

MU Certified Strip Trial Program

2017 ILeVO® Trial Harvest Report

Site number: 5

County: Barton

MU Extension Contact – Jill Scheidt, Agronomist.

Results Summary

- Whole strip yields indicate ILeVO decreased yield 1.5 bushels/acre and the difference was statistically significant.
- An assessment of within-strip variability estimated that the benefit of ILeVO was greater than or equal to zero for about 39% of the trial.
- Scouting found no confirmed Sudden Death Syndrome at this location.
- Soil sampling in the spring indicated low to high levels of Soybean Cyst Nematode (SCN). Mean SCN numbers after harvest were 25 times higher than prior to planting. The effect of ILeVO was not statistically significant.

The mission of the MU Certified Strip Trial Program is to help farmers validate management decisions on their farm and document efficiency and environmental stewardship.

The MU Certified Strip Trial Program is funded by:

MU Extension, the Missouri Soybean Merchandising Council, and the Missouri Corn Merchandising Council.

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Figure 1. Aerial photography taken August 25, 2017, showing strip trial layout in the field.

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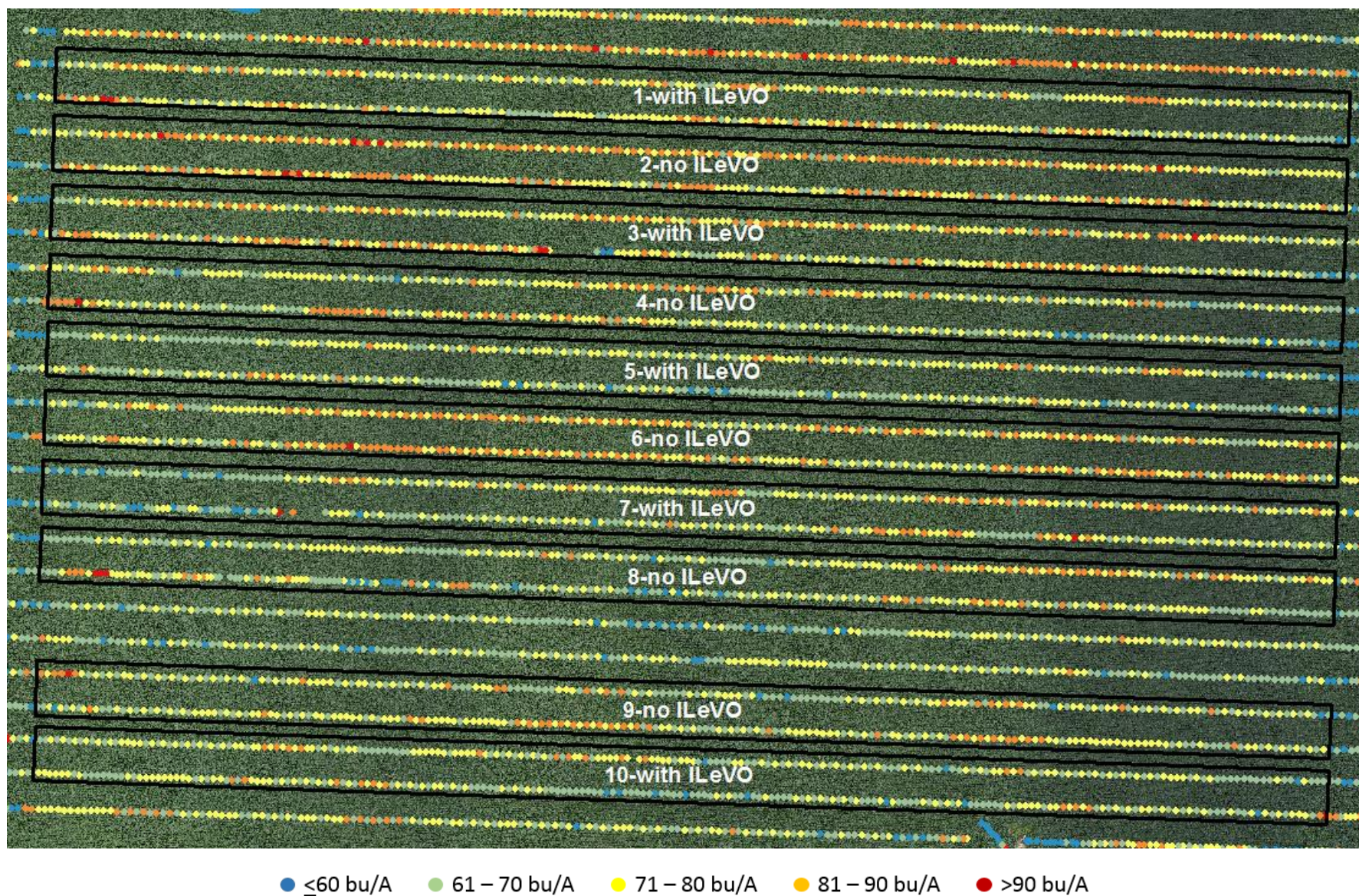


