MU Certified Strip Trial Program

2017 ILeVO® Trial Harvest Report

Site number: 1
County: Lincoln
Extension Contact – Charles Ellis, Agricultural Engineer

Results Summary

- Whole strip yields indicate ILeVO increased yield 1.0 bushel/acre and the difference was not statistically significant.
- An assessment of within-strip variability estimated that the benefit of ILeVO was greater than or equal to zero for about 57.6% of the trial.
- Scouting found no confirmed Sudden Death Syndrome at this location.
- Soil sampling in spring indicated primarily low to levels of Soybean Cyst Nematode (SCN). There was little change over the growing season. There was no evidence that ILeVO decreased SCN numbers.

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.

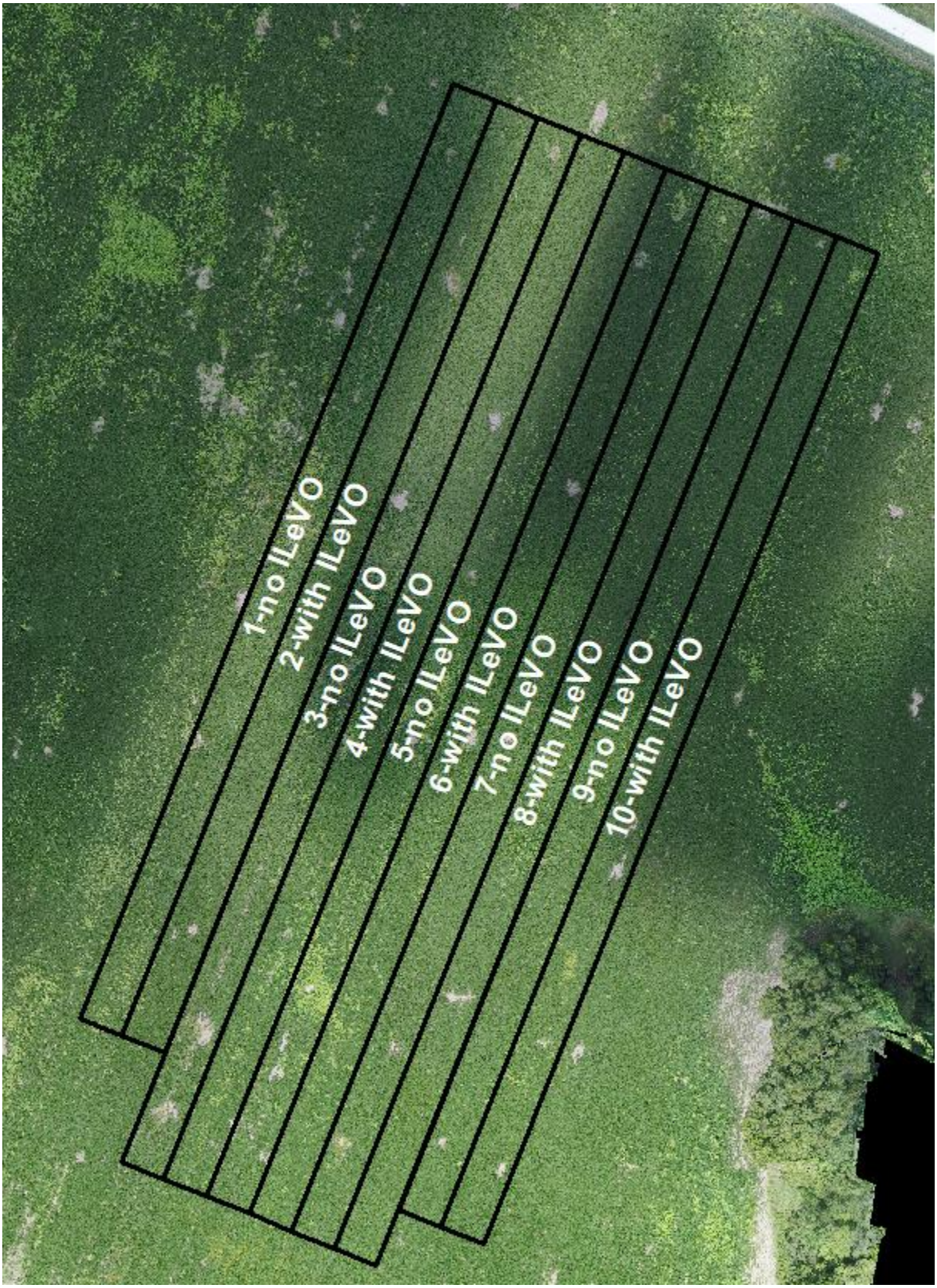

Figure 1. Aerial photography taken August 29, 2017, showing strip trial layout in the field.

