2	43.7	19.8
MSU	E15338	1.8	Conv	DFender-N-I	1k	R		61.3	65.5	65.8	52.4	60.0	71.5	34	2.1	40.6	21.1
MSU	E15345	2.7	Conv	DFender-N-I		R		**67.3**	70.6	67.7	**64.2**	60.0	**77.7**	39	2.4	38.5	20.9
MSU	E15346T	1.6	Conv	DFender-N-I				64.6	70.0	61.6	55.7	**60.5**	**77.5**	36	2.1	39.8	21.7
MSU	E15351	1.8	Conv	DFender-N-I	1c	MR		64.5	70.9	65.4	56.4	59.4	**77.8**	37	2.1	39.0	21.4
MSU	E15901	2.5	Conv	DFender-N-I	1k	R	R	60.8	67.4		57.8	58.2	66.3	39	1.9	39.8	20.7
MSU	E17203	2.4	Conv	DFender-N-I		HR		**65.5**	69.5	66.3	**62.3**	**64.0**	70.3	37	1.8	40.1	21.1
MSU	E18331-34	2.9	Conv	DFender-N-I		R		63.6			60.8	54.8	**75.4**	36	1.9	39.4	21.1
MSU	E18450	2.5	Conv	DFender-N-I	1k,3a	R		**66.6**	69.3	65.1	**61.1**	59.3	**79.5**	40	2.6	38.6	21.3
MSU	E18638T	2.0	Conv	DFender-N-I		MR		**65.2**	69.4		59.4	**61.6**	74.6	37	2.1	42.1	20.1
MSU	E19191	1.3	Conv	DFender-N-I				56.8			47.2	46.9	**76.4**	42	1.8	38.4	21.3
MSU	E19307T	2.4	Conv	DFender-N-I		R		60.2			53.9	54.4	72.3	40	2.6	41.0	20.4
MSU	E19314T	1.6	Conv	DFender-N-I	1k,3a	R		59.8	61.7		56.6	53.8	69.0	32	1.7	42.5	19.8
MSU	E19323T	1.7	Conv	DFender-N-I		R		59.4	63.9		50.7	55.6	71.9	35	1.8	41.0	20.2
MSU	E19412	2.4	Conv	DFender-N-I		R		**65.5**	67.5		**61.4**	58.8	**76.3**	38	1.6	40.2	20.6
MSU	E19689-30	2.1	Conv	DFender-N-I				59.0			53.8	52.6	70.7	35	2.0	40.5	22.2
MSU	E20078	1.7	Conv	DFender-N-I		R		63.4			56.7	**61.3**	72.1	45	2.2	39.1	21.8
MSU	E20316T	2.6	Conv	DFender-N-I		R		62.1			58.9	52.7	74.8	40	2.0	41.6	20.9

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MSU	E20329	2.5	Conv	DFender-N-I		R		64.9			56.9	**61.6**	**76.2**	37	1.6	39.0	21.9
MSU	E20351	2.6	Conv	DFender-N-I		R		**65.2**			**64.4**	59.6	71.6	43	2.7	38.1	21.8
MSU	E20355	2.9	Conv	DFender-N-I		R		65.1			**65.0**	**61.5**	68.7	43	2.3	38.5	21.3
MSU	E20394	2.3	Conv	DFender-N-I		R		58.5			55.6	54.7	65.2	46	2.6	41.9	21.7
Southwest Seeds	AAC Wigle	2.5	Conv	Vib		R		60.1	64.6		54.7	53.8	71.9	38	1.3	43.9	19.4
Zeeland Farm	e13H988	1.3	Conv	untreated	1k	R		53.4	57.0		53.5	39.5	67.2	29	1.0	42.2	22.0
Zeeland Farm	ZFS 1326	2.6	Conv	untreated		R		64.9			58.0	**61.3**	75.3	39	2.6	39.9	21.3
Zeeland Farm	ZFS 1721	1.7	Conv	Ecl-US-Q,N,N-H		R		62.1	66.4		58.4	53.2	74.6	32	1.4	42.2	20.5
Zeeland Farm	ZFS 2221	2.2	Conv	Ecl-US-Q,N,N-H		R		63.7	70.0		59.0	**60.6**	71.4	37	2.4	38.7	22.0
Zeeland Farm	ZFS 24019HO	2.4	Conv	Ecl-US-Q,N,N-H		R		58.0	61.7	62.0	53.7	49.8	70.6	37	1.1	42.6	21.7
Zeeland Farm	ZFS 2521HO	2.5	Conv	Ecl-US-Q,N,N-H		R		62.0	66.1		58.4	58.0	69.7	36	1.6	41.6	21.2
Zeeland Farm	ZFS 2819HO	2.8	Conv	Ecl-US-Q,N,N-H		R		57.4	63.2		54.4	59.4	58.4	41	2.9	40.0	21.7
GRAND MEAN								**62.4**			**57.7**	**56.7**	**72.4**	**37**	**1.9**	**40.6**	**21.1**
Max.								**71.1**			**70.1**	**69.5**	**82.6**	**46**	**3.0**	**46.5**	**22.9**
Min.								**48.9**			**42.1**	**39.5**	**58.4**	**29**	**1.0**	**37.4**	**19.3**
LSD (0.05)								**4.1**			**7.4**	**6.6**	**7.4**				
CV (%)								**7.1**			**7.9**	**7.2**	**6.3**				

[1] Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code
*** High yield in plot**
^ Data not available because of late arriving seed
Top 1/3 of trial is Bold Michigan State University varieties are experimental