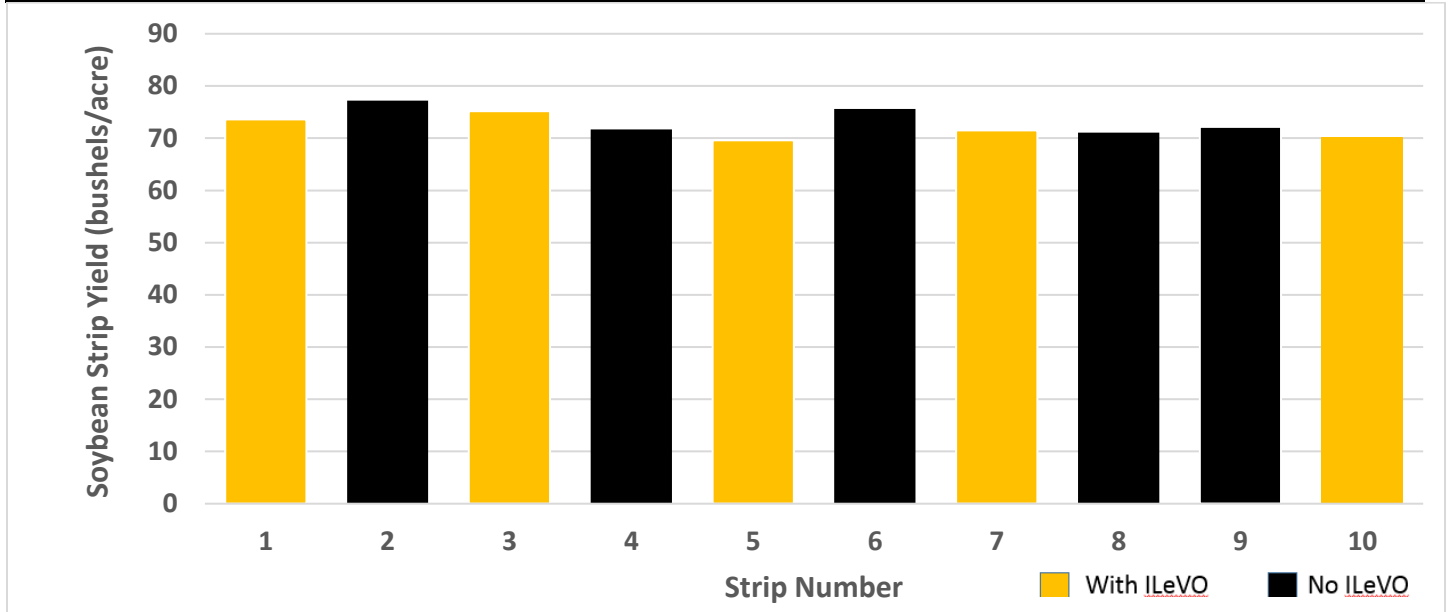
Figure 2. Yield monitor data reported as bushels per acre. Soybeans were harvested October 13, 2017.

