

# 2017 Michigan Organic Soybean Variety Trials

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This report provides information on performance of non-GMO soybean varieties grown under certified organic management in 2017. This research is funded by The Ceres Trust and the North Central Region Sustainable Agriculture Research Education (NCR SARE) Program.

## Testing Procedures

Three trial locations are reported in this publication. A total of 54 soybean varieties were entered by six seed companies and two universities. The cooperators, planting dates, harvest dates and other site details for each location are listed below.

Seed was planted in 2-row plots, 26 feet long with 30-inch row spacing at a depth of 1.5 inches. The planting rate was 180,000 seeds/Acre. At each location, varieties were replicated four times in a lattice design. The plots were trimmed to a length of 20 feet and both rows were harvested. Experimental design, data management and data analysis were conducted with AGROBASE Generation II software (Agronomix Soft- ware, Inc., Winnipeg, Canada).

## Using the data

**Yield:** Expressed as bushels per acre (Bu/A) at 13 percent moisture and is reported as single and across site means for 2017.

**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 all replications at the Tuscola and Isabella, and Kalamazoo sites.

**Protein and oil content:** Protein and oil content of the seed was determined using near-infrared reflectance and is expressed on a **dry** basis. (This report in previous years used 13 percent basis).

## Test site information

### Isabella County

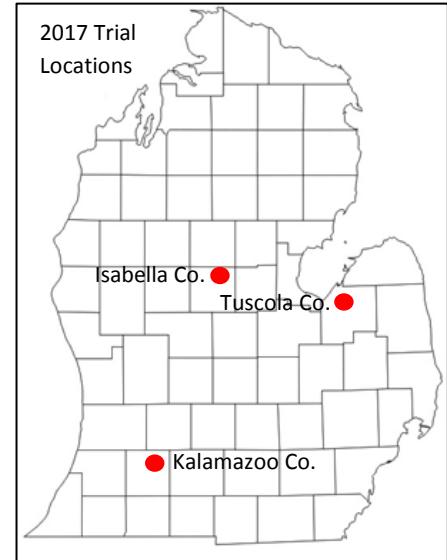
Nearest city: Rosebush      Cooperator: Matt Graham  
Soil type: Ithaca Loam  
Planting Date: May 30      Harvest Date: October 18

### Tuscola County

Nearest city: Unionville      Cooperator: Dave Sting  
Soil type: Tappan-Londo Loam      Previous crop: Corn  
Tillage: Fall plowed, spring field cultivate  
Planting Date: May 31      Harvest Date: October 19

### Kalamazoo County

Nearest city: Hickory Corners      Cooperator: W.K. Kellogg Bio Station  
Soil type: Sandy loam      Previous crop: Corn  
Tillage: Chisel plow, field cultivate  
Planting Date: June 1      Harvest Date: October 20



Rotary hoed soybean plots in Kalamazoo Co, June 14.



Isabella County organic soybean variety trial, August 7.

## Growing conditions/comments

**Isabella:** Extremely wet in the early season. Wet soils and standing water delayed cultivation.

**Tuscola:** Wet spring prior to planting. Drought July and August, with a warm and late fall.

**Kalamazoo:** Dry at planting, wet in June then very dry mid-July until early September. These plots were irrigated.



Mature soybeans at the Tuscola County site, October 19.

## Selecting a variety

Least Significant Difference (LSD) 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 percent 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. 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.

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.



Harvesting the Kalamazoo site, October 20.

## Seed sources

**DKB Farm & Services**  
Charlie Brockriede  
4945 Marathon Road  
Columbiaville, MI 48421  
810-627-8477

**D.F. Seeds Inc.**  
Chris Varner/John Diehl  
905 S. Jackson Road P.O. Box 159  
Dansville, MI 48819  
517-623-6161

**Cooperative Elevator Company**  
Gary Fritz  
1075 S. Colling Rd.  
Caro, MI 48723  
989-673-6402

**SunOpta**  
Emily Shettler  
10407 Scribner Rd  
Bancroft MI 48414  
989-721-7857

**MSU**  
Dechen Wang  
A384-E Plant and Soil Sciences Bldg.  
1066 Bogue Street  
East Lansing, MI 48824-1325  
517-355-0271 Ext. 188