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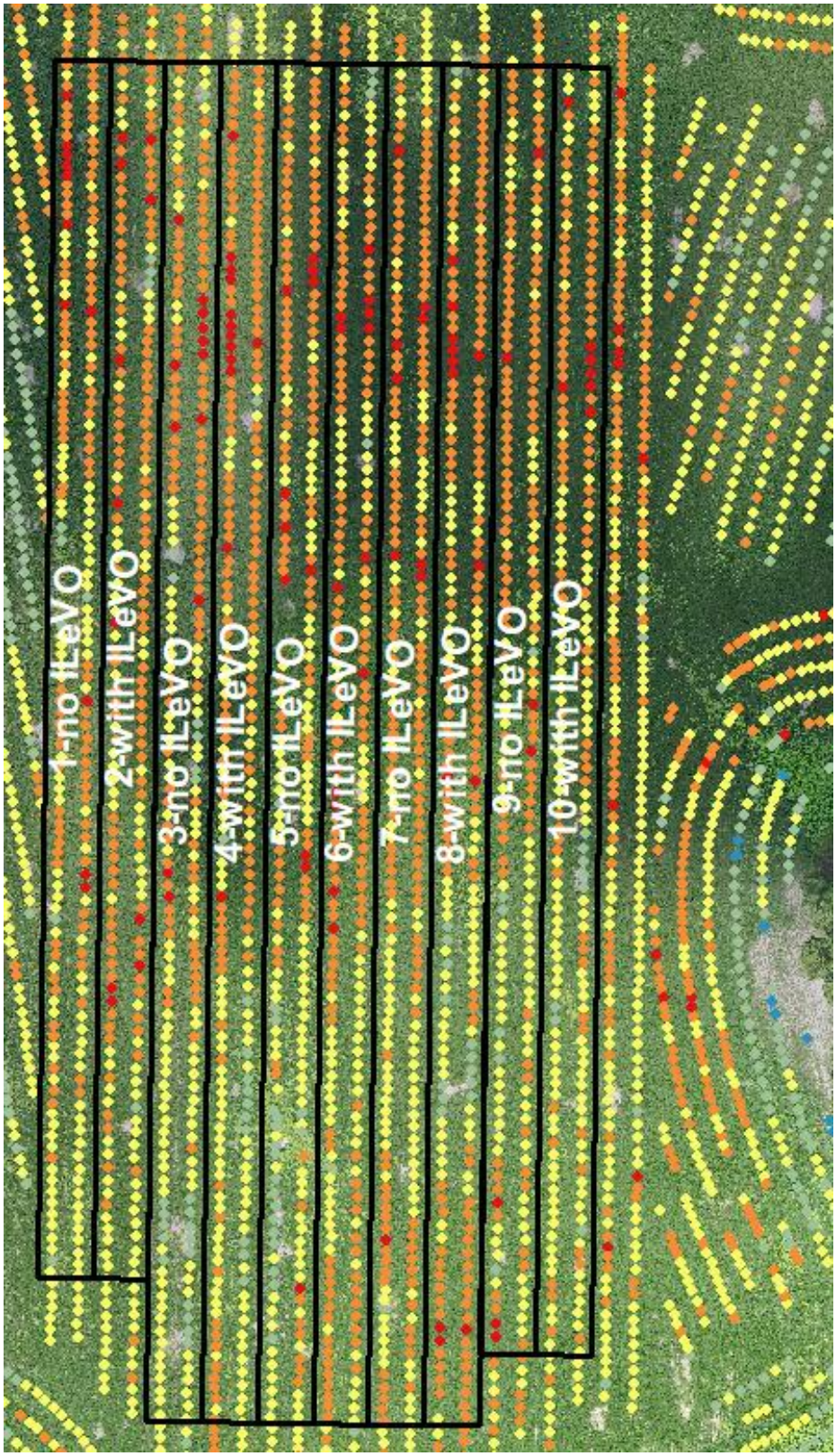

Figure 2. Yield monitor data reported as bushels per acre. Soybeans were harvested October 18, 2017.