Dr. Dechun Wang making a breeding cross

TABLE 2. 2022 MICHIGAN SOUTH CONVENTIONAL SOYBEAN VARIETY TRIAL REPORT

								YIELD (BU/AC)			2022 AVERAGE						
BRAND	VARIETY	Maturity Group	Herb Tech	TMT[1]	Phyto RES	SCN	Aphid Res	2022 AVG	21-22 AVG	20-22 AVG	Hillsdale	Lenawee	St. Joseph	Height	Lodging	Protein	Oil
Benson Hill	E24H930	2.4	Conv	untreated		R		63.0			71.8	62.0	55.2	36	1.2	42.8	21.9
Benson Hill	N2358	2.3	Conv	untreated	1c	R		64.8			68.7	64.6	61.0	37	1.2	46.5	19.4
Dairyland	DSR-2023	2.0	Conv	EG,G,I,LUM	1c	R		**77.3**			**82.5**	**75.8**	**73.7**	37	1.3	40.3	21.7
Dairyland	DSR-2502	2.5	Conv	EG,G,I,LUM	1k			**75.1**			79.2	71.4	**74.8**	34	1.1	38.2	21.7
Dairyland	DSR-2830	2.8	Conv	EG,G,I,LUM	1c	R		71.7			74.0	69.8	71.3	39	1.4	40.0	21.8
DF Seeds	DF 155 F	2.5	Conv	DFender	1k	S		66.9	65.0	63.2	80.1	56.1	64.6	37	2.3	41.5	21.2
DF Seeds	DF 260 N	2.6	Conv	DFender	1k	R		**79.0**	73.0	69.9	78.0	**80.8**	**78.4**	34	2.7	37.2	22.8
DF Seeds	DF 262 N F	2.6	Conv	DFender	1k	R		63.6	61.2		68.6	62.2	60.0	34	2.2	43.3	19.9
DF Seeds	DF 282 N	2.8	Conv	DFender	1c	R		**81.8**			***88.5**	**79.5**	**77.4**	37	1.5	39.5	20.9
Dyna-Gro	S2409N	2.4	Conv	Eq-VIP,Sa,Vay		MR		71.3	69.5	65.4	74.6	**74.6**	64.7	34	1.8	39.7	21.7
Dyna-Gro	S2872N	2.8	Conv	Eq-VIP,Sa,Vay	1c	R		**82.9**	77.6		**86.5**	**79.9**	**82.4**	36	2.0	39.6	21.1
GDM	V2122	2.1	Conv	CM+Vib	3a			72.3	70.8		80.0	73.1	63.9	35	1.8	38.8	22.5
GDM	V2423	2.4	Conv	CM+Vib	1k	R		68.3			72.7	66.8	65.4	37	1.5	39.5	22.1
GDM	V2922	2.9	Conv	CM+Vib		R		**82.7**	76.1		**84.9**	**75.9**	***87.4**	35	2.3	37.1	23.0
Growmark	HS 15C00	1.5	Conv	ACL,Sa,Cue	1k	R		**79.7**			**80.9**	***84.0**	**74.2**	33	1.5	39.4	21.8
Growmark	HS 28C20	2.8	Conv	ACL,Sa,Cue	1c	R		**83.0**			**85.1**	**83.7**	**80.2**	36	2.3	39.2	21.2
LG Seeds	LGS2020	2.0	Conv	Agr F/I + I	1k	R		***83.2**	78.1		**86.3**	**80.4**	**82.9**	31	1.3	39.8	22.2
LG Seeds	LGS2329	2.3	Conv	Agr F/I + I	1k	R		**77.5**			77.2	**76.3**	**79.1**	35	1.4	38.3	21.9
LG Seeds	LGS2801	2.8	Conv	Agr F/I + I	1c	R		***83.2**	78.2	72.5	**86.2**	**81.6**	**81.8**	36	1.9	39.8	21.4
MSU	E12076T-03	2.2	Conv	DFender-N-I		R		72.7	70.0	64.8	79.5	71.4	67.3	34	2.3	38.5	21.7
MSU	E13268	1.7	Conv	DFender-N-I	1c			72.2	67.4	63.6	79.6	72.9	64.2	33	1.8	40.5	21.8
MSU	E14077	2.4	Conv	DFender-N-I	1k	R		72.1	67.6	64.3	77.4	69.1	69.9	38	2.2	39.0	22.2
MSU	E15339	2.4	Conv	DFender-N-I		R		**77.9**	69.9	65.0	78.6	**79.2**	**76.0**	38	2.7	38.5	22.1
MSU	E15345	2.7	Conv	DFender-N-I		R		**75.8**	71.6	67.6	78.6	**77.6**	71.1	38	2.8	37.9	21.5
MSU	E15351	1.8	Conv	DFender-N-I	1c	MR		72.1	68.4	63.9	**82.6**	72.0	61.6	38	2.4	39.3	21.4
MSU	E15901	2.5	Conv	DFender-N-I	1k	R	R	71.3	68.1	64.3	76.2	72.1	65.5	37	2.1	39.5	20.6
MSU	E17040	2.7	Conv	DFender-N-I		R		71.2			76.3	68.1	69.2	39	3.0	38.9	20.9
MSU	E17062	2.7	Conv	DFender-N-I				72.8	69.4	65.2	**81.1**	69.1	68.1	39	2.8	40.1	21.6
MSU	E17203	2.4	Conv	DFender-N-I		HR		71.5	68.2	64.5	79.2	70.4	65.0	36	2.2	39.8	21.3
MSU	E17283	2.7	Conv	DFender-N-I	1k	R	R	73.8	70.3	65.9	80.3	73.4	67.9	36	1.8	39.3	21.1
MSU	E18331-34	2.9	Conv	DFender-N-I		R		67.4			76.3	67.7	58.3	32	1.9	40.1	21.4
MSU	E18638T	2.0	Conv	DFender-N-I		MR		72.1	67.6	63.4	79.9	71.2	65.3	36	2.2	41.6	20.4
MSU	E19307T	2.4	Conv	DFender-N-I		R		68.3			77.8	66.6	60.3	38	2.8	40.7	20.5
MSU	E19314T	1.6	Conv	DFender-N-I	1k,3a	R		69.4	66.2		75.3	67.9	65.0	33	1.9	41.5	20.6
MSU	E19412	2.4	Conv	DFender-N-I		R		73.2	69.5		76.6	**74.2**	68.8	38	2.1	39.6	21.1
MSU	E19689-30	2.1	Conv	DFender-N-I				66.9			75.2	68.8	56.7	35	2.4	40.1	22.4
MSU	E20078	1.7	Conv	DFender-N-I		R		73.0			77.2	70.4	**71.5**	44	2.7	39.6	21.7
MSU	E20329	2.5	Conv	DFender-N-I		R		73.4			**80.7**	72.0	67.3	36	2.1	37.6	22.4
MSU	E20351	2.6	Conv	DFender-N-I		R		74.2			**82.6**	69.8	70.2	42	2.5	38.0	21.6
MSU	E20352	2.8	Conv	DFender-N-I		R		73.8			**81.7**	68.3	**71.4**	42	2.6	37.6	22.0
MSU	E20355	2.9	Conv	DFender-N-I		R		**76.0**			**87.5**	71.6	68.8	40	2.3	38.1	21.6
Southwest Seeds	AAC Wigle	2.5	Conv	Vib		R		64.4	60.7		72.8	62.5	57.9	36	1.7	44.3	19.2
Zeeland Farm Services	ZFS 1326	2.6	Conv	untreated		R		**78.4**			**80.4**	**77.9**	**77.0**	37	2.6	39.5	21.4
Zeeland Farm Services	ZFS 2221	2.2	Conv	Ecl-US-Q,N,N-H		R		**78.7**	72.0		**83.0**	**74.8**	**78.1**	38	3.1	39.0	21.8
Zeeland Farm Services	ZFS 24019HO	2.4	Conv	Ecl-US-Q,N,N-H		R		62.4	59.0	56.9	68.3	66.8	52.2	36	1.0	41.8	22.3
Zeeland Farm Services	ZFS 2521HO	2.5	Conv	Ecl-US-Q,N,N-H		R		65.8	62.4	59.5	74.5	67.1	56.0	35	1.8	41.0	21.8
Zeeland Farm Services	ZFS 2819HO	2.8	Conv	Ecl-US-Q,N,N-H		R		68.9	62.6	56.4	75.8	64.4	66.4	41	2.9	39.4	21.9
GRAND MEAN								**73.1**			**78.7**	**71.8**	**68.8**	**36**	**2.1**	**39.8**	**21.5**
Max.								**83.2**			**88.5**	**84.0**	**87.4**	**44**	**3.1**	**46.5**	**23.0**
Min.								**19.5**			**68.3**	**56.1**	**52.2**	**28**	**1.0**	**37.1**	**19.2**
LSD (0.05)								**4.3**			**5.8**	**4.8**	**9.5**				
CV (%)								**6.4**			**5.5**	**5.0**	**8.5**				

[1] **Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code**

*** High yield in plot**

Top 1/3 of trial is Bold Michigan State University varieties are experimental

Selecting Soybean Varieties

Mike Staton, MSU Extension soybean educator

The soybean varieties you select will significantly affect your income in 2023. Because of this, you should consider yield, maturity, pest and pathogen resistance, herbicide-tolerant traits, lodging and quality when selecting varieties.

Yield

Yield is one of the most important characteristics to consider when selecting soybean varieties. A long-term analysis of the yield data from the Michigan Soybean Performance Reports shows that selecting the highest yielding varieties can increase yields by 5 to 10 bushels per acre. A variety that performs well under ideal conditions may not yield as well as others when confronted with yield-limiting factors. Yield data collected from multiple locations and several years will help you select the best adapted varieties for your farm.

Maturity

An analysis of soybean yield and maturity data from the 2009-2016 Michigan Soybean Performance Reports showed that maturity has little effect on soybean yields when the highest-yielding varieties are selected within the adapted maturity range for the area and planted in mid to late May. The analysis also showed that on average, soybean harvest operations are delayed by one day for each 0.1 increase in soybean maturity group. Planting varieties from a range of adapted soybean maturity groups is recommended.

Pest and pathogen resistance

Significant yield losses from soybean aphids, soybean diseases such as Phytophthora root and stem rot, white mold, sudden death syndrome and soybean cyst nematodes can be reduced by selecting resistant or tolerant varieties. In fact, variety selection is the best option for managing these pests and seed catalogs are excellent sources of information. Seed companies typically use a rating scale of 1 to 9 and producers need to be careful as 1 is excellent and 9 is poor in some catalogs, while in others it is the opposite. These ratings are useful when comparing varieties from a given company but not across companies.

Iowa State University conducts the most comprehensive soybean cyst nematode resistant variety trials in the U.S. Iowa State University Extension publication IPM 52, provides the source of soybean cyst nematode resistance, yield performance and soybean cyst nematode population suppression effects for all the entered varieties. The 2022 report will be available online at the Iowa State University SCN-Resistant Soybean Variety Trials website. The report should be transferable and useful on your farm provided the varieties tested are adapted to your farm and the soybean cyst nematode population type at the trials is similar to the soybean cyst nematode population type in your fields. Producers should rotate sources of soybean cyst nematode resistance and seed suppliers are an excellent source of information.

Herbicide-tolerant traits

Varieties having herbicide-resistant traits are an important tool for managing herbicide-resistant weeds such as water hemp and marestail.

Lodging

Lodged soybean plants can increase harvest losses and significantly delay harvest operations. Variety selection can help reduce lodging problems in productive fields.

Quality

Producers should also consider quality characteristics when selecting soybean varieties. Some of our leading export markets have identified 19 percent oil and 35 percent protein as a standard. As global competition increases, Michigan soybean producers will need to meet this standard to maintain access to these markets.

