



THE OHIO STATE  
UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

# THE 2018 OHIO SOYBEAN PERFORMANCE TRIALS

Wayde Looker, 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. All sites were no-till except the N1 location, which was conventionally tilled. Farmer cooperators sprayed preemergence herbicides (varied by location). Postemergence herbicides included: N1, N2, and S2 = Select Max, Alliance, Basagran, First Rate, and Flexstar. C2 = Select Max, Alliance, Basagran, and Flexstar. C1 and S1 = Select Max, Alliance, Basagran, First Rate, Flexstar, and Rap-

## 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 2018 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, Liberty Link, Roundup Ready, and Xtend varieties were tested in the same block to allow for head-to-head comparisons. Conventional, Liberty Link, Roundup Ready, and Xtend entries are statistically 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, maturity, and type.

2018 Tables by Type, Region, Maturity Grouping			
Conventional, Liberty Link, Roundup Ready, Xtend	North	Early (2.1-3.0)	Table 3
		Late (3.1-3.9)	Table 4
Conventional, Liberty Link, Roundup Ready, Xtend	Central	Early (2.5-3.3)	Table 5
		Late (3.4-4.1)	Table 6
Conventional, Liberty Link, Roundup Ready, Xtend	South	Early (2.5-3.6)	Table 7
		Late (3.7-4.4)	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, latitude, and disease. 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.** Lodging was rated at the S1 and S2 locations at harvest using the scale: 1 = nearly all plants erect, 2 = most plants leaning slightly, 3 = most plants leaning moderately (45° angle), 4 = most plants horizontal, 5 = 80% or more of the plants down on the soil surface. There was no lodging at the other locations.

**Seed Size** is reported as number of seeds per pound.

**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.

**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 region 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 2018 Ohio Soybean Performance Trials, Site Descriptions

	N1	N2	C1	C2	S1	S2
	Henry Co.	Sandusky Co.	Mercer Co.	Marion Co.	Preble Co.	Clinton Co.
Soil texture	Clay	Sandy loam	Clay	Clay	Clay loam	Silt loam
Soil pH	6.5	6.8	7.2	6.3	6.3	6.7
Soil Test P-Mehlich (ppm)	21	23	88	31	158	51
Soil Test K (ppm)	191	79	192	175	169	134
Plant date	May 29	June 4	May 24	May 17	May 14	May 11
Harvest date	Oct. 18 (early trial) Oct. 19 (late trial)	Oct. 23	Oct. 21	Oct. 12	Oct. 3	Oct. 1