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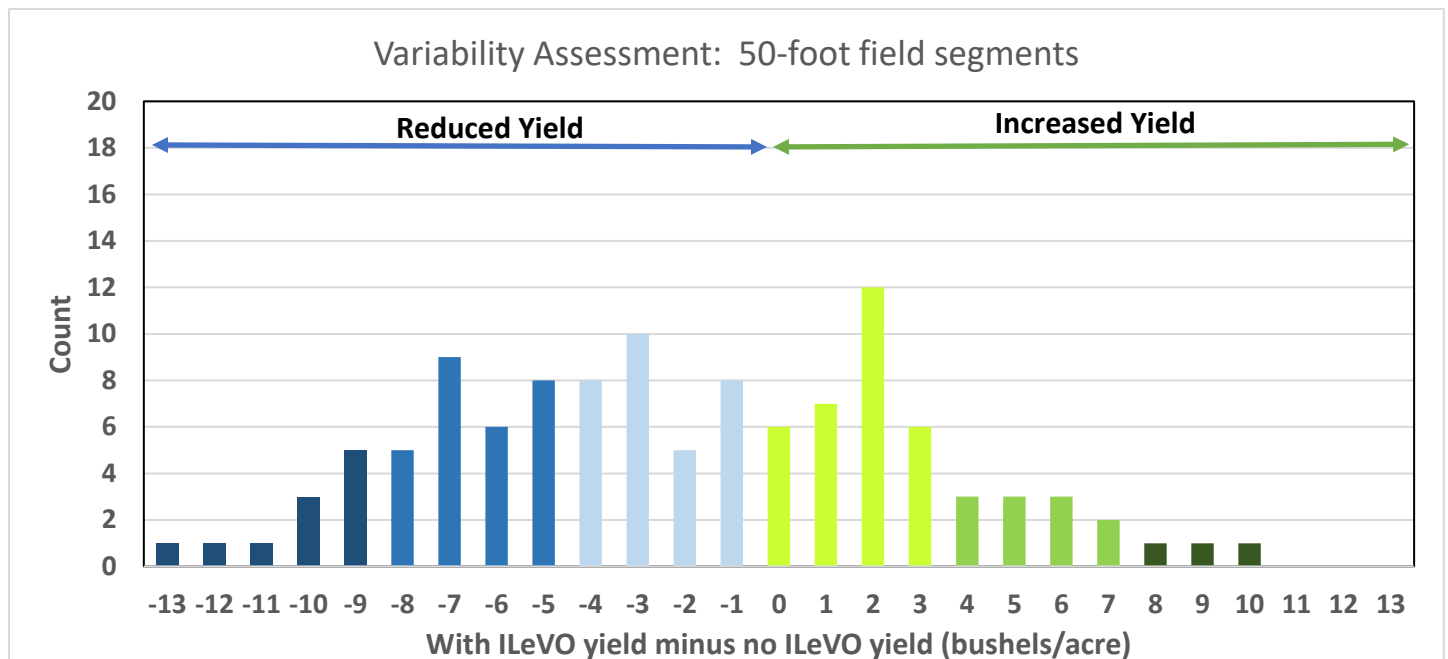
Table/Graph 1. Whole Strip Yields.

Mean yield for all strips was 72.8 bu/A (72.0 bu/A with ILeVO; 73.5 bu/A without ILeVO).

Strip	1	2	3	4	5	6	7	8	9	10
ILeVO?	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes
Yield (bu/A)	73.6	77.2	75.2	71.7	69.6	75.6	71.5	71.1	72.2	70.2



Graph 2. Field variability: Estimated yield “benefit” of ILeVO.



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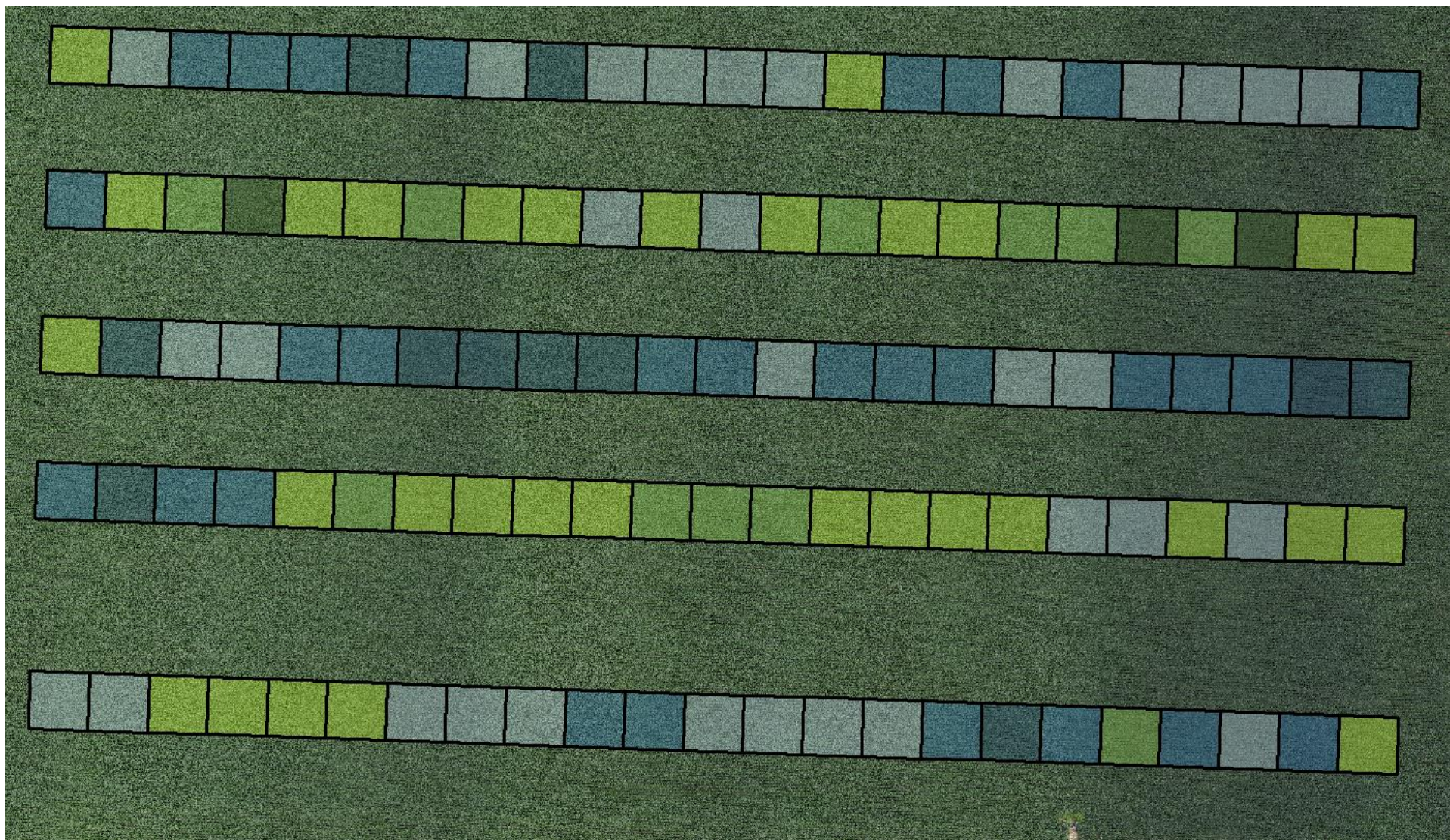