TABLE 3. 2022 MICHIGAN CENTRAL ROUND-UP READY / EARLY MATURITY, (1.1 - 2.2), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)								
										2022 AVERAGE					
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto Res	SCN	2022 AVG	21-22 AVG	20-22 AVG	Allegan	Ingham	Saginaw	Sanilac	Height	Lodging
Ag Armour	AA1923 E3	1.9	E3	AA Elite	1k	R	***69.1**			**67.4**	57.6	***70.8**	***80.7**	34	1.3
Ag Armour	AA2021 E3	2.0	E3	AA Elite	1k	R	**65.3**			**67.7**	**59.7**	59.9	73.9	31	1.3
Dairyland	DSR-1121E	1.1	E3	EG,G,I,LUM		R	60.0			61.4	58.9	53.8	65.7	28	1.4
Dairyland	DSR-1290E	1.2	E3	EG,G,I,LUM		R	59.5	64.99		59.9	52.6	53.9	71.7	29	1.9
Dairyland	DSR-1450E	1.4	E3	EG,G,I,LUM		R	**65.4**	72.25		**69.2**	56.6	57.6	**78.1**	29	1.3
Dairyland	DSR-1505E	1.5	E3	EG,G,I,LUM	1k	R	62.5			58.9	57.7	**63.6**	69.9	30	1.3
Dairyland	DSR-1673E	1.6	E3	EG,G,I,LUM	1k	R	59.6	65.6		58.0	56.2	61.6	62.6	31	1.1
Dairyland	DSR-1820E	1.8	E3	EG,G,I,LUM	1k	R	63.2	68.23		63.2	**59.7**	58.5	71.6	29	1.0
Dairyland	DSR-1919E	1.9	E3	EG,G,I,LUM	1k	R	64.5			63.6	**61.1**	**65.3**	67.9	34	1.4
Dairyland	DSR-2030E	2.0	E3	EG,G,I,LUM	3a,1c	R	60.5	66.9		**65.4**	54.8	50.2	71.4	30	1.8
Dairyland	DSR-2040E	2	E3	EG,G,I,LUM	1k	R	64.9	70.6		64.2	59.3	62.0	74.2	30	1.2
Dairyland	DSR-2188E	2.1	E3	EG,G,I,LUM	1k	R	63.6			61.5	**62.1**	60.0	70.8	36	1.3
DF Seeds	DF 3143 N E3	1.4	E3	DFender	1k	R	**65.8**			**68.8**	53.4	**63.8**	**76.9**	33	1.1
DF Seeds	DF 3172 N E3	1.7	E3	DFender	3a	R	**66.6**	71.2		**70.4**	57.7	**67.6**	70.8	30	1.8
DF Seeds	DF 3191 N E3	1.9	E3	DFender	1k	R	63.0	70.93	64.9	61.0	57.5	61.9	71.8	32	1.0
DF Seeds	DF 3211 N E3	2.1	E3	DFender	1k	R	**65.6**	69.6	64.3	63.9	57.8	60.2	**80.6**	32	1.2
DF Seeds	DF 3223 N E3	2.2	E3	DFender	1c	R	59.2			62.9	57.5	52.7	63.7	34	1.6
Dyna-Gro	S14EN22	1.4	E3	Eq-VIP,Sa,Vay		R	62.8			63.4	45.8	**67.5**	**74.5**	34	1.4
Dyna-Gro	S17XF02	1.7	XF	Eq-VIP,Sa,Vay	1c	R	64.6	70.46		62.8	56.3	60.8	**78.6**	34	1.4
Dyna-Gro	S18EN52	1.8	E3	Eq-VIP,Sa,Vay	1c	MR	**66.0**	69.39		55.6	**62.7**	**67.6**	**78.2**	34	1.7
Dyna-Gro	S19XF62	1.9	XF	Eq-VIP,Sa,Vay		R	**65.0**			***71.4**	58.1	56.1	**74.2**	33	1.2
Dyna-Gro	S20EN92	2.0	E3	Eq-VIP,Sa,Vay	1c	MR	**65.2**	69.9		**65.6**	**62.0**	61.6	71.5	35	1.3
Dyna-Gro	S21EN81	2.1	E3	Eq-VIP,Sa,Vay	1k	R	**67.0**	72.1	68.1	**71.0**	59.0	63.0	**74.8**	32	1.3
Dyna-Gro	SX22620EN	2.0	E3	Eq-VIP,Sa,Vay	1k	R	**65.2**			**67.1**	**59.8**	**65.6**	68.1	34	1.3
Golden Harvest	GH1763E3	1.7	E3	CM,Vib,Sa		MR3	59.4			57.2	56.4	56.7	67.1	29	1.0
Golden Harvest	GH1922E3	1.9	E3	CM,Vib,Sa	1k	R3,MR14	**67.1**	69.79		64.7	59.1	**66.1**	**78.5**	35	1.2
Golden Harvest	GH1973E3S	1.9	E3	CM,Vib,Sa	1k	MR1,MR3,MR5	**66.3**			**67.9**	**59.8**	**65.2**	72.3	29	1.7
Golden Harvest	GH2083E3S	2.0	E3	CM,Vib,Sa	1c	MR3,R14	60.3			62.1	52.4	59.0	67.8	29	1.3
Golden Harvest	GH2292E3	2.2	E3	CM,Vib,Sa	1c	MR3	64.1	69.3		61.3	**59.9**	63.0	72.3	33	1.3
Growmark	HS 18E00	1.8	E3	ACL,Sa,Cue		R	64.5			65.0	57.7	**63.9**	71.4	31	1.2
Growmark	HS 18F20	1.8	XF	ACL,Sa,Cue		R	61.8			61.9	59.4	57.8	68.1	33	1.3
Growmark	HS 21E20	2.1	E3	ACL,Sa,Cue	1c	R	64.7			64.9	58.9	59.0	**76.0**	34	1.2
Growmark	HS 21F20	2.1	XF	ACL,Sa,Cue	1c,3a	R	63.1			59.1	54.1	**64.0**	**75.2**	37	1.9
M & W Seeds	M&W 21E10	2.1	E3	Titan N-H			^			^	**61.4**	^	^	^	^
M & W Seeds	M&W 22E63	2.2	E3	Titan N-H		R3,MR14	64.1			63.9	**59.4**	**66.3**	66.9	34	1.4
MSU	E19497GT	1.5	RR1	DFender-N-I	3a	R	59.7	63.6		58.8	52.7	55.8	71.4	34	1.6
NK Seeds	NK13-Y4XF	1.3	XF	CM,Vib,Sa	1c,3a	MR	64.7			**67.7**	54.0	61.6	**75.3**	30	1.1
NK Seeds	NK14-W6E3	1.4	E3	CM,Vib,Sa	1c,3a	R	62.8	69.11		53.9	57.1	**68.4**	71.7	30	1.5
NK Seeds	NK19-T8E3S	1.9	E3	CM,Vib,Sa	1k	R	62.5			60.4	58.7	62.0	69.0	29	1.4
NK Seeds	NK20-B6E3S	2.0	E3	CM,Vib,Sa	1c	MR	61.4			**66.4**	52.9	59.2	67.1	28	1.2
NK Seeds	NK22-C4E3	2.2	E3	CM,Vib,Sa	1c	MR	60.8	65.53		55.1	55.6	**64.2**	68.2	35	1.3
NK Seeds	NK22-R2E3	2.2	E3	CM,Vib,Sa	1c	MR	62.5			65.4	57.4	61.5	65.7	33	1.2
Renk	GENESIS G1560E	1.5	E3	ECL-Trio	3a	R	64.3			59.0	58.8	**63.6**	**75.7**	31	1.4

