

MU Certified Strip Trial Program

2017 ILeVO® Trial Harvest Report

Site number: 13

County: Barton

Extension Contact – Jill Scheidt, Agronomist

Results Summary

- Whole strip yields indicate ILeVO increased yield 4.4 bushels/acre and the difference was statistically significant.
- An assessment of within-strip variability estimated that the benefit of ILeVO was greater or equal to zero for about 75% of the trial.
- Scouting confirmed Sudden Death Syndrome at this location.
- Soil sampling in spring indicated variable (moderate to high) levels of Soybean Cyst Nematode (SCN). Mean SCN numbers after harvest were over three times higher. There was evidence that ILeVO reduced this increase.

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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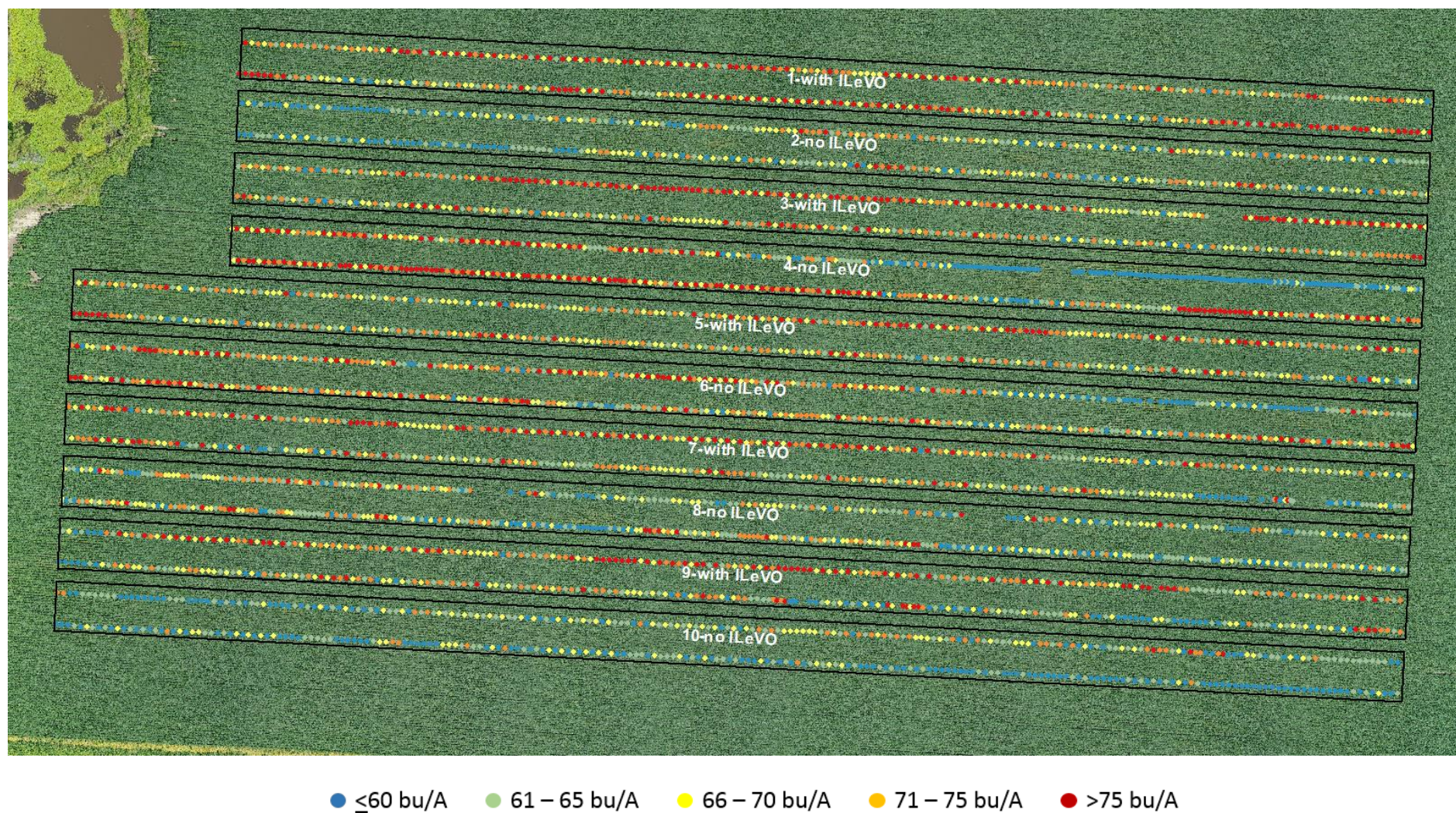


