

2016 MICHIGAN SOYBEAN PERFORMANCE REPORT

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This report provides information on the performance of Conventional, Liberty Link, and Roundup Ready soybean varieties in Michigan in 2016.

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

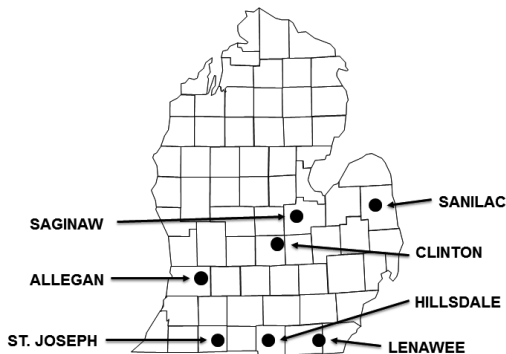
TESTING PROCEDURES

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

Twenty-eight seed companies entered a total of 253 commercial varieties. The cooperators, planting dates, harvest dates, and other site details for the locations are listed below.

Seed was planted in 6-row plots, 20 feet long with 15-inch row spacing, at a depth of 1.5-inches. The planting rate was 160,000 seeds/acre. At each location, varieties were replicated four times in a lattice design. The plots were trimmed to a length of 14 feet and the center four rows were harvested. Experimental design, data management, and data analysis were conducted with AGROBASE Generation II, (Agronomix Software, Inc., Winnipeg, Canada).

2016 TEST SITE COUNTY LOCATIONS



TEST SITE INFORMATION

Lenawee County

Nearest city: Britton
Cooperator: David & Jason Woods
Planting date: 5-24-16
Harvest date: Roundup and Liberty 11-7-16
Conventional 11-9-16
Previous crop: Seed Corn
Soil type: Brookston Clay Loam
Fertilizer: 250# /A 0-0-60
Herbicides: Conventional & Liberty Link Trials –
Preemerge 12 oz. Authority MTZ, 1.33 pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

Hillsdale County

Nearest city: Reading
Cooperator: Robert Lennard
Planting date: 5-22-16
Harvest date: 10-7-16
Previous crop: Corn
Soil type: Matherton Loam – Sand Loam
Fertilizer: 150# 0-0-60
Herbicides: Conventional & Liberty Link Trials –
Preemerge 12 oz. Authority MTZ, 1.33 pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

St. Joseph County - Irrigated

Nearest city: Mendon
Cooperator: Roger and Anne Gentz and Family
Planting date: 5-25-16
Harvest date: 10-25-16
Previous crop: Seed Corn
Soil type: Elston Sandy Loam
Fertilizer: 175#/A 0-0-60
Herbicides: Conventional and Liberty Link Trials –
Preemerge 12 oz. Authority MTZ, 1.33 pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

Clinton County

Nearest city:
Cooperator: Tom Galecka
Planting date: 5-19-16
Harvest date: 10-19-16
Previous crop: Corn
Soil type: Corunna Sandy Loam
Fertilizer: none
Herbicides: All trials-Preemerge 12 oz. Authority MTZ, 1.33
pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax
Liberty Link Trials – 36oz/A Liberty

Allegan County

Nearest city: Hamilton
Cooperator: Harvey Jipping
Planting date: 5-20-16
Harvest date: 10-21-156
Previous crop: Corn
Soil type: Clay Loam
Fertilizer: Lime pelletized 200#/A, Potash Ammonia Sulfate
250#/A
Herbicides: Conventional & Liberty Link Trials –
Preemerge 12 oz. Authority MTZ, 1.33 pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

Saginaw County

Nearest city: Saginaw
Cooperator: Tom Hoff
Planting date: 5-23-16
Harvest date: 10-16-16

Previous crop: Wheat
Soil type: Clay Loam
Fertilizer: None
Herbicides: Conventional & Liberty Link Trials –
Preemergence 12 oz. Authority MTZ, 1.33 pt/A Dual II Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

Sanilac County

Nearest city: Sandusky
Cooperator: Gerstenberger Farms, Inc.
Planting date: 5-21-6
Harvest date: 10-24-16
Previous crop: Corn
Soil type: Parkhill Clay Loam
Fertilizer: none
Herbicides: Conventional and Liberty Link Trials –
Preemergence 1.5#/A Lorox 50% D.F. 1.33 pt/A Dual II
Magnum
Roundup Ready Trials – 32 oz./A Roundup Powermax

LIBERTY LINK TRIAL

The Central Liberty Link soybean varieties were tested in Allegan, Clinton, Saginaw and Sanilac Counties.