**Schillinger Genetics, Inc.**  
Corey Nikkel  
4401 Westown Parkway, Suite 225  
West Des Moines, IA 50266  
515-225-6164

**Albert Lea Seed**  
Ben Hinueber  
1414 W. Main, PO Box 127  
Albert Lea, MN 56007  
800-352-5247

**Blue Rive Hybrids**  
Stuart Grim  
2326 230th St.  
Ames, IA 50014  
800-370-7979

**University of Minnesota/  
MN Crop Improvement**  
Roger Wippler  
1900 Hendon Ave.  
St. Paul, MN 55108  
612-625-7766



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## 2017 Michigan Organic Soybean Variety Trial Results

Brand / Source	Variety	Maturity	Hilum Color	Bushels per Acre			% Oil#	% Protein#	Height Inches*	DAP**	Seeds per Lb.
				Average	Isabella	Kalamazoo					
Albert Lea Seed	Viking 0.1572N	1.5	yellow	37.1	31.8	33.9	45.6	20.5	40.9	22	112 2577
Albert Lea Seed	Viking 0.2072N	2.0	yellow	44.3	32.5	45.9	51.2	20.5	37.6	27	116 2800
Albert Lea Seed	Viking 0.2188AT12N	2.4	yellow	53.4	46.3	54.0	59.0	20.1	39.9	28	117 2732
Albert Lea Seed	Viking 0.2399AT12N	2.6	yellow	53.6	50.9	57.6	52.9	20.1	39.5	30	120 2732
Albert Lea Seed	Viking 0.2446	2.4	black	44.7	34.7	48.2	50.0	19.4	40.7	29	118 2506
Blue River Hybrids	17C2	1.7	dark	45.2	37.0	48.1	49.8	20.3	38.6	26	112 3217
Blue River Hybrids	18C7	1.8	dark	44.9	36.7	47.6	49.6	21.0	37.6	26	119 2338
Blue River Hybrids	20FC6	2.0	yellow	45.4	40.8	44.7	50.7	20.6	36.3	26	113 2732
Blue River Hybrids	21C6	2.1	buff	47.3	42.4	48.9	50.5	21.8	36.3	29	114 2817
Blue River Hybrids	21F3	2.6	yellow	43.1	36.8	46.0	46.1	19.5	41.5	24	115 2668
Blue River Hybrids	22DC6	2.2	buff	49.6	38.5	53.7	55.1	19.7	38.6	29	120 2945
Blue River Hybrids	26F0	2.6	yellow	45.0	29.7	50.2	49.8	19.5	41.5	30	120 2268
Blue River Hybrids	27C5	2.7	yellow	50.0	42.8	49.6	57.0	20.3	39.7	28	118 2871
Cooperative Elevator Co.	DH 410	1.6	clear	42.4	35.1	40.7	50.9	20.7	40.7	26	111 2700
Cooperative Elevator Co.	DH 530	1.6	clear	39.9	27.7	45.2	45.0	21.0	37.8	26	112 2592
DF Seeds Inc.	DF 155 F	2.5	clear	48.1	45.9	50.4	48.9	19.8	41.1	30	119 2326
DF Seeds Inc.	DF 187 N	1.8	clear	42.6	36.6	43.7	47.2	19.5	40.2	26	118 2520
DF Seeds Inc.	DF 227 N	2.2	brown	49.7	41.4	51.0	55.8	19.4	39.1	29	119 2908
DF Seeds Inc.	DF 232 N	2.3	clear	49.3	46.9	46.5	55.2	20.8	37.4	29	115 2413
DKB Farms	Vinton 81	1.9	clear	39.9	39.1	40.4	41.2	19.2	42.2	31	115 2150
Michigan State University	E05181T	2.0	yellow	44.4	42.1	42.7	49.1	20.6	40.1	26	117 2246
Michigan State University	E07051	2.2	dark brown	48.2	43.7	52.0	49.1	20.5	38.4	26	115 2439
Michigan State University	E07130T	2.3	yellow	44.8	46.9	43.4	44.7	18.9	43.7	33	118 1906
Michigan State University	E07158T	2.3	yellow	42.8	44.2	42.4	43.3	19.1	45.3	31	117 1772
Michigan State University	E10174	2.7	yellow	48.5	41.2	49.9	53.9	20.1	38.4	32	120 2246