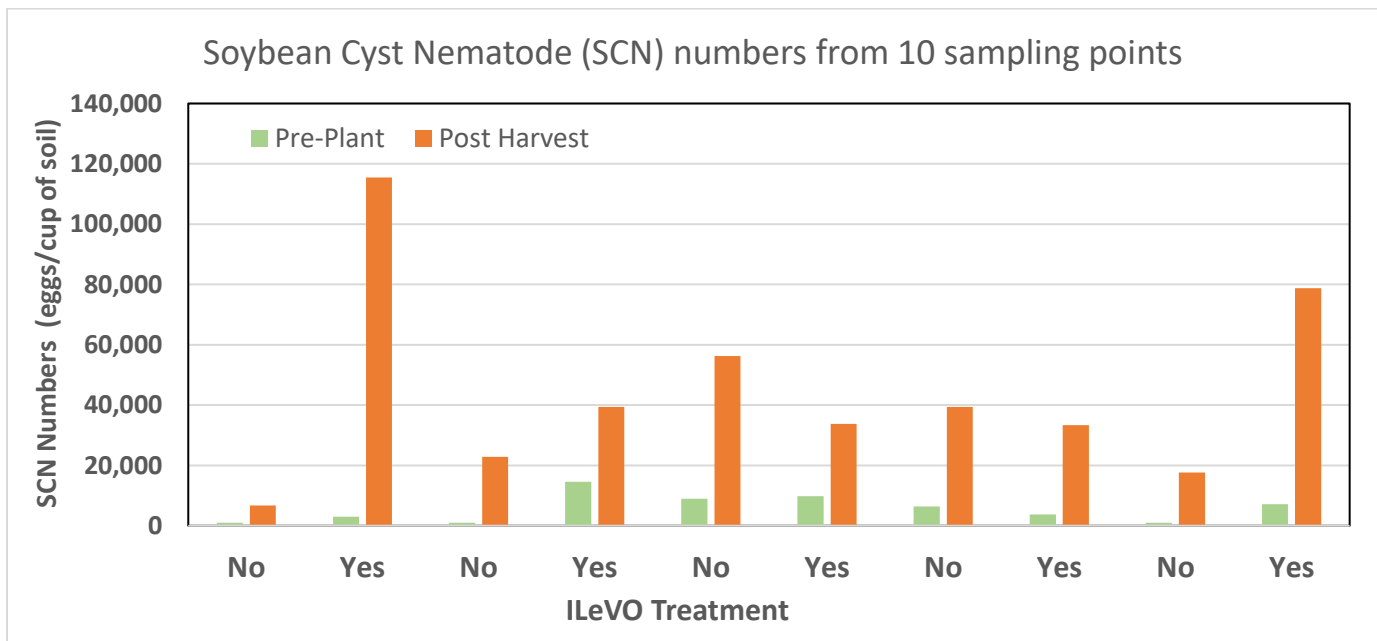
Figure 3. Field variability in the yield effect of ILeVO: Colors match previous figure. Green segments are where the calculated yield difference was ≥ 0 ; blue segments are where yield effect was negative.