TABLE 3. 2022 MICHIGAN CENTRAL ROUND-UP READY / EARLY MATURITY, (1.1 - 2.2), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)								
										2022 AVERAGE					
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto Res	SCN	2022 AVG	21-22 AVG	20-22 AVG	Allegan	Ingham	Saginaw	Sanilac	Height	Lodging
Renk	GENESIS G1760E	1.7	E3	ECL-Trio	3a	R	64.3			60.5	58.1	**63.1**	**75.6**	32	1.8
Renk	GENESIS G1950E	1.9	E3	ECL-Trio		R	62.9	69.6		**66.7**	54.5	60.0	70.5	30	1.0
Renk	GENESIS G1970E	1.9	E3	ECL-Trio	1k	R	63.9			58.9	58.2	61.4	**77.0**	35	1.3
Renk	GENESIS G2150E	2.1	E3	ECL-Trio,Sa	1k	R	**65.5**	69.03	65.8	**67.3**	**62.8**	62.5	69.4	31	1.3
Renk	GENESIS G2270E	2.2	E3	ECL-Trio, Sa	1c	R	63.1			56.1	**60.1**	61.3	**75.1**	35	1.8
Renk	RENK RS183NXF	1.8	XF	ECL-Trio		R	**65.1**			64.5	**60.0**	**65.9**	69.7	33	1.3
Xitavo	XO 1372E	1.3	E3	P,V,I,Obv,Rel		R3,MR14	61.1	67.11		**65.4**	54.6	53.8	70.5	27	1.3
Xitavo	XO 1451E	1.4	E3	P,V,I,Obv,Rel	1k	R3,MR14	64.4	68.1		62.4	**61.6**	60.2	73.3	32	1.1
Xitavo	XO 1632E	1.6	E3	P,V,I,Obv,Rel	3a	R3,MR14	62.3	68.2		**65.4**	55.5	59.6	68.6	29	1.5
Xitavo	XO 1761E	1.7	E3	P,V,I,Obv,Rel	1k	R3,MR14	61.4	66.0	61.5	64.5	55.8	55.9	69.4	29	1.0
Xitavo	XO 1822E	1.8	E3	P,V,I,Obv,Rel	3a	R3,MR14	**65.1**	68.91		63.7	**61.0**	61.0	**74.8**	30	1.8
Xitavo	XO 1971E	1.9	E3	P,V,I,Obv,Rel		R3,MR14	**67.1**	72.64		**66.0**	**61.4**	**67.1**	73.7	31	1.1
Xitavo	XO 2181E	2.1	E3	P,V,I,Obv,Rel	1k	R3,MR14	**66.0**	69.3		**66.7**	***65.6**	59.3	72.2	33	1.2
Xitavo	XO 2282E	2.2	E3	P,V,I,Obv,Rel		R3,MR14	**66.9**	69.3		64.9	**62.8**	62.9	**76.8**	33	1.3
GRAND MEAN							**63.7**			**63.4**	**57.9**	**61.4**	**72.1**	**32**	**1.3**
Max.							**69.1**			**71.4**	**65.6**	**70.8**	**80.7**	**37**	**1.9**
Min.							**59.2**			**53.9**	**45.8**	**50.2**	**62.6**	**27**	**1.0**
LSD (0.05)							**3.8**			**7.7**	**5.9**	**5.5**	**6.4**	**2**	**0**
CV (%)							**7.5**			**9.0**	**7.6**	**6.6**	**6.5**	**8**	**31**

[1] Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code
*** High yield in plot**
^ Data not available because of late arriving seed
Top 1/3 of trial is Bold

Planting yield trials with the research planter at Ingham County plot

TABLE 4. 2022 MICHIGAN CENTRAL ROUND-UP READY / LATE MATURITY, (2.3 - 3.0), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)								
										2022 AVERAGE					
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto RES	SCN	2022 AVG	21-22 AVG	20-22 AVG	Allegan	Ingham	Saginaw	Sanilac	Height	Lodging
Ag Armour	AA2523 E3	2.5	E3	AA Elite	1c	R	**65.4**			**66.6**	57.4	59.3	**78.3**	35	1.6
Dairyland	DSR-2424E	2.4	E3	EG,G,I,LUM	1k	R	**63.2**	67.3		57.8	**62.0**	**62.5**	70.4	35	1.6
Dairyland	DSR-2562E	2.5	E3	EG,G,I,LUM	1k	R	60.4			**64.4**	55.1	59.3	62.6	33	1.3
Dairyland	DSR-2640E	2.6	E3	EG,G,I,LUM	1k	R	60.8	66.2		56.4	**61.2**	**64.0**	61.6	36	1.7
Dairyland	DSR-2717E	2.7	E3	EG,G,I,LUM	1k	R	**65.6**			**62.2**	**67.4**	***65.2**	67.7	35	1.8
Dairyland	DSR-2999E	2.9	E3	EG,G,I,LUM	1k	R	60.3	67.1		56.9	59.4	**61.8**	62.7	37	1.8
Dairyland	DSR-3177E	3.1	E3	EG,G,I,LUM	1c	R	59.1	66.8		56.9	**62.2**	**62.0**	55.4	39	1.8
DF Seeds	DF 3242 N E3	2.4	E3	DFender	1k	R	61.7	66.2		54.7	54.1	59.9	**78.3**	35	1.3
DF Seeds	DF 3251 N E3	2.5	E3	DFender		R	61.1	69.5	65.1	56.3	58.2	54.1	75.7	37	1.6
Dyna-Gro	S23ES32	2.3	E3	Eq-VIP,Sa,Vay	1k	R	62.5	67.7		55.5	**59.6**	60.5	74.3	35	1.8
Dyna-Gro	S25EN02	2.5	E3	Eq-VIP,Sa,Vay	1k	R	**64.4**	69.1		58.4	**61.2**	61.0	**76.9**	36	1.4
Dyna-Gro	S26EN53	2.6	E3	Eq-VIP,Sa,Vay	1c	R	**64.2**			**67.8**	56.8	56.1	**76.2**	36	1.4
Golden Harvest	GH2463E3S	2.4	E3	CM,Vib,Sa		MR3,R14	**66.2**			61.8	57.2	**61.5**	***84.1**	36	1.4
Golden Harvest	GH2505E3	2.5	E3	CM,Vib,Sa		MR3	63.1	70.3	65.3	58.9	58.9	**64.5**	70.3	37	2.1
Growmark	HS 23E10	2.3	E3	ACL,Sa,Cue	1k	R	61.8			55.7	**60.9**	59.1	71.4	36	1.7
Growmark	HS 23F10	2.3	XF	ACL,Sa,Cue	1c	R	62.9			61.0	54.0	56.5	**80.0**	36	1.5
Growmark	HS 24F00	2.4	XF	ACL,Sa,Cue	1c	R	60.4			**63.7**	50.1	53.8	73.9	34	1.3
Growmark	HS 26E20	2.6	E3	ACL,Sa,Cue	1k	R	^			^	49.8	^	^	^	^
Growmark	HS 27E10	2.7	E3	ACL,Sa,Cue	1k,3a	R	59.9			61.8	56.5	57.8	63.4	33	1.6
M & W Seeds	M&W 23E54	2.3	E3	Titan N-H			**63.6**			59.4	57.6	59.1	**78.2**	34	1.5
M & W Seeds	M&W 25E25	2.5	E3	Titan N-H		R3,MR14	62.7	68.1	63.0	60.2	53.4	**62.9**	74.4	36	1.8
M & W Seeds	M&W 26E15	2.6	E3	Titan N-H			^			^	***68.2**	^	^	^	^
M & W Seeds	M&W 27E11	2.7	E3	Titan N-H			**63.4**			**67.7**	56.9	56.4	72.8	36	1.6
M & W Seeds	M&W 29E72	2.9	E3	Titan N-H	1k	R3,MR14	63.2	68.9		**61.9**	56.9	55.5	**78.4**	34	1.8
M & W Seeds	M&W 30E66	3.0	E3	Titan N-H		R3,MR14	57.2	65.0		**63.7**	58.7	54.0	52.7	34	1.8
MCIA	MCIA 2319 LL/GT27	2.3	LL/GT	CM		R	***69.9**	71.5		***69.5**	**66.7**	59.9	**83.6**	36	1.3
MCIA	MCIA 2520 LL/GT27	2.5	LL/GT	CM		R	**65.0**	71.7		**64.0**	56.2	57.1	**82.7**	34	1.3
MSU	E18450GT	2.5	RR1	DFender-N-I	1k,3a	R	60.2	64.5	60.2	57.9	55.1	52.3	75.4	41	2.2
MSU	E19495GT	2.5	RR1	DFender-N-I		R	63.0	67.3		56.2	58.5	56.8	**80.6**	38	2.3
MSU	E19523GT	2.6	RR1	DFender-N-I		R	56.8			56.6	45.6	52.8	72.0	36	2.6
MSU	E19532GT	2.8	RR1	DFender-N-I		R	56.6			59.2	43.9	51.0	72.3	36	2.6
NK Seeds	NK23-T9XF	2.3	XF	CM,Vib,Sa	1c	MR	**65.8**			60.5	**63.3**	**61.8**	**77.6**	35	2.1
Xitavo	XO 2323E	2.3	E3	P,V,I,Obv,Rel	1c	R3,MR14	61.0			56.3	**60.4**	58.4	69.0	36	1.7
Xitavo	XO 2472E	2.4	E3	P,V,I,Obv,Rel	1k	R3,MR14	61.8	67.8		57.2	58.4	**64.4**	67.2	35	1.8
Xitavo	XO 2501E	2.5	E3	P,V,I,Obv,Rel		R3,MR14	61.8	70.6	66.1	58.8	54.4	**61.7**	72.1	38	2.1
Xitavo	XO 2613E	2.6	E3	P,V,I,Obv,Rel	1c	R3,MR14	**65.1**			**63.8**	**63.2**	**61.7**	71.7	37	1.3
Xitavo	XO 2832E	2.8	E3	P,V,I,Obv,Rel	1k	R3,MR14	**65.9**	70.4		**64.2**	**61.2**	58.0	**80.1**	36	1.5
Xitavo	XO 2921E	2.9	E3	P,V,I,Obv,Rel		R3,MR14	58.6			57.1	56.5	56.6	64.6	36	1.2
Xitavo	XO 2963E	2.9	E3	P,V,I,Obv,Rel	1k	R3,R5	62.4			**64.3**	56.8	**63.9**	64.7	35	1.6
GRAND MEAN							**62.3**			**60.4**	**57.8**	**59.0**	**72.3**	**36**	**1.7**
Max.							**69.9**			**69.5**	**67.4**	**65.2**	**84.1**	**41**	**2.6**
Min.							**56.6**			**54.7**	**43.9**	**51.0**	**52.7**	**33**	**1.2**
LSD (0.05)							**3.5**			**7.6**	**5.9**	**6.3**	**8.9**		
CV (%)							**7.0**			**7.7**	**6.3**	**6.6**	**7.6**		

