



**THE OHIO STATE
UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

THE 2022 OHIO SOYBEAN PERFORMANCE TRIALS

Allen Geyer, Matthew Hankinson, John McCormick, and Laura Lindsey
Department of Horticulture and Crop Science
Ohio State University Extension and OARDC

INTRODUCTION

The purpose of the Ohio Soybean Performance Trials is to evaluate soybean varieties for yield and other agronomic characteristics. This evaluation gives soybean producers comparative information for selecting the best varieties for their unique production systems.

FIELD PLOT DESIGN

The entries for each test site were planted in a randomized complete block design. Each entry was replicated four times and planted in plots 28 ft long and 5 ft wide containing four rows seeded at 15-inch row width. Seeding rate was 150,000 seeds per acre. Corn was the previous crop at all locations. All locations were no-till except the S2 location, which was planted into a stale seedbed. Farmer cooperators sprayed pre-emergence herbicides (varied by location). All locations were sprayed post-emergence with First Rate, Flexstar, and Select Max.

METHOD OF CONDUCTING TRIALS

Entries in Trials. Performance of entries in The Ohio Soybean Performance Trials are published if seed will be available to Ohio soybean producers for the following planting season. All 2022 entries were submitted voluntarily by seed companies. Entry fee charges were paid per entry and region.

Test by Maturity and Type. Varieties were grouped, tested and analyzed by maturity (early and late). Conventional (CV), RoundUp Ready (RR), Enlist (EN), XtendFlex (XF), sulfonylurea-tolerant soybean (STS), Liberty Link/glyphosate tolerant (LLGT27), EN/STS, and XF/STS varieties were tested in the same block to allow for head-to-head comparisons. Varieties are comparable within a location and maturity grouping (early or late). Conventional herbicides were sprayed on all entries. Use the table below to find varieties by region and maturity.

2022 Tables by Region and Maturity Grouping

North	Early (1.9-3.1)	Table 3
	Late (3.2-3.8)	Table 4
Central	Early (2.5-3.3)	Table 5
	Late (3.4-4.3)	Table 6
South	Early (2.9-3.6)	Table 7
	Late (3.7-4.3)	Table 8

MEASUREMENTS AND RECORDS

Relative Maturity. Relative maturity (RM) is a rating designed to account for all of the factors that affect maturity date and includes variety, planting date, weather, and latitude. Maturity is defined as the “95% brown pods” stage. A variety with a RM rating of 3.5 should reach the 95% brown pod stage 5 days later than a variety with a rating of 3.0. RM was submitted by seed companies.

Lodging Score. There was no lodging in 2022.

Seed Size is reported as number of seeds per pound. Seed size was determined from varieties grown at the C2 location.

Yield. Each soybean variety was harvested when the moisture content was between 8 and 14 percent and yields reported in bushels per acre at 13 percent moisture.

Protein, Oil %. Analysis was determined by near infrared transmittance technology. The test was performed using a Foss NIR whole grain analyzer and is reported at 13 percent moisture. Protein and oil were determined from varieties grown at the C2 location.

LSD. A Least Significant Difference (LSD) for yield was computed for each location and maturity grouping. LSDs are reported in bushels per acre at 13 percent moisture. Yields of two varieties within a location and maturity grouping are significantly different 90% of the time if their yields differ by more than the LSD value shown for that maturity group. A double asterisk (**) is used to denote the variety with the highest yield within a location and maturity grouping. A single asterisk (*) is used to denote varieties with yield not statistically different than the highest yielding variety.

DATA USE. Inclusion of entries in the Ohio Soybean Performance Trials does not constitute an endorsement of a particular entry by the Ohio State University, Ohio Agricultural Research and Development Center, or Ohio State University Extension.

