



THE OHIO STATE
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COLLEGE OF FOOD, AGRICULTURAL,
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2017 Ohio Soybean Seed Treatment Trial

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INTRODUCTION

The purpose of the Ohio Soybean Seed Treatment trial is to evaluate soybean seed treatments for stand and yield. This evaluation gives soybean producers comparative information for selecting soybean products for their unique production system.

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/acre. All sites had corn as the previous crop and were no-tillage.



METHOD OF CONDUCTING TRIALS

Entries in Trials. All 2017 entries were submitted voluntarily by companies. Entry fee charges were paid per treatment. Application protocol and product rate were provided by the company. All products were tested on Lorain (public variety) with a 3.4 relative maturity. All products were applied to seed treated with Intego Suite fungicide and insecticide.

Product Type. Each company was asked to specify product type(s): biological, fertilizer, inoculant, growth regulator, fungicide and/or insecticide.

Statistical comparison. Contrasts were used to compare treated seed to the treated check. A single asterisk (*) next to stand count or yield result indicates a statistically significant higher result compared to the check treatment at 70% confidence level (i.e., 70% confident that yield was greater due to seed treatment). A double asterisk (**) next to stand count or yield result indicates a statistically significant higher result compared to the check treatment at 90% confidence level (i.e., 90% confident that yield was greater due to seed treatment).

MEASUREMENTS AND RECORDS

Stand count is reported as the number of 1,000 plants per acre. Stand counts were conducted for each plot and location in the spring approximately 21 days after planting.

Yield. Soybeans were harvested when the moisture content was between 8 and 13% and yields reported in bushels per acre at 13% moisture.

DATA USE. Inclusion of entries in the Ohio seed treatment trial 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 2017 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	Clay	Silty clay loam	Clay loam	Silty clay	Silt loam
Soil pH	5.7	6.5	6.8	6.3	6.0	6.6
Soil Test P-Mehlich (ppm)	58	17	89	28	92	116
Soil Test K (ppm)	161	118	150	168	188	203
Plant date	18-May	19-May	7-Jun	17-May	30-May	16-May
Harvest date	20-Oct	19-Oct	21-Oct	4-Oct	17-Oct	16-Oct

Table 3. The 2017 Ohio Soybean Seed Treatment Trial, North Region.

Treatment Name	Company Name	Product Type	Type of Seed	Stand Count– N1	Stand Count– N2	Yield– N1	Yield– N2
				1000 plants/acre	1000 plants/acre	Bu/acre	Bu/acre
GmExSAL	Advanced Biological Marketing	Biological	Treated	115**	100	39.1*	44.9*
GmGEXSA	Advanced Biological Marketing	Biological	Treated	114*	114**	40.9*	44.7
GmMarL	Advanced Biological Marketing	Biological	Treated	114*	110*	39.0	46.4*
Gm2L	Advanced Biological Marketing	Fertilizer	Treated	105	106	35.3	44.1
Exceed Liquid SAR	Visjon Biologics	Inoculant	Treated	121**	112*	35.9	42.2
Untreated Check			Untreated	84	79	28.3	36.2
Treated Check			Treated	100	97	32.6	41.5

Table 4. The 2017 Ohio Soybean Seed Treatment Trial, Central Region.

Treatment Name	Company Name	Product Type	Type of Seed	Stand Count– C1	Stand Count– C2	Yield– C1	Yield– C2
				1000 plants/acre	1000 plants/acre	Bu/acre	Bu/acre
GmExSAL	Advanced Biological Marketing	Biological	Treated	139**	134	48.6	52.6
GmGEXSA	Advanced Biological Marketing	Biological	Treated	140**	136*	50.3	50.4
GmMarL	Advanced Biological Marketing	Biological	Treated	133	139**	48.2	53.9
Gm2L	Advanced Biological Marketing	Fertilizer	Treated	134	137*	47.2	54.1
Exceed Liquid SAR	Visjon Biologics	Inoculant	Treated	131	139**	47.5	56.5*
Untreated Check			Untreated	127	123	44.7	53.7
Treated Check			Treated	132	131	48.1	51.9

**Indicates statistically significant higher value compared to the check treatment at 90% confidence level.

*Indicates statistically significant higher value compared to the check treatment at 70% confidence level.

Table 4. The 2017 Ohio Soybean Seed Treatment Trial, Central Region.

Treatment Name	Company Name	Product Type	Type of Seed	Stand Count– S1 1000 plants/acre	Stand Count– S2 1000 plants/acre	Yield– S1 Bu/acre	Yield– S2 Bu/acre
GmExSAL	Advanced Biological Marketing	Biological	Treated	123	129	57.0	59.7
GmGEXSA	Advanced Biological Marketing	Biological	Treated	117	131	58.0*	56.5
GmMarL	Advanced Biological Marketing	Biological	Treated	125	122	59.6**	62.3
Gm2L	Advanced Biological Marketing	Fertilizer	Treated	126	124	57.1	62.7
Exceed Liquid SAR	Visjon Biologics	Inoculant	Treated	127	127	58.1*	57.5
Untreated Check			Untreated	99	103	53.6	59.8
Treated Check			Treated	125	128	55.4	61.2

**Indicates statistically significant higher value compared to the check treatment at 90% confidence level.

*Indicates statistically significant higher value compared to the check treatment at 70% confidence level.