[1] Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code

*** High yield in plot**

^ Data not available because of late arriving seed

Top 1/3 of trial is Bold

MICHIGAN SOYBEAN COMMITTEE

Free Diagnostic Services for Michigan Soybean Farmers

Soybean Cyst Nematode (SCN) Analysis

SCN is a major limiting factor in Michigan's soybean production. To better manage SCN, soil sampling by a diagnostic laboratory is necessary. The Michigan Soybean Committee covers the costs of samples submitted to the MSU Diagnostic Lab.

Herbicide Resistant Weed Screening

Herbicide resistant weeds are a growing concern for Michigan soybean farmers. The Michigan Soybean Committee sponsors the testing of select species including pigweeds/amaranths, ragweeds, horseweed and common lambsquarters for Michigan soybean growers.

Submit Samples:

Forms with directions for submitting soil and weed seed samples can be found online at michigansoybean.org/forms-and-resources.

michigansoybean.org

Funding for these programs is made possible by the Michigan soybean checkoff program.

TABLE 5. 2022 MICHIGAN SOUTHERN ZONE ROUND-UP READY / EARLY MATURITY, (1.5 - 2.7), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)								
										2022 AVERAGE					
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto Resist.	SCN	2022 AVG	21-22 AVG	20-22 AVG	Hillsdale	Ingham	Lenawee	St. Joseph	Height	Lodging
AGRA Solutions	KEY 1226 GL	2.6	GT27	Encase	1c	MR	73.7	67.6		82.0	64.4	72.8	75.7	74	37.0
AGRA Solutions	KEY 1321 GL	2.1	GT27	Encase		R3MR14	73.7			75.4	60.3	75.6	**83.6**	74	32.0
Dairyland	DSR-1919E	1.9	E3	EG,G,I,LUM	1k	R	**76.1**			77.7	**66.9**	**77.8**	82.0	76	34.0
Dairyland	DSR-2030E	2.0	E3	EG,G,I,LUM	3a,1c	R	72.7	69.0		76.8	62.0	76.7	75.4	73	32.0
Dairyland	DSR-2040E	2.0	E3	EG,G,I,LUM	1k	R	**76.2**	69.6		**83.1**	60.9	**79.0**	81.9	76	30.0
Dairyland	DSR-2188E	2.1	E3	EG,G,I,LUM	1k	R	**77.6**			77.2	**69.5**	**79.2**	**84.4**	78	36.0
Dairyland	DSR-2424E	2.4	E3	EG,G,I,LUM	1k	R	74.3	68.6		77.3	**68.9**	70.5	80.7	74	36.0
Dairyland	DSR-2562E	2.5	E3	EG,G,I,LUM	1k	R	74.6			79.3	64.5	72.0	**82.4**	75	34.0
Dairyland	DSR-2640E	2.6	E3	EG,G,I,LUM	1k	R	74.4	66.3		77.5	**71.4**	74.8	73.8	74	35.0
Dairyland	DSR-2717E	2.7	E3	EG,G,I,LUM	1k	R	**80.1**			82.4	**72.2**	**78.6**	**87.5**	80	36.0
DF Seeds	DF 3242 N E3	2.4	E3	DFender	1k	R	76.0			80.3	**68.8**	76.0	78.9	76	37.0
DF Seeds	DF 3251 N E3	2.5	E3	DFender		R	***80.2**	73.6	66.7	**87.1**	**68.0**	**77.6**	**88.1**	80	37.0
DF Seeds	DF 3272 N E3	2.7	E3	DFender	1c	R	70.2			75.1	63.2	69.6	73.0	70	36.0
Dyna-Gro	S25EN02	2.5	E3	Eq-VIP,Sa,Vay	1k	R	73.4	69.4		74.7	62.2	74.7	81.9	73	36.0
Dyna-Gro	S26EN53	2.6	E3	Eq-VIP,Sa,Vay	1c	R	**76.6**			81.9	65.4	72.6	**86.7**	77	37.0
Dyna-Gro	S26XF42	2.6	XF	Eq-VIP,Sa,Vay		R	75.9			**84.6**	58.4	75.6	**84.8**	76	37.0
Golden Harvest	GH2505E3	2.5	E3	CM,Vib,Sa		MR3	**79.6**	74.3		***88.6**	64.5	75.6	***89.7**	80	37.0
Golden Harvest	GH2610E3	2.6	E3	CM,Vib,Sa	1k	MR1,MR3,MR5	74.5			78.9	65.6	73.0	80.3	75	35.0
Golden Harvest	GH2653XF	2.6	XF	CM,Vib,Sa	1c	MR3	**78.1**			**84.9**	63.3	**78.9**	**85.4**	78	34.0
Growmark	HS 18E00	1.8	E3	ACL,Sa,Cue		R	74.9			77.8	59.3	**77.8**	**84.5**	75	32.0
Growmark	HS 18F20	1.8	XF	ACL,Sa,Cue		R	73.5			73.9	61.0	**77.1**	82.0	74	33.0
Growmark	HS 21E20	2.1	E3	ACL,Sa,Cue	1c	R	^			81.5	64.0	^	**87.9**	56	23.0
Growmark	HS 21F20	2.1	XF	ACL,Sa,Cue	1c,3a	R	71.1			82.5	62.8	71.7	67.5	71	36.0
Growmark	HS 23E10	2.3	E3	ACL,Sa,Cue	1k	R	74.4			82.5	64.5	73.3	77.3	74	36.0
Growmark	HS 23F10	2.3	XF	ACL,Sa,Cue	1c	R	72.5			80.4	63.6	73.0	73.2	73	37.0
Growmark	HS 24F00	2.4	XF	ACL,Sa,Cue	1c	R	73.5			81.9	60.8	72.3	79.1	74	36.0
Growmark	HS 26E20	2.6	E3	ACL,Sa,Cue	1k	R	^			80.7	64.9	^	77.5	54	24.0
Growmark	HS 27E10	2.7	E3	ACL,Sa,Cue	1k,3a	R	**76.3**			**83.3**	**68.0**	**76.9**	76.9	76	35.0
M & W Seeds	M&W 21E10	2.1	E3	Titan N-H			^			79.3	**66.8**	^	82.1	55	23.0
M & W Seeds	M&W 22E63	2.2	E3	Titan N-H		R3,MR14	73.7			**82.9**	**67.8**	75.9	68.3	74	33.0
M & W Seeds	M&W 23E54	2.3	E3	Titan N-H			75.4			82.6	**67.0**	76.3	75.5	75	35.0
M & W Seeds	M&W 25E25	2.5	E3	Titan N-H		R3,MR14	**79.2**	74.1	67.1	**83.8**	**71.5**	**77.1**	**84.5**	79	39.0
M & W Seeds	M&W 26E15	2.6	E3	Titan N-H			^			**83.0**	***72.9**	^	**86.4**	58	25.0
M & W Seeds	M&W 27E11	2.7	E3	Titan N-H			**78.1**			**84.8**	**68.3**	75.0	**84.4**	78	37.0
MCIA	MCIA 2319 LL/GT27	2.3	LL/GT	CM		R	**76.2**	71.7		82.2	66.3	76.7	79.8	76	36.0
MCIA	MCIA 2520 LL/GT27	2.5	LL/GT	CM		R	74.4	72.4		**83.0**	63.9	70.0	80.6	74	32.0
MSU	E18450GT	2.5	RR1	DFender-N-I	1k,3a	R	69.8	67.2	62.2	76.2	59.5	68.8	74.8	70	41.0
MSU	E19495GT	2.5	RR1	DFender-N-I		R	68.3	63.7		76.5	57.3	70.9	68.4	68	37.0
MSU	E19497GT	1.5	RR1	DFender-N-I	3a	R	68.7	65.0		74.3	57.5	71.0	71.9	69	35.0
MSU	E19523GT	2.6	RR1	DFender-N-I		R	65.2			74.0	49.0	65.5	72.3	65	34.0
NK Seeds	NK22-R2E3	2.2	E3	CM,Vib,Sa	1c	MR	73.3			72.7	60.6	76.2	**83.8**	73	33.0
NK Seeds	NK24-A2E3S	2.4	E3	CM,Vib,Sa	1a	MR	**77.9**			**85.5**	**69.3**	74.0	**82.7**	78	36.0
NK Seeds	NK25-C9XF	2.5	XF	CM,Vib,Sa	1c	MR	74.5	71.6		76.8	66.1	74.6	80.4	75	36.0