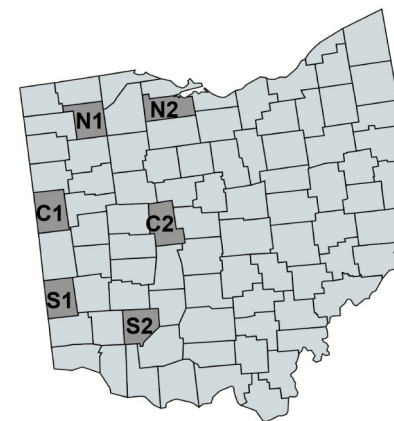


Table 1: The 2022 Ohio Soybean Performance Trials, Site Descriptions

	N1	N2	C1	C2	S1	S2
	Henry Co.	Sandusky Co.	Mercer Co.	Union Co.	Preble Co.	Clinton Co.
Soil texture	Clay	Clay loam	Clay	Silty clay loam	Clay loam	Silt loam
Organic matter (%)	3.8	3.3	3.0	3.1	2.9	2.8
Soil pH	6.4	5.9	7.3	6.4	6.1	6.3
Soil Test P-Mehlich (ppm)	39	17	97	40	36	99
Soil Test K (ppm)	148	98	163	99	162	186
Plant date	May 13, 2022	June 5, 2022	June 3, 2022	June 1, 2022	May 11, 2022	May 12, 2022
Harvest date					Oct. 6, 2022	Oct. 10, 2022

TABLE 7: The 2022 Ohio Soybean Performance Trials, South Region - Early Varieties (RM 2.9-3.6)

Variety	Entry		Physical Characteristics			South Region Yield (bu/ac)				
	Brand/Company Name	Type	RM	Seeds/lb.	% Protein	% Oil	S1	S2	'22 Mean	'21-'22 Mean
E3760 E3	Ebberts Field Seeds, Inc.	EN	3.6				74.1**	83.5*	78.8	
E3560 E3	Ebberts Field Seeds, Inc.	EN	3.5				69.2*	83.8**	76.5	73.1
NK36-H9E3S	NK Seeds	EN	3.6				69.9*	80.7*	75.3	
SC7332E™	Seed Consultants, Inc.	EN	3.3				69.5*	79.6	74.6	
333XF	Ebberts Field Seeds, Inc.	XF	3.3				70.7*	78.1	74.4	
AG35XF1	Asgrow	XF	3.5				70.4*	77.7	74.1	75.4
XO 3651E	Xitavo Soybean Seed	EN	3.6				68.4	79.6	74.0	73.6
3531XF	Stewart Seeds	XF	3.5				70.5*	77.3	73.9	74.4
AGI 1736AE	Advanced Genetics, Inc.	EN	3.6				66.2	80.7*	73.5	
V3632S	Virtue Seeds	CV	3.6				67.5	79.3	73.4	
GH3373E3S	Golden Harvest	EN, STS	3.3				69.1*	77.6	73.4	
E3370 E3	Ebberts Field Seeds, Inc.	EN	3.2				68.2	77.2	72.7	
XO 3341E	Xitavo Soybean Seed	EN	3.3				67.7	77.6	72.7	72.1
XO 3483E	Xitavo Soybean Seed	EN	3.4				65.9	79.3	72.6	
GH3582E3	Golden Harvest	EN	3.5				65.6	78.8	72.2	70.7
AGI 1734AE	Advanced Genetics, Inc.	EN	3.4				68.8	75.5	72.2	
372XF	Ebberts Field Seeds, Inc.	XF	3.6				66.1	77.9	72.0	
SC7322E™	Seed Consultants, Inc.	EN	3.2				68.3	75.5	71.9	72.6
E3460 E3	Ebberts Field Seeds, Inc.	EN	3.4				67.3	76.2	71.8	70.7
NK33-W2E3S	NK Seeds	EN	3.3				68.1	74.7	71.4	
V2922	Virtue Seeds	CV	2.9				67.4	75.4	71.4	73.5
AG30XF2	Asgrow	XF	3.0				63.6	78.8	71.2	
AG33XF2	Asgrow	XF	3.3				65.3	76.5	70.9	
XO 3402E	Xitavo Soybean Seed	EN	3.4				66.7	74.5	70.6	71.2
SC7341E™	Seed Consultants, Inc.	EN	3.4				63.3	77.8	70.6	73.5
XO 3131E	Xitavo Soybean Seed	EN	3.1				66.6	74.4	70.5	71.8
AGI 0733AE	Advanced Genetics, Inc.	EN	3.3				63.1	77.5	70.3	
S3681STS	Dyna-Gro Seed	CV, STS	3.6				66.5	73.0	69.8	73.8
S33EN42	Dyna-Gro Seed	EN	3.3				64.2	74.3	69.3	
AG32XF2	Asgrow	XF	3.2				62.7	72.6	67.7	
WSC 1248N	Williamsfield Seed Company	CV	3.6				61.9	73.3	67.6	
W 6330E	Wellman Seeds, Inc.	EN	3.0				61.8	72.4	67.1	
		Min	2.9				61.8	72.4	67.1	
		Max	3.6				74.1	83.8	78.8	
		Mean	3.4				67.0	77.2	72.1	
		LSD (0.1)					5.2	4.0		
		CV					6.6	4.4		