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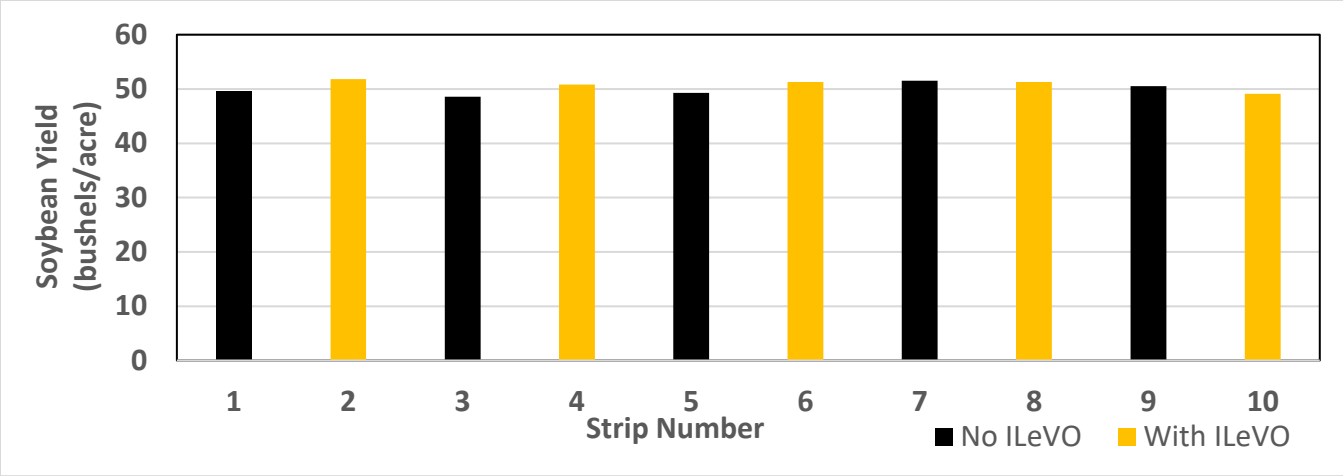
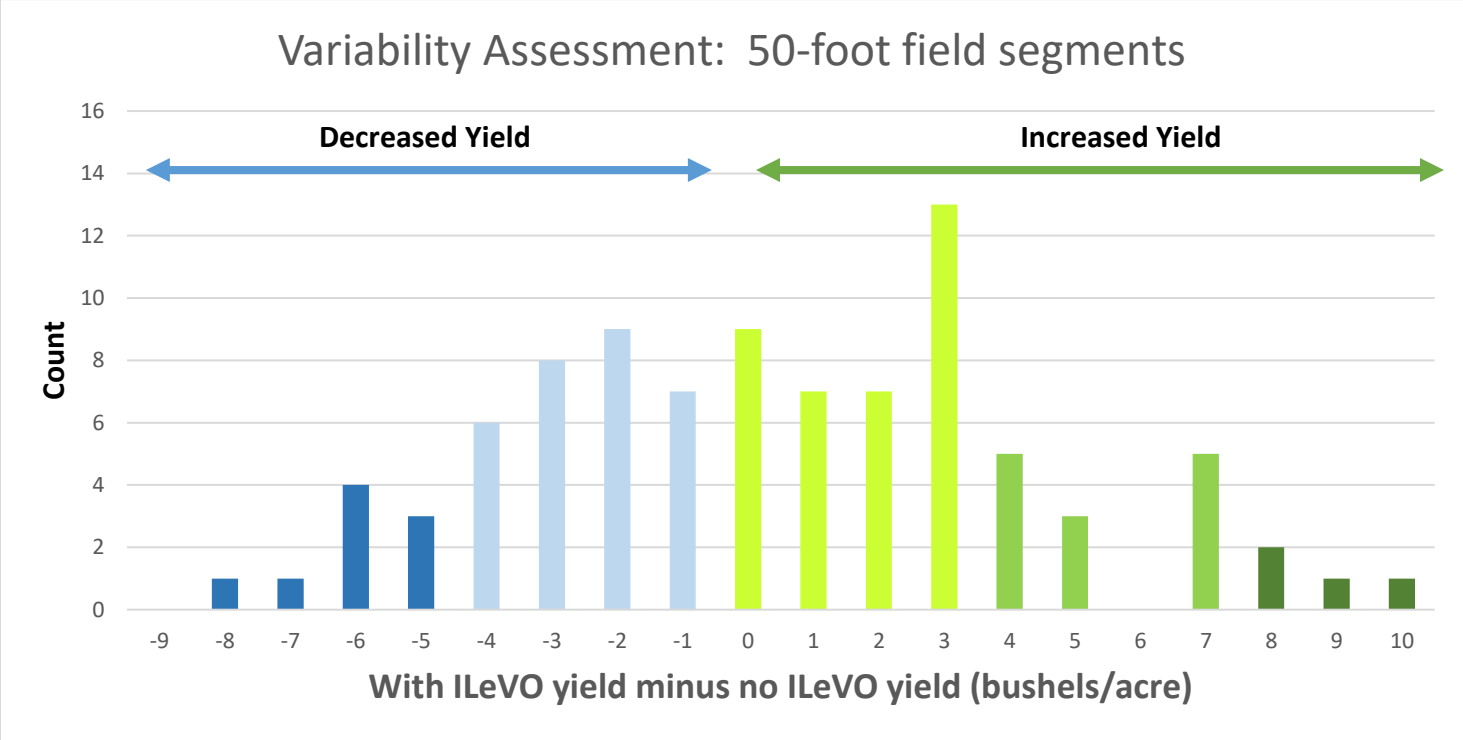
Table/Graph 1. Whole Strip Yields:

Mean yield for all strips was 50.4 bu/A (50.9 bu/A with ILeVO; 49.9 bu/A without ILeVO).

Strip	1	2	3	4	5	6	7	8	9	10
ILeVO?	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Yield (bu/A)	49.7	51.8	48.6	50.8	49.3	51.3	51.5	51.3	50.5	49.1



Graph 2. Field variability: Estimated yield "benefit" of ILeVO.



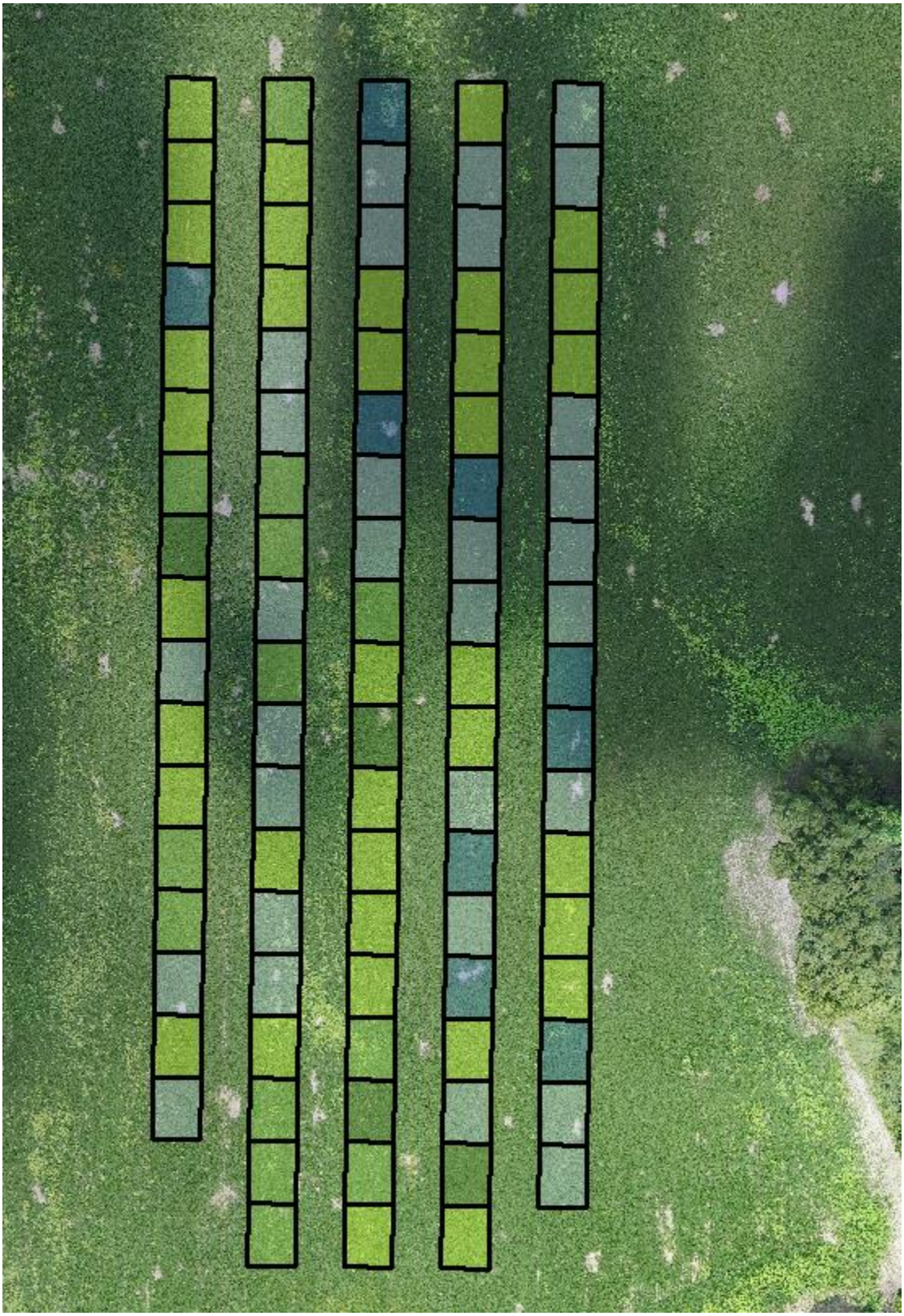
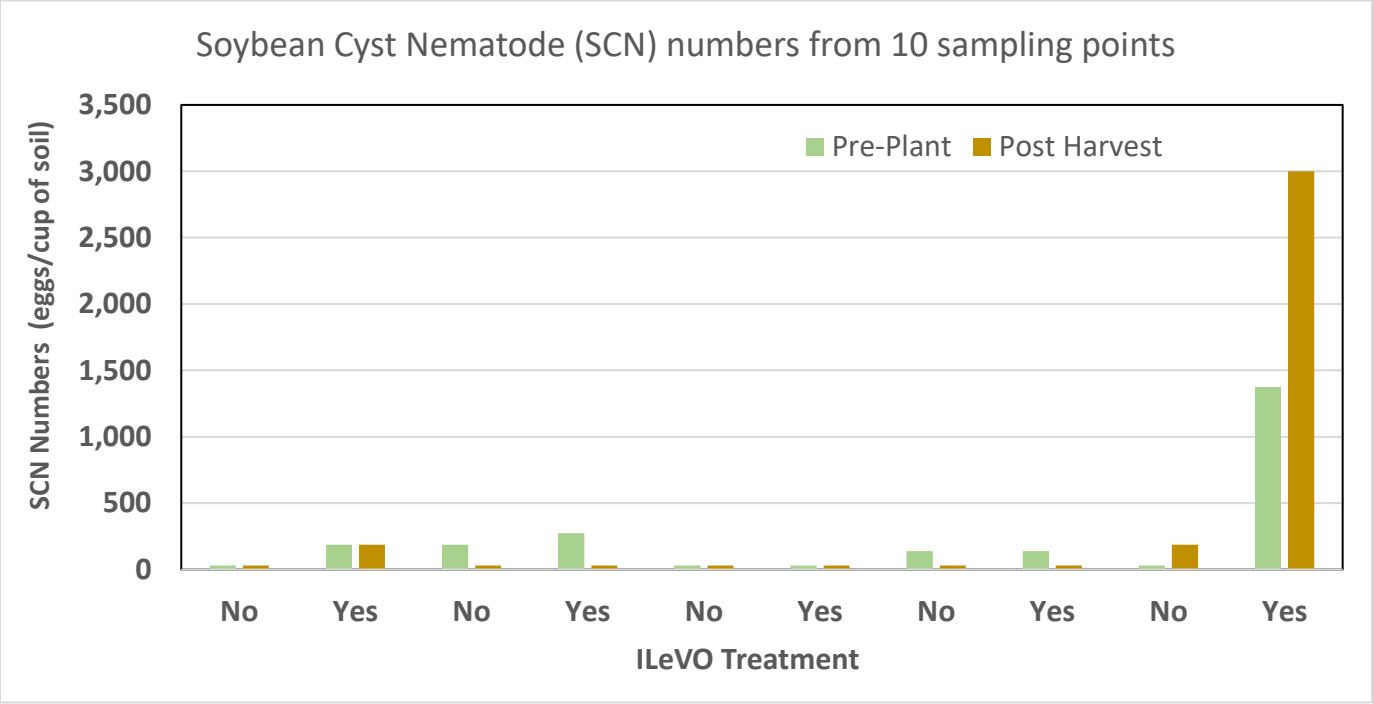


Figure 3. Field variability in the yield effect of ILeVO: Colors match previous figure. Green segments are where the calculated yield difference was ≥ 0; blue segments are where yield effect was negative.