**TABLE 5: The 2018 Ohio Soybean Performance Trials, Central Region - Early Varieties (RM 2.5-3.3)**

Variety	Entry		RM	Physical Characteristics			Central Region Yield (bu/ac)			
	Brand/Company Name	Type		Seeds/lb.	% Protein	% Oil	C1	C2	'18 Mean	'17-'18 Mean
SC 9339R <sup>TM</sup>	Seed Consultants, Inc.	GT	3.3				64.3*	66.3*	65.3	
HS 28X70	Growmark, Inc.	Xtend	2.8				64.8**	63.4*	64.1	59.9
G2900RX	AgriGold Hybrids	Xtend	2.9				60.0*	68.1**	64.1	58.7
S3305N	Dyna-Gro Seed	CV	3.3				62.8*	65.2*	64.0	61.1
3321L	NuTech Seed, LLC	LL	3.2				64.1*	62.9*	63.5	
S28XT58	Dyna-Gro Seed	Xtend	2.8				60.5*	66.3*	63.4	60.1
S31XT59	Dyna-Gro Seed	Xtend	3.1				58.4	65.9*	62.2	
CZ 2601 LL	Credenz/BASF	LL	2.6				58.3	65.2*	61.8	
C2888RX	LG Seeds	Xtend	2.8				58.6	64.7*	61.7	
LGS3297RX	LG Seeds	Xtend	3.2				61.4*	61.0*	61.2	
7287X	NuTech Seed, LLC	Xtend	2.8				63.3*	59.1	61.2	
SG-2728R2X	Shur Grow	Xtend	2.7				61.8*	60.6	61.2	
CZ 3233 LL	Credenz/BASF	LL	3.2				63.3*	58.8	61.1	
HS 32L60	Growmark, Inc.	LL	3.2				62.5*	59.4	61.0	57.5
S33XT79	Dyna-Gro Seed	Xtend	3.3				61.6*	59.6	60.6	
GH3195X	Golden Harvest	Xtend	3.1				58.7	62.5*	60.6	
S31-Y2X	NK Seeds/Syngenta	Xtend	3.1				59.4	61.6*	60.5	57.9
W 5932X	Wellman Seeds, Inc.	Xtend	3.2				58.3	61.8*	60.1	
CZ 3118 LL	Credenz/BASF	LL	3.1				61.8*	58.2	60.0	58.0
7317	NuTech Seed, LLC	RR1	3.1				63.9*	56.0	60.0	57.6
SG-2929R2X	Shur Grow	Xtend	2.9				61.2*	58.7	60.0	
SG-2629R2X	Shur Grow	Xtend	2.6				63.0*	56.7	59.9	
GH3088X	Golden Harvest	Xtend	3.0				60.1*	59.4	59.8	
3029R2X	Stewart Seeds	Xtend	3.0				59.1	60.0	59.6	
HS 25X70	Growmark, Inc.	Xtend	2.5				57.1	61.7*	59.4	56.9
HS 33X80	Growmark, Inc.	Xtend	3.3				58.6	59.8	59.2	
CZ 2810 LL	Credenz/BASF	LL	2.8				60.8*	57.5	59.2	57.7
Ebberts 319R2X	Ebberts Field Seeds	Xtend	3.1				53.3	64.9*	59.1	
W 5828X	Wellman Seeds, Inc.	Xtend	2.8				53.9	64.0*	59.0	54.7
AG32X8	Asgrow/Bayer Crop Science	Xtend	3.2				58.4	59.0	58.7	56.9
AG33X8	Asgrow/Bayer Crop Science	Xtend	3.3				58.1	58.6	58.4	56.4
Ebberts 339R2X	Ebberts Field Seeds	Xtend	3.3				55.1	61.6*	58.4	
SG-3229R2X	Shur Grow	Xtend	3.2				61.6*	54.9	58.3	
S33-D7X	NK Seeds/Syngenta	Xtend	3.3				59.6	56.8	58.2	
HS 32X80	Growmark, Inc.	Xtend	3.2				57.3	59.0	58.2	
3337R2X	Stewart Seeds	Xtend	3.3				59.9*	56.4	58.2	57.6
S33RY76	Dyna-Gro Seed	RR2Y	3.3				58.3	57.8	58.1	58.9
26RY2	Advanced Genetics, Inc.	RR2Y	2.6				57.8	58.2	58.0	56.9
G3285RX	AgriGold Hybrids	Xtend	3.2				56.8	59.2	58.0	
W 4732	Wellman Seeds, Inc.	RR2Y	3.2				54.0	62.0*	58.0	55.7
LGS2759RX	LG Seeds	Xtend	2.7				56.3	58.6	57.5	
28X9	Seed Consultants, Inc.	Xtend	2.8				58.5	55.6	57.1	
W 4333	Wellman Seeds, Inc.	RR2Y	3.3				54.4	59.7	57.1	56.1
W 265	Wellman Seeds, Inc.	CV	2.6				57.7	55.4	56.6	
SC 9318R <sup>TM</sup>	Seed Consultants, Inc.	GT	3.1				56.4	56.3	56.4	55.4
SG-3026R2X	Shur Grow	Xtend	3.0				58.7	53.7	56.2	55.3
AG30X8	Asgrow/Bayer Crop Science	Xtend	3.0				57.1	55.2	56.2	54.3
Illini 2904N	Ohio Foundation Seeds, Inc.	CV	2.9				56.3	55.3	55.8	
2601RX	Advanced Genetics, Inc.	Xtend	2.6				55.4	55.5	55.5	
AG27X7	Asgrow/Bayer Crop Science	Xtend	2.7				57.8	53.1	55.5	55.6
3309L	NuTech Seed, LLC	LL	3.0				52.0	58.7	55.4	53.8
30RY3	Advanced Genetics, Inc.	RR2Y	3.0				53.7	56.9	55.3	55.2
W 295	Wellman Seeds, Inc.	CV	2.9				55.8	54.8	55.3	56.0
W 5833X	Wellman Seeds, Inc.	Xtend	3.3				53.9	56.3	55.1	57.1

**NOTE: Central Region, Early Variety Trial Results are Continued on the Next Page.**

**TABLE 5: The 2018 Ohio Soybean Performance Trials, Central Region - Early Varieties (RM 2.5-3.3)**  
**CONTINUED FROM PREVIOUS PAGE**