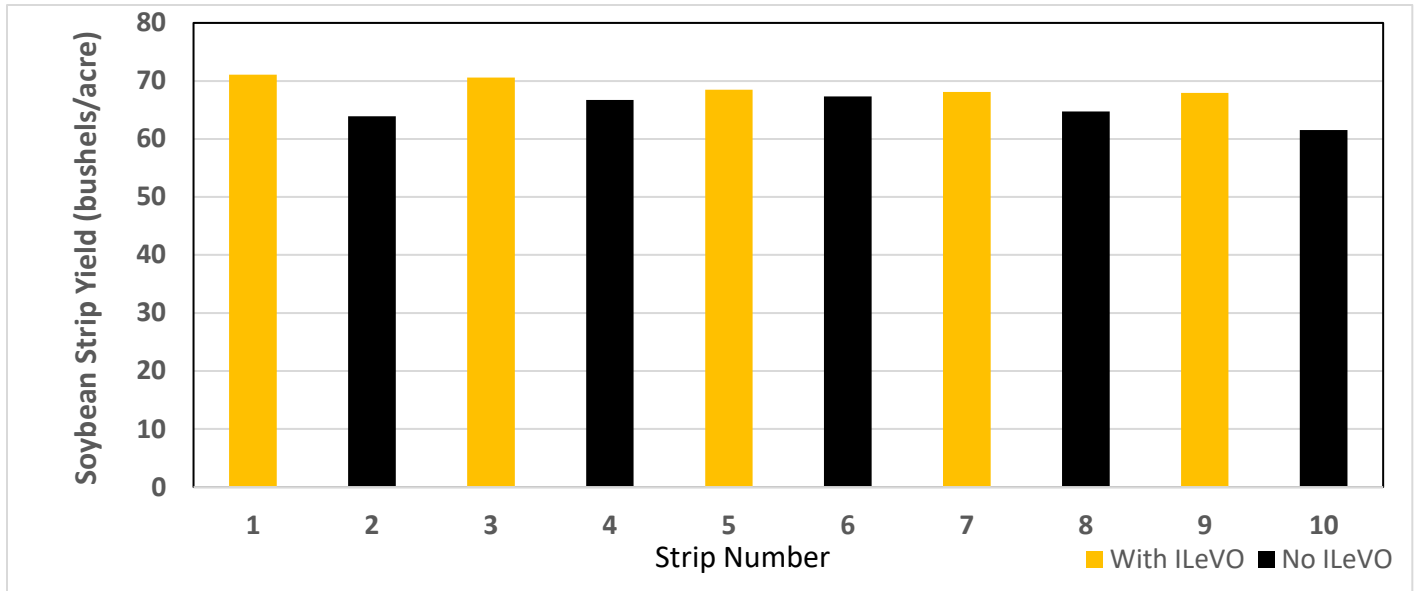
Figure 2. Yield monitor soybean data reported as bushels per acre. Field was harvested October 12, 2017.

