

RESEARCH FOR RESULTS



WIU Combined Soybean Trials 2017

- OVERVIEW:** This trial compares soybean yields among 10 different organic soybean varieties planted on both organic and conventional field plots, plus 2 additional seed treatments. 7 of the soybean varieties were feed grade and 3 were food grade.
- LOCATION:** **Organic site** – Allison Organic Research Farm, 7 miles north of Sciota, IL in southwest Warren County.
Conventional site - The WIU Research Farm, 2 miles north of Macomb, IL in central McDonough County.
- VARIETIES:** **Same at both sites - see table.**
- PLANTING DATE:** **Organic site** – June 8, 2017
Conventional site – May 17, 2017
- HARVEST DATE:** **Organic site** – November 3, 2017
Conventional site – November 7, 2017
- POPULATION:** **Organic site** – 165,000/acre (final stand counts included in table).
Conventional site – 165,000/acre (final stand counts not included in table).
- PLOTS:** **Organic site** - trial was located in field 2B west, which is mapped as Sable silty clay loam.
Conventional site - trial was located in block 3, which is mapped as Ipava silt loam.
- WEED TREATMENT:** **Organic site** - Tine weeding (6/20), row cultivation (7/17), and a small amount of hand weeding. Excellent weed control was achieved.
Conventional site - Standard non-GMO soybean herbicide program and manual removal of a large number of tall broadleaf weeds late in the season. Control of foxtail and other grasses was good but broadleaf weed control was very poor.
- TREATMENTS:** Control was GH389N untreated
Test #1: TerraMax PSB-ST Seed Treatment on GH389N
Test #2: **SoilBiotics Organic 1r – Seed Treatment** on GH389N
All other varieties were untreated.
- WEATHER:** Weather for the 2017 growing season varied, (very dry in June, unusually wet in July and very dry in August and September), but overall weather conditions were favorable for high soybean yields at both locations. Higher yields were produced at the organic site from 9 of the 12 varieties/treatments. In addition, average yield across all plots was 10.7 bu/a higher at the organic site, despite being planted 22 days later. Much higher weed pressure is likely the primary reason for the lower yields at the conventional site. At both locations, variation in yield between the highest and lowest performing varieties/treatments was significant (>20 bu/a).

Variety	Group	Company/ Source	Organic Allison Farm Planted 6/8 Yield (Bu/Acre)	Significance Groupings	Rank	Organic Allison Farm Population (Plants/Acre)	Significance Groupings	Conventional WIU Farm Planted 5/17 Yield (Bu/Acre)	Significance Groupings	Rank
GH389N w/ TerraMax PSB-ST	3.8	Great Harvest Organics	66.4	a	1	114,112	bcd	49.1	ab	6
39C4	3.9	Blue River Hybrids	65.7	a	2	129,791	ab	47.4	ab	9
GH389N	3.8	Great Harvest Organics	64.9	ab	3	121,951	abc	47.8	ab	8
GH389N w/ SoilBiotics 1r ST	3.8	Great Harvest Organics	64.1	ab	4	125,436	abc	52.6	a	3
GH380	3.8	Great Harvest Organics	61.2	abc	5	121,080	abc	52.2	a	4
GH350	3.5	Great Harvest Organics	61.1	abc	6	108,014	bcd	56.1	a	1
31C6	3.1	Blue River Hybrids	59.2	abc	7	120,209	abc	48.7	ab	7
GH330	3.3	Great Harvest Organics	58.0	bc	8	109,756	bcd	51.8	a	5
34A7	3.4	Blue River Hybrids	57.5	bc	9	146,342	a	40.2	bc	10
E3865s	3.8	Blue River Hybrids	55.6	cd	10	100,174	cd	55.0	a	2
IA 2012	2.9	Iowa State/ Bradley Farms	48.5	de	11	89,721	d	35.8	c	12
GH327	3.2	Great Harvest Organics	42.4	e	12	99,303	cd	39.2	bc	11
			LSD =7.5			LSD = 26,970		LSD =11.4		

SUMMARY: Averaged across both organic and conventional sites the **SoilBiotics Organic 1r - Seed Treatment** out yielded the control by 2.0 bu/a. and the TerraMax PSB-ST treatment out yielded the control by 1.4 bu/a. The additional revenue generated from the extra bushels exceeded the cost of the seed treatments. Both treatments performed well (top 4) at the organic site. The **SoilBiotics Organic 1r - Seed Treatment** ranked 3rd in the conventional site at 52.6 bu/a, which is 4.8 bu/a greater than the control.