Michigan State University	E11128T	2.6	yellow	47.4	42.9	48.7	50.9	19.3	43.1	28	118 2191
Michigan State University	E12076T	2.9	yellow	51.6	47.5	53.4	54.4	20.0	38.6	31	122 2749
Michigan State University	E13036T	2.4	yellow	45.6	36.1	51.2	48.5	19.8	40.2	27	121 2257
Michigan State University	E13100	2.5	yellow	48.3	42.5	48.4	53.7	20.2	37.9	29	117 2350
Michigan State University	E13268	1.7	black	45.1	35.8	43.2	55.3	20.6	38.2	25	113 2817
Michigan State University	E13364	2.2	dark brown	43.6	30.9	46.9	51.0	20.3	38.7	26	117 2800
Michigan State University	E13367	2.2	brown	46.9	34.1	52.7	50.1	19.5	37.1	26	115 2853
Michigan State University	E13369	1.6	brown	45.4	35.6	48.6	50.8	19.9	38.2	28	116 3044
Michigan State University	E13370	2.2	black	47.3	38.1	52.1	50.6	19.9	38.4	26	121 3086
Michigan State University	E13902	2.5	dark buff	46.4	45.2	44.9	49.6	19.9	39.3	26	121 2452
Michigan State University	E14044T	2.5	yellow	41.6	30.6	45.9	46.7	19.2	42.2	25	118 2338
Michigan State University	E14077	2.4	imp. black	48.4	38.1	51.6	54.3	20.6	38.4	28	121 2637
Michigan State University	E15079T	2.2	yellow	46.5	44.6	44.2	51.6	19.1	43.3	29	118 2257
Michigan State University	E15165T	1.9	yellow	46.7	41.1	47.3	51.4	19.2	44.4	25	115 1989
Michigan State University	E15346T	2.5	yellow	48.2	36.4	51.3	53.6	20.8	37.8	29	116 2479
Michigan State University	E16602	1.8	yellow	32.0	15.0	42.0	36.0	18.0	41.7	30	123 6389
Michigan State University	E16603	1.8	yellow	38.0	34.7	38.8	41.0	18.7	38.0	28	118 6574
Michigan State University	E16606	2.2	yellow	35.8	29.7	37.3	40.3	18.6	39.8	32	120 6670
Michigan State University	E16608	2.4	yellow	34.2	23.4	40.4	37.5	18.4	42.1	35	124 6670
SunOpta	SR 129	1.8	yellow	43.0	33.7	46.0	48.3	19.2	42.4	26	116 2291
SunOpta	SR 204	2.4	yellow	42.1	30.4	46.4	45.4	19.2	42.4	26	117 2234
SunOpta	SR 354	2.2	yellow	45.0	39.1	43.5	52.0	18.4	42.6	25	119 2213
University of Minnesota	M04-295008	1.5	yellow	43.4	35.9	44.9	48.9	19.8	42.3	28	114 2110
University of Minnesota	M07-297007	1.7	black	45.1	41.2	47.0	47.3	20.6	39.3	28	113 3107
University of Minnesota	M08-332003	1.3	buff	31.2	24.5	30.1	38.2	17.9	48.6	25	110 3044
University of Minnesota	M08-365100	1.5	grey	42.1	32.9	42.5	49.9	21.5	37.8	24	116 2716
University of Minnesota	MN1613CN	1.6	yellow	39.3	32.1	38.0	47.4	20.3	38.3	25	111 2835
University of Minnesota	MN1701CN	1.7	yellow	42.1	40.2	41.0	45.8	20.3	38.9	28	113 3065
University of Minnesota	MN1806CN	1.8	yellow	40.8	29.1	42.3	49.3	21.0	39.5	26	116 2653
# Dry Basis				GRAND MEAN	44.4	37.3	46.0	49.1	19.9	40.0	
* Maturity: Days After Planting				Max. Mean	53.6	50.9	57.6	59.0	21.8	48.6	
* Average across locations				Min. Mean	31.2	15.0	30.1	36.0	17.9	36.3	
				LSD	5.8	14.1	8.3	5.6	0.3	0.9	
				CV	13.8	19.5	10.9	6.9	1.4	1.6	

