THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

2017 Bayer Seed Treatment Trial

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INTRODUCTION

The purpose of the 2017 Bayer Seed Treatment Trial was to compare stand and grain yield of soybean seed treated with Evergol Energy SB, Poncho/VOTiVO, and ILeVO to untreated seed of the same variety in high-yielding and well-drained fields with limited pest pressure.

FIELD PLOT DESIGN

The trial was planted on-farm in six counties in Ohio (see map below). 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. All sites had corn as the previous crop. All sites were no-tillage.

METHOD OF CONDUCTING TRIALS

Entries in Trials. Bayer seed treatment and seed were submitted voluntarily. Entry fee charges were paid per treatment. Application protocol and product rate were provided by the company. Soybean seed treatment was tested on Bayer Credenz CZ3601LL (3.6 relative maturity).

Statistical comparison. Contrasts were used to compare treated to untreated seed at a 90% confidence level.

MEASUREMENTS AND RECORDS

Stand count is reported as the number of 1000 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.

Results. Yield of treated seed was statistically greater at one out of six trial locations. At the S2 location, treated seed yielded 4.4 bu/acre greater than the untreated seed.

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 Henry Co.	N2 Sandusky Co.	C1 Mercer Co.	C2 Marion Co.	S1 Preble Co.	S2 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 2. Soybean yield of treated and untreated seed at each trial location and trial locations combined.

	N1	N2	C1	C2	S1	S2	Locations combined
Treated	44.0	42.2	50.1	56.3	67.0	69.9 A	54.9
Untreated	37.6	40.4	50.6	57.8	64.0	65.5 B	52.6
P-value	0.2487	0.5678	0.8529	0.6295	0.1661	0.0694	0.4410

Table 3. Soybean stand (1000 plants/acre) approximately 21 days after planting of treated and untreated seed at each trial location and trial locations combined.

	N1	N2	C1	C2	S1	S2	Locations combined
Treated	117	97	132	135 B	124	122	120
Untreated	119	110	136	143 A	121	119	124
P-value	0.7806	0.1624	0.3629	0.0553	0.7426	0.7024	0.4151