Variety	Entry		Physical Characteristics			Central Region Yield (bu/ac)				
	Brand/Company Name	Type	RM	Seeds/lb.	% Protein	% Oil	C1	C2	'18 Mean	'17-'18 Mean
7253	NuTech Seed, LLC	RR1	2.5				53.6	56.5	55.1	
3301RX	Advanced Genetics, Inc.	Xtend	3.3				57.5	52.5	55.0	
Wyandot 14	Ohio Foundation Seeds, Inc.	CV	2.9				52.4	57.3	54.9	53.3
RS 31XT40	Rupp Seeds, Inc	Xtend	3.1				52.9	56.6	54.8	
30R8	Seed Consultants, Inc.	RR1	3.0				52.7	56.2	54.5	
CZ 2928 LL	Credenz/BASF	LL	2.9				56.2	52.1	54.2	
HS 28L70	Growmark, Inc.	LL	2.8				51.7	54.9	53.3	
W 335	Wellman Seeds, Inc.	CV	3.3				51.4	53.4	52.4	
HS 27X80	Growmark, Inc.	Xtend	2.7				52.9	50.6	51.8	
Summit	Ohio Foundation Seeds, Inc.	CV	2.6				49.8	52.5	51.2	53.5
W 4525	Wellman Seeds, Inc.	RR2Y	2.5				51.4	50.5	51.0	
W 5926X	Wellman Seeds, Inc.	Xtend	2.6				46.3	53.2	49.8	
DB2616R	Seed Consultants, Inc.	RR1	2.6				51.2	47.7	49.5	
SC 8326X™	Seed Consultants, Inc.	Xtend	3.2				51.7	45.8	48.8	
7279	NuTech Seed, LLC	RR1	2.7				51.4	44.5	48.0	48.9
Streeter	Ohio Foundation Seeds, Inc.	CV	3.0				49.2	46.1	47.7	49.2
		<b>Min</b>	2.5				46.3	37.3	47.7	
		<b>Max</b>	3.3				64.8	68.1	65.3	
		<b>Mean</b>	3.0				57.0	57.2	57.5	
		<b>LSD (0.1)</b>					5.0	7.4		
		<b>CV</b>					7.4	9.5		

Note: Min, max, mean, LSD, and CV values include experimental cultivars that were not printed in this publication.

**TABLE 6: The 2018 Ohio Soybean Performance Trials, Central Region - Late Varieties (RM 3.4-4.1)**

Variety	Entry		Physical Characteristics			Central Region Yield (bu/ac)				
	Brand/Company Name	Type	RM	Seeds/lb.	% Protein	% Oil	C1	C2	'18 Mean	'17-'18 Mean
LGS3777RX	LG Seeds	Xtend, STS	3.7				59.3*	64.1*	61.7	
3601RX	Advanced Genetics, Inc.	Xtend	3.6				61.1*	61.9*	61.5	57.7
W 5836X	Wellman Seeds, Inc.	Xtend	3.6				60.2*	61.8*	61.0	59.0
AG38X8	Asgrow/Bayer Crop Science	Xtend	3.8				58.7*	62.5*	60.6	59.6
HS 38X70	Growmark, Inc.	Xtend	3.8				57.6*	63.1*	60.4	61.1
3386L	NuTech Seed, LLC	LL	3.8				54.1	66.4*	60.3	60.1
Ebberts 388R2X	Ebberts Field Seeds	Xtend	3.8				57.1*	62.0*	59.6	59.1
Ebberts 368R2X	Ebberts Field Seeds	Xtend	3.6				61.6**	57.0	59.3	57.2
SG-3628R2X	Shur Grow	Xtend	3.6				61.0*	56.9	59.0	59.1
S36XT09	Dyna-Gro Seed	Xtend	3.6				58.5*	59.3	58.9	
3801RX	Advanced Genetics, Inc.	Xtend	3.8				50.3	66.7**	58.5	
AG34X6	Asgrow/Bayer Crop Science	Xtend	3.4				59.2*	57.8	58.5	56.2
S37XS89	Dyna-Gro Seed	Xtend, STS	3.7				56.5	60.4*	58.5	
3361L	NuTech Seed, LLC	LL	3.6				52.9	63.8*	58.4	57.6
G3722RX	AgriGold Hybrids	Xtend	3.7				55.2	61.2*	58.2	
HS 34X60	Growmark, Inc.	Xtend	3.4				57.3*	59.1	58.2	58.4
SG-3729R2X	Shur Grow	Xtend	3.7				59.9*	56.3	58.1	
GH3475X	Golden Harvest	Xtend	3.4				56.2	59.9*	58.1	
SC 3374LL™	Seed Consultants, Inc.	LL	3.7				54.1	61.6*	57.9	
LGS3411RX	LG Seeds	Xtend	3.4				56.5	59.0	57.8	
G3520RX	AgriGold Hybrids	Xtend	3.5				53.0	62.3*	57.7	57.1
HS 35X80	Growmark, Inc.	Xtend	3.5				54.4	60.7*	57.6	
SCS 9385RR™	Seed Consultants, Inc.	GT	3.8				57.8*	57.2	57.5	57.0
3449R2X	Stewart Seeds	Xtend	3.4				55.6	59.3	57.5	

NOTE: Central Region, Late Variety Trial Results are Continued on the Next Page.