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Table 2. Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup of soil).

	Pre-Plant		Post-Harvest	
Treatment	SCN (eggs/cup)	SCN Rating	SCN (eggs/cup)	SCN Rating
No ILeVO	563	Moderate	6,750	Moderate
With ILeVO	3,000	Moderate	115,500	High
No ILeVO	0	Low	22,875	High
With ILeVO	14,625	High	39,375	High
No ILeVO	9,000	Moderate	56,250	High
With ILeVO	9,750	Moderate	33,750	High
No ILeVO	6,375	Moderate	39,375	High
With ILeVO	3,750	Moderate	33,375	High
No ILeVO	188	Low	17,625	High
With ILeVO	7,125	Moderate	78,750	High
Mean	5,438		44,363	

Graph 3. Graphical representation of Soybean Cyst Nematode (SCN) numbers pre-plant and post-harvest from 10 sampling points in the field.



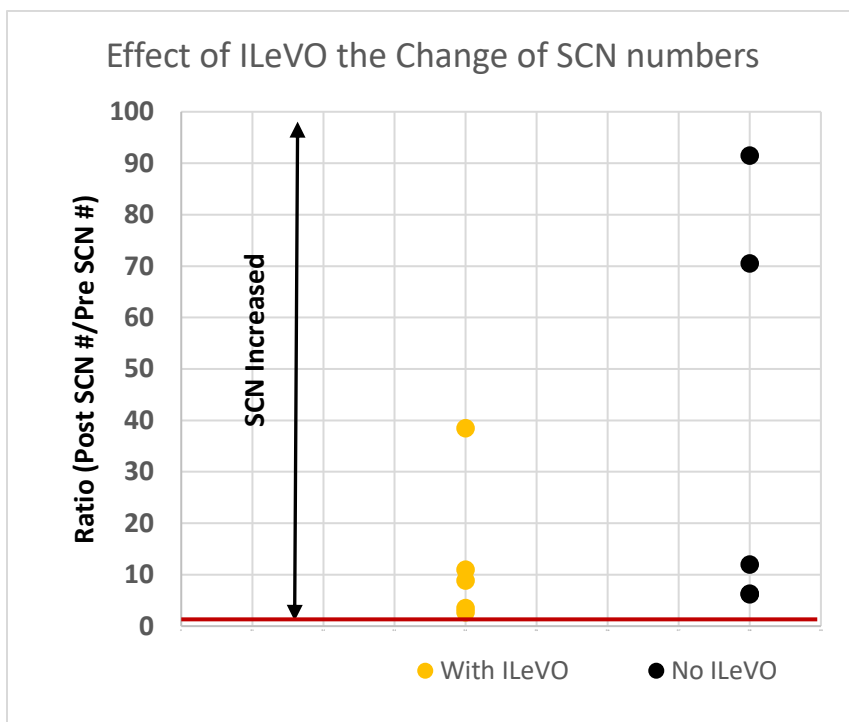
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Samples were taken 5/17/2017 (pre-plant) and 10/26/2017 (post-harvest) in the same 10 locations in the field. Sampling points were 12 feet circles along a north-south transect across the plots about 150 feet from the western edge of the strips.

To assess the effect of ILeVO on SCN numbers, the ratio of SCN numbers were calculated at post-harvest divided by SCN numbers at pre-plant (Post-harvest SCN #/Pre-plant SCN #) for each of the 10 sampling points.

In the figure below, no change in SCN numbers = 1. Above 1, SCN numbers increased over the growing season.

Graph 4. Increase in SCN numbers between pre-plant and post-harvest samplings.



SCN numbers averaged 25 times higher in fall compared to spring. The effect of ILeVO on this change (37 times higher with no ILeVO; 13 times higher with ILeVO) was not statistically significant.

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Management Information

Location characteristics:	Trial size: 20 acres	Dominant soil type: Silt Loam	
Crop rotation:	Previous crop: Corn	Current crop: Soybean	
Soybean variety:	Stine 43RE02	SCN resistant: Yes	SDS resistant: Yes
Agronomic information:	Planted: 6/7/2017	Harvested: 10/13/2017	
Other seed treatments:	Acceleron		
SDS history:	History of SDS: Yes	Confirmed SDS in 2017: No	

Location Notes:

- There was no evidence of SDS in this field from images taken August 29, 2017.