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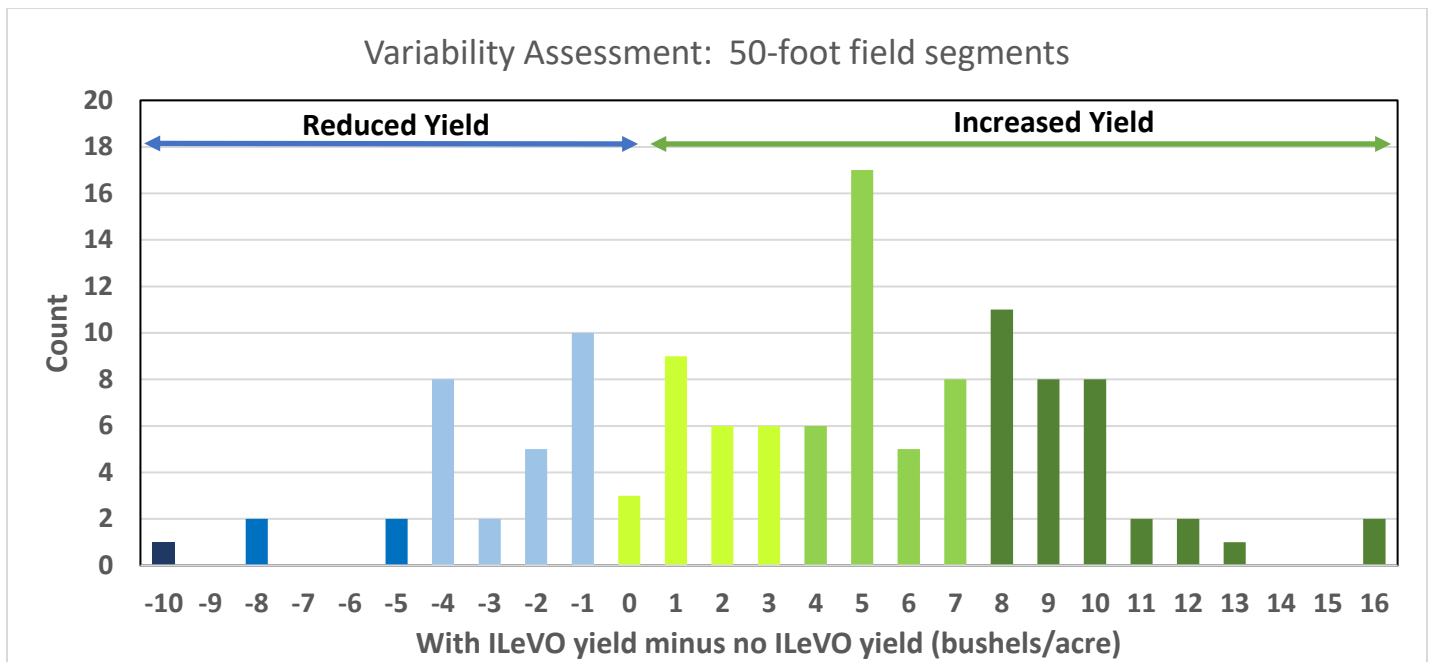
Table/Graph 1. Whole Strip Yields.

Mean yield for all strips was 66.4 bu/A (69.2 bu/A with ILeVO; 64.8 bu/A without).

Strip	1	2	3	4	5	6	7	8	9	10
ILeVO?	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yield (bu/A)	71.1	63.9	70.6	66.7	68.5	67.3	68.1	64.7	67.9	61.5