Please note: Minimum, maximum, and mean include data for experimental soybean varieties that are not published in this bulletin.

TABLE 8: The 2022 Ohio Soybean Performance Trials, South Region - Late Varieties (RM 3.7-4.3)

Variety	Entry		Physical Characteristics				South Region Yield (bu/ac)			
	Brand/Company Name	Type	RM	Seeds/lb.	% Protein	% Oil	S1	S2	'22 Mean	'21-'22 Mean
S37ES52	Dyna-Gro Seed	EN, STS	3.7				74.9**	83.1*	79.0	80.5
3843XF	Stewart Seeds	XF	3.8				69.7	84.6**	77.2	
XO 3752E	Xitavo Soybean Seed	EN	3.7				69.4	82.1*	75.8	78.0
S37XF33	Dyna-Gro Seed	XF	3.7				71.6*	79.4	75.5	
AG43XF2	Asgrow	XF	4.3				68.8	80.1	74.5	
4053XF	Stewart Seeds	XF	4.0				66.9	80.4*	73.7	
AG38XF1	Asgrow	XF	3.8				68.1	79.0	73.6	75.6
AGI 0743AE	Advanced Genetics, Inc.	EN	4.3				65.2	80.8*	73.0	
AGI 2737AE	Advanced Genetics, Inc.	EN	3.7				68.8	75.5	72.2	
XO 3861E	Xitavo Soybean Seed	EN	3.8				71.4*	72.6	72.0	73.9
3731XF	Stewart Seeds	XF	3.7				67.9	75.2	71.6	70.9
SC7372E™	Seed Consultants, Inc.	EN	3.7				68.8	74.0	71.4	73.4
E3970 E3	Ebberts Field Seeds, Inc.	EN	3.8				70.8*	71.8	71.3	
S39EN19	Dyna-Gro Seed	EN	3.9				65.0	77.3	71.2	74.2
WSC 7400N	Williamsfield Seed Company	CV	4.3				66.7	75.2	71.0	
XO 3922E	Xitavo Soybean Seed	EN	3.9				67.7	74.1	70.9	73.0
AGI 9739AE	Advanced Genetics, Inc.	EN	3.9				62.7	78.6	70.7	
AGI 1737AE	Advanced Genetics, Inc.	EN	3.7				66.8	74.2	70.5	
S19-3530RY	University of Missouri	RR	4.3				63.5	76.9	70.2	
XO 3803E	Xitavo Soybean Seed	EN	3.8				67.0	71.7	69.4	
SC7381E™	Seed Consultants, Inc.	EN	3.8				67.2	71.2	69.2	71.3
AGI 1738AE	Advanced Genetics, Inc.	EN	3.8				62.4	74.8	68.6	
SC7412E™	Seed Consultants, Inc.	EN	4.1				65.2	71.7	68.5	
W 6237E	Wellman Seeds, Inc.	EN	3.7				65.0	71.8	68.4	71.4
XO 4132E	Xitavo Soybean Seed	EN	4.1				64.5	67.2	65.9	73.3
S41EN72	Dyna-Gro Seed	EN	4.1				61.3	68.2	64.8	72.0
		Min	3.7				60.3	67.2	64.7	
		Max	4.3				74.9	84.6	79.0	
		Mean	3.9				67.1	75.6	71.3	
		LSD (0.1)					4.8	4.3		
		CV					6.1	4.9		

Please note: Minimum, maximum, and mean include data for experimental soybean varieties that are not published in this bulletin.