TABLE 5. 2022 MICHIGAN SOUTHERN ZONE ROUND-UP READY / EARLY MATURITY, (1.5 - 2.7), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)								
										2022 AVERAGE					
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto Resist.	SCN	2022 AVG	21-22 AVG	20-22 AVG	Hillsdale	Ingham	Lenawee	St. Joseph	Height	Lodging
Renk	GENESIS G2550E	2.5	E3	ECL-Trio,Sa		R	75.4	73.0	67.2	**84.5**	**67.7**	74.2	75.3	75	38.0
Renk	GENESIS G2570ES	2.5	E3	ECL-Trio,Sa	1a	R	**78.9**			**86.2**	66.1	**78.2**	**85.1**	79	36.0
Renk	RENK RS253NXF	2.5	XF	ECL-Trio,Sa	1c	R	75.2			**84.1**	63.2	**78.3**	75.2	75	38.0
Wellman	W6125 E	2.5	E3	Encase		R3,MR14	74.5	72.3	67.0	**82.9**	63.2	76.4	75.6	75	38.0
Wellman	W6319 E	1.9	E3	Encase	1k		75.6			82.8	65.3	**78.6**	75.5	76	37.0
Wellman	W6323 E	2.3	E3	Encase	1c,3a		75.2			80.0	**67.8**	75.9	77.1	75	34.0
Xitavo	XO 2181E	2.1	E3	P,V,I,Obv,Rel	1k	R3,MR14	75.2	69.0	62.4	82.6	65.7	***80.2**	72.5	75	33.0
Xitavo	XO 2282E	2.2	E3	P,V,I,Obv,Rel		R3,MR14	74.1	68.6		82.5	62.5	73.8	77.5	74	32.0
Xitavo	XO 2323E	2.3	E3	P,V,I,Obv,Rel	1c	R3,MR14	74.9			**84.5**	63.1	**78.3**	73.8	75	36.0
Xitavo	XO 2472E	2.4	E3	P,V,I,Obv,Rel	1k	R3,MR14	**76.9**	69.8		82.8	**67.5**	**77.8**	79.4	77	36.0
Xitavo	XO 2501E	2.5	E3	P,V,I,Obv,Rel		R3,MR14	**78.6**	73.3	65.6	**84.4**	**69.0**	76.8	**84.2**	79	40.0
Xitavo	XO 2613E	2.6	E3	P,V,I,Obv,Rel	1c	R3,MR14	**77.1**			**83.8**	62.4	**76.9**	**85.4**	77	36.0
GRAND MEAN							**74.8**			**80.9**	**64.5**	**75.0**	**79.3**	**75**	**35.4**
Max.							**80.2**			**88.6**	**72.9**	**80.2**	**89.7**	**80**	**40.6**
Min.							**65.2**			**72.7**	**49.0**	**65.5**	**67.5**	**54**	**23.3**
LSD (0.05)							**3.2**			**5.0**	**7.2**	**4.2**	**7.2**		
CV (%)							**5.4**			**4.6**	**5.6**	**4.1**	**6.6**		

[1] Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code
*** High yield in plot**
^ Data not available because of late arriving seed
Top 1/3 of trial is Bold

The Sanilac location signed up for a field day.

TABLE 6. 2022 MICHIGAN SOUTHERN ZONE ROUND-UP READY / LATE MATURITY, (2.8 - 3.3), SOYBEAN VARIETY TRIAL REPORT

							YIELD (BU/AC)							
										2022 AVERAGE				
BRAND	VARIETY	Maturity Group	Herb	TMT[1]	Phyto Resist.	SCN	2022 AVG	21-22 AVG	20-22 AVG	Hillsdale	Lenawee	St. Joseph	Height	Lodging
Ag Armour	AA3122 E3	3.0	E3	AA Elite	1c	R	78.8			**85.0**	70.5	80.8	39	2.3
AGRA Solutions	KEY 1031 GL	3.1	GT27	Encase	1c	MR	79.9	73.7		80.8	**74.8**	**84.1**	37	2.0
Dairyland	DSR-2999E	2.9	E3	EG,G,I,LUM	1k	R	75.3	69.6		74.2	71.0	80.6	39	1.9
Dairyland	DSR-3177E	3.1	E3	EG,G,I,LUM	1c	R	**80.8**	75.3		82.8	71.3	**88.4**	39	2.0
Dyna-Gro	S28EN22	2.8	E3	Eq-VIP,Sa,Vay	1k,3a	MR	73.7	70.4		75.0	68.9	77.3	36	1.3
Dyna-Gro	S28XF92S	2.8	XF	Eq-VIP,Sa,Vay	1c	R	76.8	74.6		80.3	69.8	80.4	39	1.8
Dyna-Gro	S29EN62	2.9	E3	Eq-VIP,Sa,Vay	1k	R	77.1	73.9		**84.8**	73.7	72.7	35	1.3
Dyna-Gro	S31EN91	3.1	E3	Eq-VIP,Sa,Vay	1c	R	78.5	75.1	69.6	**86.0**	69.6	79.9	39	2.1
Golden Harvest	GH2818E3	2.8	E3	CM,Vib,Sa	1k	R3,MR14	75.8	71.1	66.1	78.6	**75.9**	72.9	36	1.4
Golden Harvest	GH3023XF	3.0	XF	CM,Vib,Sa	1c	R3	**80.8**			78.3	**78.1**	**85.8**	37	1.1
Golden Harvest	GH3043E3	3.0	E3	CM,Vib,Sa	3a	R3,MR14	**79.9**			79.2	71.2	**89.4**	34	1.4
M & W Seeds	M&W 29E72	2.9	E3	Titan N-H	1k	R3,MR14	79.0	74.2		83.4	72.0	81.7	34	1.3
M & W Seeds	M&W 30E66	3.0	E3	Titan N-H		R3,MR14	74.6	70.6		77.4	72.1	74.3	36	1.4
MCIA	MCIA 2820 LL/GT27	2.8	LL/GT	CM		R	**82.4**			**85.7**	**78.1**	**83.6**	36	1.2
MSU	E19532GT	2.8	RR1	DFender-N-I		R	65.0			71.9	61.4	61.7	35	2.8
NK Seeds	NK29-Z4E3	2.9	E3	CM,Vib,Sa	1k,3a	MR	73.8			74.7	71.5	75.1	36	1.2
Renk	GENESIS G2960E	2.9	E3	ECL-Trio,Sa	1k	R	**80.5**	75.6		***87.8**	**76.0**	77.7	35	1.2
Wellman	W6131 E	3.1	E3	Encase	1c	R3,MR14	**80.5**	72.8	67.1	79.9	74.1	**87.5**	38	2.6
Wellman	W6227 E	2.7	E3	Encase	1c	R3,MR14	74.1	70.2		81.3	72.5	68.6	38	1.4
Wellman	W6330 E	3.0	E3	Encase	1c		***83.7**			**86.1**	***79.9**	**85.0**	39	1.4
Xitavo	XO 2832E	2.8	E3	P,V,I,Obv,Rel	1k	R3,MR14	79.0	74.4		**84.6**	**75.1**	77.4	34	1.1
Xitavo	XO 2921E	2.9	E3	P,V,I,Obv,Rel		R3,MR14	78.9			81.5	**74.6**	80.7	39	1.2
Xitavo	XO 2963E	2.9	E3	P,V,I,Obv,Rel	1k	R3,R5	**81.8**			**84.5**	70.5	***90.6**	36	1.7
Xitavo	XO 3131E	3.1	E3	P,V,I,Obv,Rel	1c	R3,MR14	79.2	75.1	69.5	**84.1**	72.1	81.4	37	2.2
Xitavo	XO 3341E	3.3	E3	P,V,I,Obv,Rel		R3,MR14	**80.2**	73.1	65.4	75.3	**78.0**	**87.4**	38	2.3
GRAND MEAN							**78.0**			**80.9**	**72.9**	**80.2**	**37**	**1.7**
Max.							**83.7**			**87.8**	**79.9**	**90.6**	**39**	**2.8**
Min.							**65.0**			**71.9**	**61.4**	**61.7**	**34**	**1.1**
LSD (0.05)							**4.3**			**6.1**	**4.6**	**9.4**		
CV (%)							**5.9**			**5.5**	**4.6**	**7.1**		

[1] Seed Treatment: See 'Seed Treatment' paragraph (under 'Using the Data') for product code

*** High yield in plot**

^ Data not available because of late arriving seed

Top 1/3 of trial is Bold

Update on Phytophthora root rot management

Marty Chilvers and Austin McCoy, MSU Field Crops Pathology

Phytophthora stem and root rot is one of the diseases that we occasionally must contend with here in Michigan. The disease is caused by the water mold, *Phytophthora sojae*, which is capable of surviving in the soil for many years. After emergence plant stand loss may become apparent, and by June additional symptoms may be showing such as root rot and plant wilting. In managing any issue it's important to know what you are managing for. Unfortunately, it can be difficult to differentiate the causes of seedling and root rot diseases. If in doubt samples can be submitted to MSU's Plant and Pest Diagnostics lab (www.canr.msu.edu/pestid/).