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



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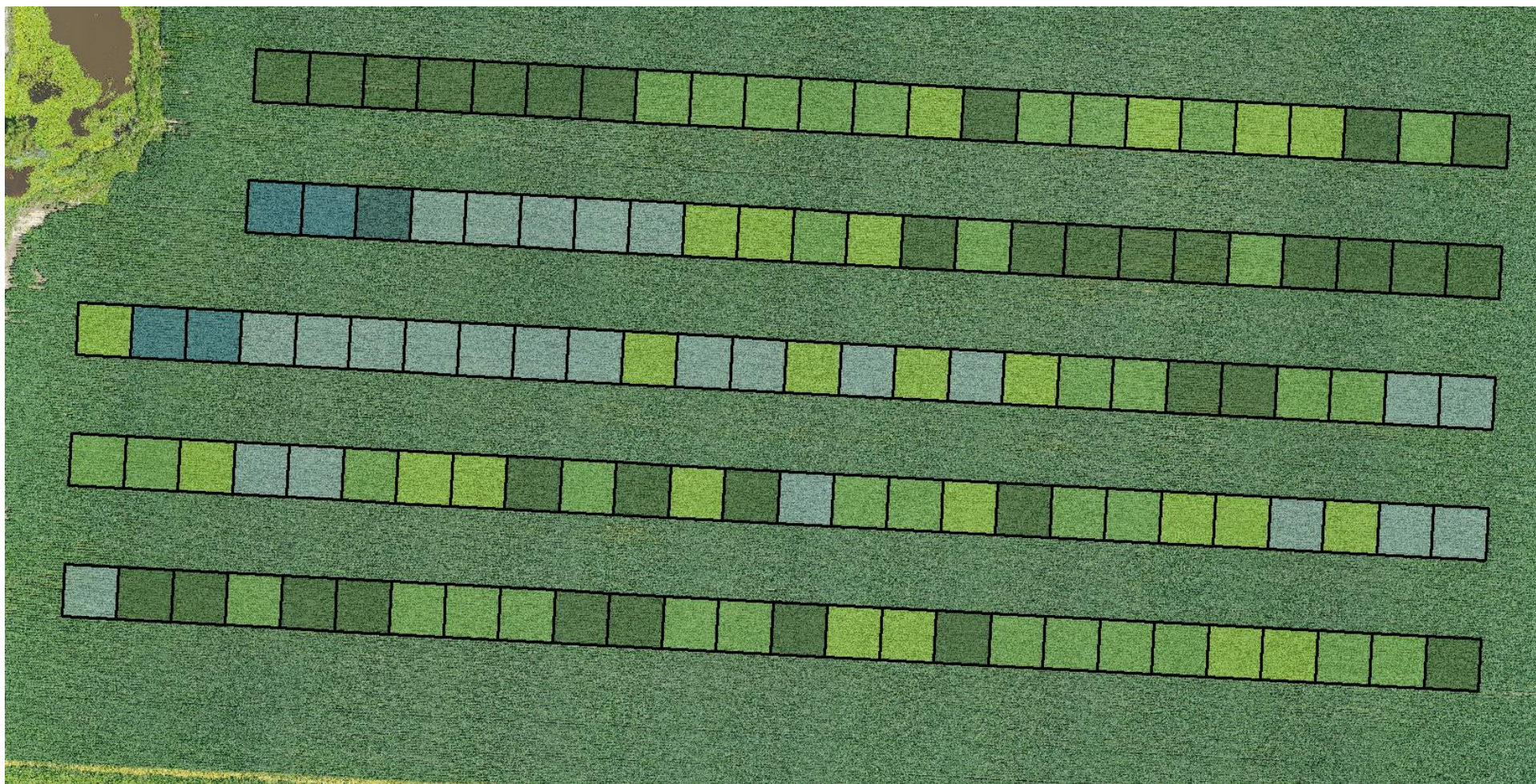


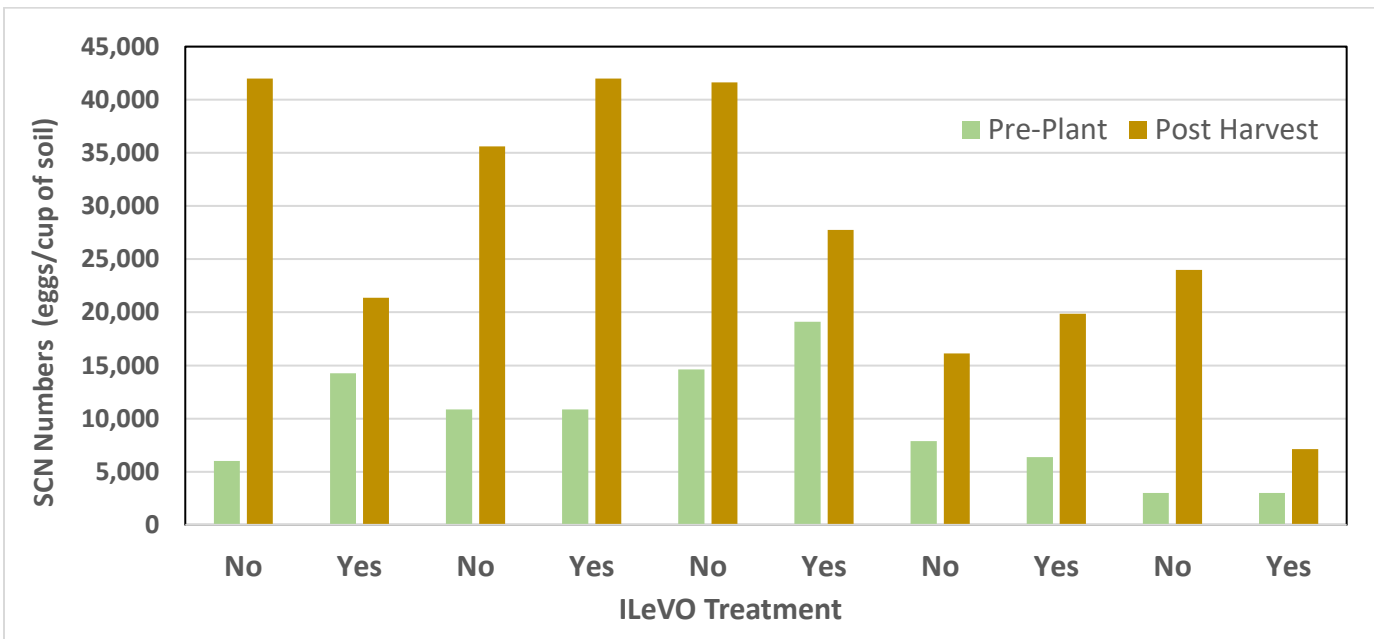
Figure 3. Field variability in the predicted yield effect of ILeVO: Colors match previous graph. Green segments are where the predicted yield effect was ≥ 0 ; blue segments are where yield effect was predicted negative.