The South Liberty Link soybean varieties were tested in Hillsdale, Lenawee, Clinton and St. Joseph Counties.

Both trials were treated with conventional herbicides as noted in test site information.

GROWING CONDITIONS / COMMENTS

Most of Michigan was dry during the early growing season and White mold as well as most diseases were not a factor. Excessive rain in August caused plants to grow tall and caused more lodging in many areas. Overall yields were good to excellent.

USING THE DATA

Results are presented in Tables 1 through 8.

Yield: Yield is expressed as bushels per acre at 13% moisture and is reported as single and across site means for 2016. 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.

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

SELECTING A VARIETY

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.

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'

<u>TREATMENT CODE</u>	
<u>Code</u>	<u>Treatment</u>
• ACL	Accelaron
• Agr F/I	Agrishield Fungicide/Insecticide
• ALL	Allegiance
• AM	Apron Maxx (Maxim)
• AM-C	Apron Maxx & Cruiser
• Clar	Clariva
• CM	Cruiser Maxx
• Ecl-US-Q	EclipseUS quad IM
• EG	EverGolEnergy
• ENC	Encase
• ESC	Escalate
• G	Gaucho
• I	ILeVO (BayerCropScience)
• N	NForce
• N-H	Inhibit
• O	Optimize
• P	Poncho
• PA	PA2030
• SmartCote S	SmartCote Supreme
• SS	SureStand
• Vib	Vibrance
• V	Votivo

Comparing Soybean Varieties Has Never Been Easier!

Soybeanyielddata.msu.edu

- ✓ Sort by location
- ✓ Compare specific brands
- ✓ Select by resistance traits
- ✓ Limit the range of maturities
- ✓ View only the top varieties
- ✓ Use the statistical data for validity

2017 Pest and Crop Management Update for Field Crop Producers and Agronomists

What: Five integrated pest and crop management (IPM) update meetings for field crop producers and agronomists will be conducted this winter. The programs are sponsored by Michigan State University Extension, Michigan Soybean Promotion Committee, Corn Marketing Program of Michigan and Michigan Wheat Program.

When/Where: All programs will begin at 8:30 a.m. and end at 3:30 p.m. except for the Dundee location which will start at 9:00 a.m. and end at 4:00 p.m. The dates and locations for the meetings are:

- **January 12**, Comfort Inn & Suites Hotel and Conference Center, Mt. Pleasant, contact Isabella County MSUE at 989.317.4079
- **January 13**, Saginaw Valley Research & Extension Center, Frankenmuth, contact Lapeer County MSUE at 810.667.0341
- **February 21**, Cabela's, Dundee, contact Van Buren County MSUE at 269.657.8213
- **February 22**, Dowagiac Conservation Club, Dowagiac, contact Van Buren County MSUE at 269.657.8213
- **February 23**, Sanilac Career Center, Peck, contact Sanilac County MSUE at 810.648.2515

Registration: The registration fee for this program is **\$25.00** per person. Pre-registration is required to ensure an accurate count for meals and materials. Please register one week before the event you plan to attend.

To register online (preferred method): Please go to <http://events.anr.msu.edu/IPMcropsmgmt2017/>.

To register by phone: Please call the MSU Extension office that is hosting the meeting you plan to attend.

Online webinar option: If you are unable to attend these meetings, you can learn about and register for the 2017 Field Crops Webinar Series at <http://events.anr.msu.edu/FieldCropsWebinarSeries2017/>.