Mid to late June is a good time to scout for 'classic' Phytophthora symptoms, which consist of a brown lesion running from the soil line often up the side of a stem. Phytophthora should be managed by using a combination of seed treatments, single-gene resistance (*Rps* genes), and field tolerance. While seed treatments typically only protect seeds and seedlings for 2-3 weeks, variety resistance can offer season long reductions in disease. A recent survey conducted by our lab and supported by the Michigan Soybean Committee identified that the most common *Rps* genes for Phytophthora management, *Rps* 1c and 1k, are no longer effective in Michigan. The graph below demonstrates that the majority of *Phytophthora* isolates tested were able to cause disease on soybean varieties containing those genes. We did find the genes *Rps* 3a, 3c and 4 to be effective at controlling most isolates, however, only *Rps* 3a is available in Michigan.

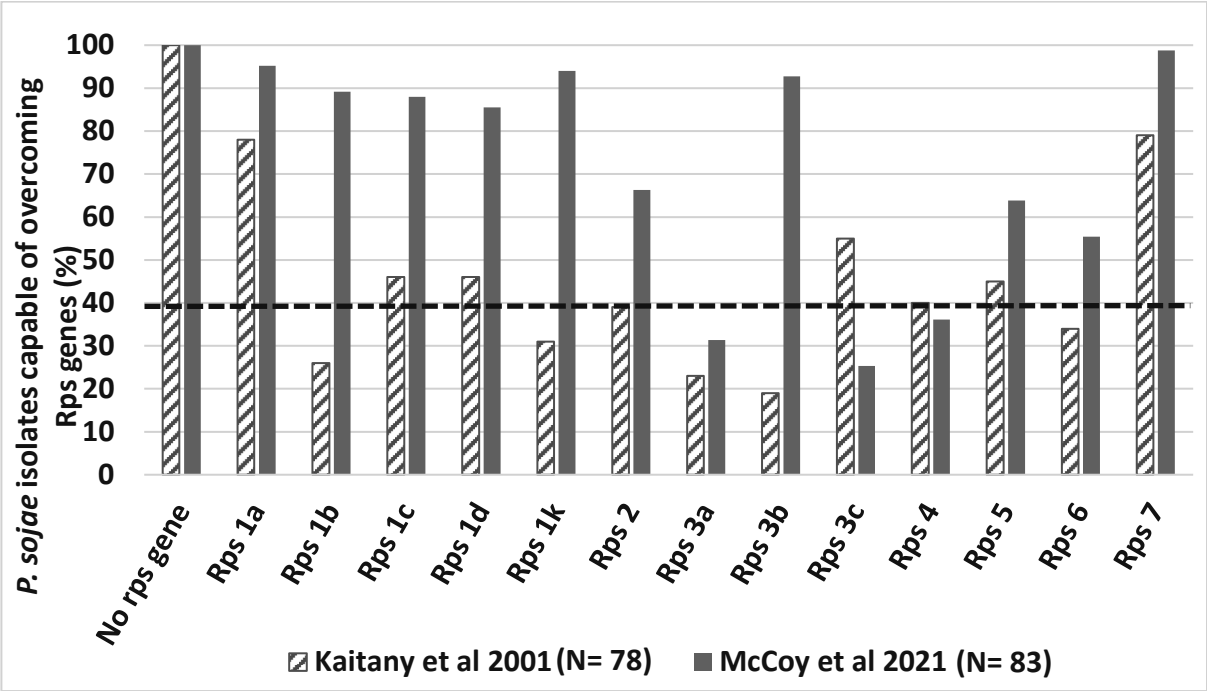

Figure: Graph demonstrating the percentage of *Phytophthora sojae* isolates in Michigan that are capable of overcoming Rps resistance genes. Note the general increase of *Phytophthora sojae* isolates that can overcome the various resistance genes in 2021 vs 2001.

We were also able to use this collection of *Phytophthora sojae* isolates from across Michigan to determine their sensitivity to fungicide seed treatments. We screened products such as metalaxyl/mefenoxam which is a component of most seed treatments, and newer products such as oxathiapiprolin (Lumisena™), and ethaboxam (Intego™). To date all isolates of *Phytophthora sojae* appear to be sensitive to these fungicides. Although a seed treatment will not eliminate Phytophthora it will help reduce disease severity, particularly when paired with plant resistance. Plant resistance will remain a keystone to disease management and as such we are actively working with the MSU soybean breeding program to identify new sources of resistance to this disease.

INDEX FOR 2022 SOYBEAN VARIETY PERFORMANCE TRIALS

There are 160 varieties from 19 private seed companies plus 42 MSU varieties entered in seven county test sites in the 2022 Soybean Variety Performance Trials. **The first number within parentheses refer to the table in which the variety appears.** Company names used in association with variety numbers refer to the brand, and the numbers are the variety designation.
The SCN source of resistance if any, is listed in a second parentheses. PI88788 is abbreviated as P8.

TABLE 1 Central Conventional	TABLE 2 Southern Conventional	TABLE 3 Central Early Roundup Ready	TABLE 4 Central Late Roundup Ready	TABLE 5 Southern Early Roundup Ready	TABLE 6 Southern Late Roundup Ready
Allegan	Hillsdale	Allegan	Allegan	Hillsdale	Hillsdale
Ingham	Ingham	Ingham	Ingham	Ingham	Ingham
Saginaw	Lenawee	Saginaw	Saginaw	Lenawee	Lenawee
Sanilac	St. Joseph	Sanilac	Sanilac	St. Joseph	St. Joseph

Ag Armour Seeds
Ag Armour AA1923 E3 (3) (P8)
Ag Armour AA2021 E3 (3) (P8)
Ag Armour AA2523 E3 (4) (P8)
Ag Armour AA3122 E3 (6) (P8)

AGRA Solutions, LLC
Agra Solutions KEY 1031 GL (6) (P8)
Agra Solutions KEY 1226 GL (5) (P8)
Agra Solutions KEY 1321 GL (5) (P8)

Benson Hill
Benson Hill E16UP133 (1) (P8)
Benson Hill E24H930 (2) (P8)
Benson Hill N21D001 (1) (P8)
Benson Hill N2358 (1,2) (P8)

Dairyland Seed
Dairyland DSR-1121E (3) (P8)
Dairyland DSR-1290E (3) (P8)
Dairyland DSR-1450E (3) (P8)
Dairyland DSR-1505E (3) (P8)
Dairyland DSR-1673E (3) (P8)
Dairyland DSR-1820E (3) (P8)
Dairyland DSR-1919E (3,5) (PEKING)
Dairyland DSR-2023 (1,2) (P8)
Dairyland DSR-2030E (3,5) (P8)
Dairyland DSR-2040E (3,5) (P8)
Dairyland DSR-2188E (3,5) (PEKING)
Dairyland DSR-2424E (4,5) (PEKING)
Dairyland DSR-2502 (1,2)
Dairyland DSR-2562E (4,5) (P8)
Dairyland DSR-2640E (4,5) (P8)
Dairyland DSR-2717E (4,5) (PEKING)
Dairyland DSR-2830 (1,2) (P8)
Dairyland DSR-2999E (4,6) (P8)
Dairyland DSR-3177E (4,6) (P8)

DF SEEDS, LLC
DF DF 151 N (1) (P8)
DF DF 155 F (1,2)
DF DF 187 N (1) (P8)
DF DF 203 N (1) (P8)
DF DF 210 N (1) (PEKING)
DF DF 231 N (1) (P8)
DF DF 260 N (1,2) (P8)
DF DF 262 N F (1,2) (P8)
DF DF 282 N (2) (P8)
DF DF 3141 N E3 (3) (P8)
DF DF 3172 N E3 (3) (P8)
DF DF 3191 N E3 (3) (P8)
DF DF 3211 N E3 (3) (P8)
DF DF 3223 N E3 (3) (P8)
DF DF 3242 N E3 (4,5) (P8)
DF DF 3251 N E3 (4,5) (P8)
DF DF 3272 N E3 (5) (P8)