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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	6,000	Moderate	42,000	High
With ILeVO	14,250	High	21,375	High
No ILeVO	10,875	High	35,625	High
With ILeVO	10875	High	42,000	High
No ILeVO	14,625	High	41,625	High
With ILeVO	19,125	High	27,750	High
No ILeVO	7,875	Moderate	16,125	High
With ILeVO	6,375	Moderate	19,875	High
No ILeVO	3,000	Moderate	24,000	High
With ILeVO	3,000	Moderate	7,125	Moderate
Means	9,600		27,750	

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



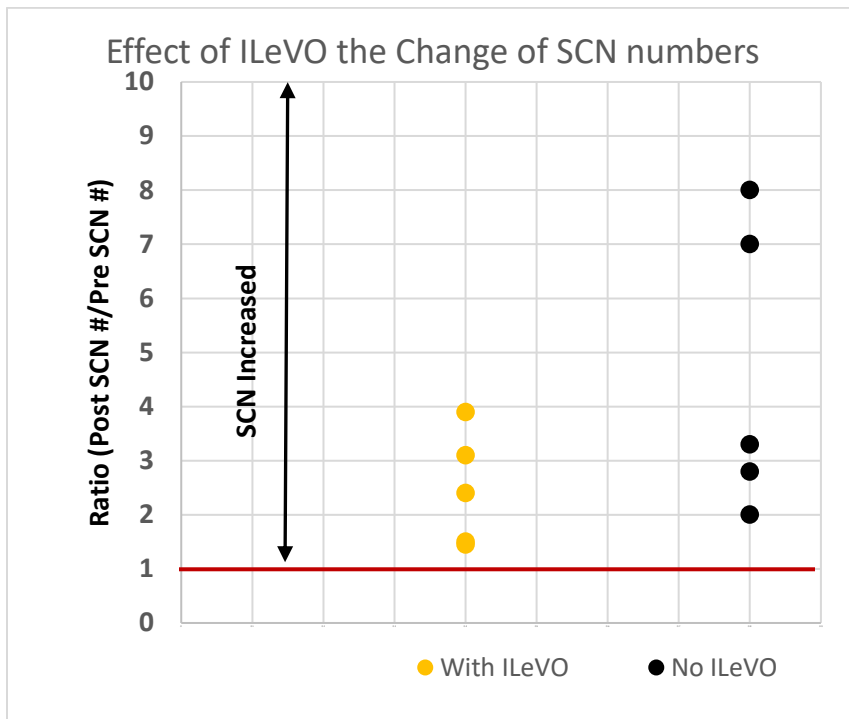
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Samples were taken 5/17/2017 (pre-plant) and 10/26/2017 (post-harvest) in the same 10 locations in the field. Sampling points were 12 feet circles along north-south transect across the plots about 250 to 400 feet from the western edge of the strips, depending on the strip.

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 over three times higher in fall compared to spring (2.5 times higher with ILeVO, 4.6 times higher with no ILeVO). There was some statistical evidence that ILeVO affected this change.

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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: 6/6/2017	Harvested: 10/12/2017	
Other seed treatments:	Acceleron		
SDS history:	History of SDS: Yes	Confirmed SDS in 2017: Yes	

Location Notes:

- This field was an ILeVO treated field that had five strips of no-ILeVO seed.
- The field was surveyed on August 25th with aerial imagery. SDS was confirmed at this field.