**TABLE 6: The 2018 Ohio Soybean Performance Trials, Central Region - Late Varieties (RM 3.4-4.1)**  
**CONTINUED FROM PREVIOUS PAGE**

Variety	Entry Brand/Company Name	Type	Physical Characteristics			Central Region Yield (bu/ac)				
			RM	Seeds/lb.	% Protein	% Oil	C1	C2	'18 Mean	'17-'18 Mean
CZ 3601 LL	Credenz/BASF	LL	3.6				50.5	64.3*	57.4	57.2
DSR-3555/R2Y	Dairyland Seed	RR2Y	3.5				57.3*	57.0	57.2	57.3
HS 38L32	Growmark, Inc.	LL	3.8				52.3	61.8*	57.1	55.7
S36LL77	Dyna-Gro Seed	LL	3.6				52.4	60.6*	56.5	56.9
G3602RX	AgriGold Hybrids	Xtend	3.6				55.9	56.7	56.3	
CZ 3841 LL	Credenz/BASF	LL	3.8				51.9	60.6*	56.3	58.3
S34XT69	Dyna-Gro Seed	Xtend	3.4				53.8	57.7	55.8	
SC 9367R™	Seed Consultants, Inc.	GT	3.6				58.3*	53.1	55.7	
DB3617X	Seed Consultants, Inc.	Xtend	3.6				55.3	55.5	55.4	
AG36X6	Asgrow/Bayer Crop Science	Xtend	3.6				54.3	55.7	55.0	57.6
C3550RX	LG Seeds	Xtend	3.5				53.3	56.7	55.0	56.6
3628R2X	Stewart Seeds	Xtend	3.6				52.8	57.2	55.0	57.1
35RY4	Advanced Genetics, Inc.	RR2Y	3.5				56.3	53.6	55.0	55.1
Ebberts 379R2X	Ebberts Field Seeds	Xtend	3.7				54.5	55.1	54.8	
39X9	Seed Consultants, Inc.	Xtend	3.9				55.3	54.0	54.7	
RS 35XT55	Rupp Seeds, Inc.	Xtend	3.5				49.8	59.5	54.7	55.7
7352X	NuTech Seed, LLC	Xtend	3.5				57.3*	51.9	54.6	52.8
SC 8379X™	Seed Consultants, Inc.	Xtend	3.7				52.9	55.5	54.2	
36LL01	Advanced Genetics, Inc.	LL	3.6				51.9	56.1	54.0	54.4
SG-3428R2X	Shur Grow	Xtend	3.4				52.4	54.9	53.7	55.5
3729R2X	Stewart Seeds	Xtend	3.7				58.8*	48.2	53.5	
GH3546X	Golden Harvest	Xtend	3.5				54.1	52.4	53.3	55.8
CZ 3548 LL	Credenz/BASF	LL	3.5				50.7	55.5	53.1	54.1
G3440RX	AgriGold Hybrids	Xtend	3.4				50.8	54.6	52.7	
C3985RX	LG Seeds	Xtend	3.9				50.2	54.2	52.2	55.0
S35XT97	Dyna-Gro Seed	Xtend	3.5				50.5	53.6	52.1	54.7
38RY3	Advanced Genetics, Inc.	RR2Y	3.8				54.2	49.0	51.6	52.8
3343L	NuTech Seed, LLC	LL	3.4				49.2	53.0	51.1	52.7
W 4339	Wellman Seeds, Inc.	RR2Y	3.9				50.7	49.5	50.1	54.7
Lorain	Ohio Foundation Seeds, Inc.	CV	3.4				42.4	51.3	46.9	49.6
GH3982X	Golden Harvest	Xtend	3.9				44.2	45.4	44.8	49.1
		<b>Min</b>	3.4				42.4	41.4	44.8	
		<b>Max</b>	4.1				61.6	66.7	61.7	
		<b>Mean</b>	3.7				53.8	56.1	56.1	
		<b>LSD (0.1)</b>					4.9	7.1		
		<b>CV</b>					7.8	9.3		

Note: Min, max, mean, LSD, and CV values include experimental cultivars that were not printed in this publication.