Dyna-Gro Seed
Dyna-Gro S14EN22 (3) (P8)
Dyna-Gro S17XF02 (3) (P8)
Dyna-Gro S18EN52 (3) (P8)
Dyna-Gro S19XF62 (3) (P8)
Dyna-Gro S20EN92 (3) (P8)
Dyna-Gro S21EN81 (3) (P8)
Dyna-Gro S23ES32 (4) (P8)
Dyna-Gro S2409N (1,2) (P8)
Dyna-Gro S25EN02 (4,5) (PEKING)
Dyna-Gro S26EN53 (4,5) (P8)
Dyna-Gro S26XF42 (5) (P8)
Dyna-Gro S2872N (2) (P8)
Dyna-Gro S28EN22 (6) (P8)
Dyna-Gro S28XF92S (6) (P8)
Dyna-Gro S29EN62 (6) (P8)
Dyna-Gro S31EN91 (6) (P8)
Dyna-Gro SX22620EN (3) (PEKING)

GDM Seeds
GDM V2122 (1)
GDM V2423 (1) (P8)
GDM V2922 (1) (P8/P1437654)

Golden Harvest
Golden Harvest GH1763E3 (3) (P8)
Golden Harvest GH1922E3 (3) (P8)
Golden Harvest GH1973E3S (3) (PEKING)
Golden Harvest GH2083E3S (3) (P8)
Golden Harvest GH2292E3 (3) (P8)
Golden Harvest GH2463E3S (4) (P8)
Golden Harvest GH2505E3 (4,5) (P8)
Golden Harvest GH2610E3 (5) (PEKING)
Golden Harvest GH2653XF (5) (P8)
Golden Harvest GH2818E3 (6) (P8)
Golden Harvest GH3023XF (6) (P8)
Golden Harvest GH3043E3 (6) (P8)

Growmark
Growmark HS 15C00 (1,2) (P8)
Growmark HS 18E00 (3,5) (P8)
Growmark HS 18F20 (3,5) (P8)
Growmark HS 21E20 (3,5) (P8)
Growmark HS 21F20 (3,5) (P8)
Growmark HS 23E10 (4,5) (P8)
Growmark HS 23F10 (4,5) (P8)
Growmark HS 24F00 (4,5) (P8)
Growmark HS 26E20 (4,5) (P8)
Growmark HS 27E10 (4,5) (P8)
Growmark HS 28C20 (4,5) (P8)

LG Seeds
LG LGS1684 (1)
LG LGS2020 (1,2) (P8)
LG LGS2329 (1,2) (PEKING)
LG LGS2801 (2) (P8)

M&W Seeds
M & W M&W 21E10 (3,5) (PEKING)
M & W M&W 22E63 (3,5) (P8)
M & W M&W 23E54 (4,5)
M & W M&W 25E25 (4,5) (P8)
M & W M&W 26E15 (4,5) (PEKING)
M & W M&W 27E11 (4,5)
M & W M&W 29E72 (4,6) (P8)
M & W M&W 30E66 (4,6) (P8)

Michigan Crop Improvement Association
MCIA MCIA 2119 LL/GT27 (3)
MCIA MCIA 2221 LL/GT27 (3)
MCIA MCIA 2319 LL/GT27 (4,5)
MCIA MCIA 2520 LL/GT27 (4,5)
MCIA MCIA 2820 LL/GT27 (6)

MSU
MSU E07158-T (1)
MSU E11128T (1) (P8)
MSU E12076T-03 (1,2) (P8)
MSU E13268 (1,2)
MSU E14077 (1,2) (P8)
MSU E15165T (1) (P8)
MSU E15338 (1) (P8)
MSU E15339 (2) (P8)
MSU E15345 (1,2) (P8)
MSU E15346T (1)
MSU E15351 (1,2) (P8)
MSU E15901 (1,2) (P8)
MSU E16099 (1)
MSU E16346 (1)
MSU E17040 (2) (P8)
MSU E17062 (2)
MSU E17181T (1)
MSU E17203 (1,2) (P8)
MSU E17283 (2) (P8)
MSU E18331-34 (1,2) (P8)
MSU E18450 (1) (P8)
MSU E18450GT (4,5) (P8)
MSU E18638T (1,2) (P8)
MSU E19191 (1)
MSU E19307T (1,2) (P8)
MSU E19314T (1,2) (P8)
MSU E19323T (1) (P8)
MSU E19412 (1,2) (P8)
MSU E19495GT (4,5)
MSU E19497GT (3,5)
MSU E19523GT (4,5)
MSU E19532GT (4,6)
MSU E19582 (1) (P8)
MSU E19689-30 (1,2)
MSU E20078 (1,2) (P8)
MSU E20303T (1,2) (P8)
MSU E20316T (1,2) (P8)
MSU E20329 (1,2) (P8)
MSU E20351 (1,2) (P8)
MSU E20352 (1,2) (P8)
MSU E20355 (1,2) (P8)
MSU E20394 (1) (P8)

NK Seeds
NK Nk13-Y4XF (3) (P8)
NK Nk14-W6E3 (3) (PEKING)
NK NK19-T8E3S (3) (PEKING)
NK NK20-B6E3S (3) (P8)
NK NK22-C4E3 (3) (P8)
NK NK22-R2E3 (3,5) (P8)
NK NK23-T9XF (4) (P8)
NK NK24-A2E3S (5) (P8)
NK NK25-C9XF (5) (P8)
NK NK29-Z4E3 (6) (P8)

RENK SEED
Renk GENESIS G1560E (3) (P8)
Renk GENESIS G1760E (3) (P8)
Renk GENESIS G1950E (3) (P8)
Renk GENESIS G1970E (3) (P8)
Renk GENESIS G2150E (3) (P8)
Renk GENESIS G2270E (3) (P8)
Renk GENESIS G2550E (5) (P8)
Renk GENESIS G2570ES (5) (P8)
Renk GENESIS G2960E (6) (P8)
Renk RENK RS183NXF (3) (P8)
Renk RENK RS253NXF (5) (P8)

Southwest Seeds Inc.
Southwest AAC Wigle (1,2) (P8)

Wellman Seeds, Inc.
Wellman W6125 E (5) (P8)
Wellman W6131 E (6) (P8)
Wellman W6227 E (6) (P8)
Wellman W6319 E (5) (P8)
Wellman W6323 E (5) (P8)
Wellman W6330 E (6) (P8)

Xitavo
Xitavo XO 1372E (3) (P8)
Xitavo XO 1451E (3) (P8)
Xitavo XO 1632E (3) (P8)
Xitavo XO 1761E (3) (P8)
Xitavo XO 1822E (3) (P8)
Xitavo XO 1971E (3) (P8)
Xitavo XO 2181E (3,5) (P8)
Xitavo XO 2282E (3,5) (P8)
Xitavo XO 2323E (4,5) (P8)
Xitavo XO 2472E (4,5) (P8)
Xitavo XO 2501E (4,5) (P8)
Xitavo XO 2613E (4,5) (P8)
Xitavo XO 2832E (4,6) (P8)
Xitavo XO 2921E (4,6) (P8)
Xitavo XO 2963E (4,6) (PEKING)
Xitavo XO 3131E (6) (P8)
Xitavo XO 3341E (6) (P8)

Zeeland Farm Services, Inc.
ZFS e13H988 (1) (P8)
ZFS ZFS 1326 (1,2) (P8)
ZFS ZFS 1721 (1) (P8)
ZFS ZFS 2221 (1,2) (P8)
ZFS ZFS 24019HO (1,2) (P8)
ZFS ZFS 2521HO (1,2) (P8)
ZFS ZFS 2819HO (1,2) (P8)

MICHIGAN SOYBEAN COMMITTEE
3055 W. M-21
St. Johns, MI 48879

MICHIGAN SOYBEAN COMMITTEE

The Soybean Checkoff
michigansoybean.org

Fellow Soybean Producers,

The investment of checkoff funds in the Michigan State University soybean breeding program is an example of our mission to "Manage checkoff resources to increase return on investment for Michigan soybean farmers while enhancing sustainable soybean production". We feel confident in the value that the breeding program creates including its soybean variety performance evaluation and hope that it is a valuable resource for your farm.

We wish you a safe and profitable 2023 season.

Sincerely,
Michigan Soybean Committee Directors

District #1 Dan Rajzer, Decatur
District #2 Pete Crawford, Dansville
District #3 Laurie Isley, Palmyra
District #4 Scott Wilson, Lexington
District #5 John Burk, Bay City
District #6 Mark Senk, Owosso
District #7 Ryan Drozd, Allegan