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	0	Low	0	Low
With ILeVO	188	Low	188	Low
No ILeVO	188	Low	0	Low
With ILeVO	275	Low	0	Low
No ILeVO	0	Low	0	Low
With ILeVO	0	Low	0	Low
No ILeVO	138	Low	0	Low
With ILeVO	138	Low	0	Low
No ILeVO	0	Low	188	Low
With ILeVO	1,375	Moderate	3,000	Moderate
Means	230.2		337.6	

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



Soil samples were taken 4/25/2017 (pre) and 10/24/2017 (post) in the same 10 locations in the field. Sampling points were 12 feet circles along transect across the plots about 300 feet from the north eastern edge of the strips.

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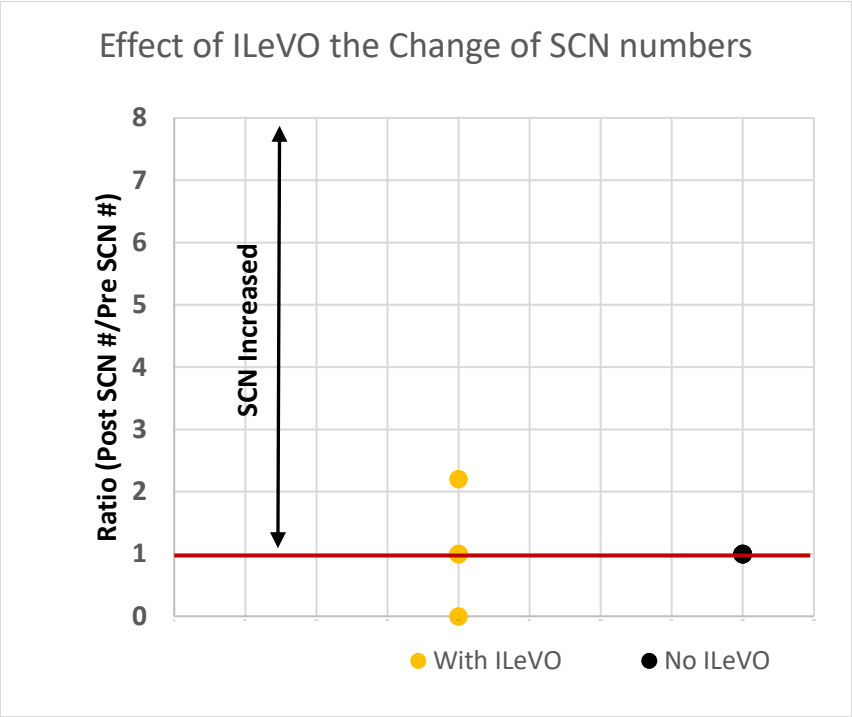
To assess the effect of ILeVO on SCN numbers, the ratio of SCN numbers was calculated as post-harvest divided by SCN numbers at pre-plant (Post-harvest SCN #/Pre-plant SCN #) for each of the 10 sampling points.

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 the same in fall compared to spring. There was no evidence that ILeVO affected the fall/spring ratio (1.03 with no ILeVO; 1.00 with ILeVO).

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Management Information

Location characteristics:	Trial size: 12 acres	Dominant soil type: Silt Loam	
Crop rotation:	Previous crop: Soybean	Current crop: Soybean	
Soybean variety:	Becks 424L4	SCN resistant: Yes	SDS resistant: Yes
Agronomic information:	Planted: 5/16/2017	Harvested: 10/18/2017	
Other seed treatments:	Escalate		
SDS history:	History of SDS: No	Confirmed SDS in 2017: No	

Location Notes:

- This field was an ILeVO treated field that had five strips of no-ILeVO seed.
- This field has weed pressure and many areas with no stand, possibly due to early vole damage, but no evidence of SDS.