

MU Certified Strip Trial Program

2017 ILeVO® Trial Harvest Report

Site number: 6

County: Lincoln

Extension Contact – Charles Ellis, Agricultural Engineer

Results Summary

- Whole strip yields indicate ILeVO increased yield 1.0 bushel/acre; there was some evidence that 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 50% of the trial.
- Scouting found no confirmed Sudden Death Syndrome at this location.
- Soil sampling in spring indicated low levels of Soybean Cyst Nematode (SCN). Mean SCN numbers were marginally higher after harvest compared to prior to planting. There was no evidence that ILeVO affected 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.

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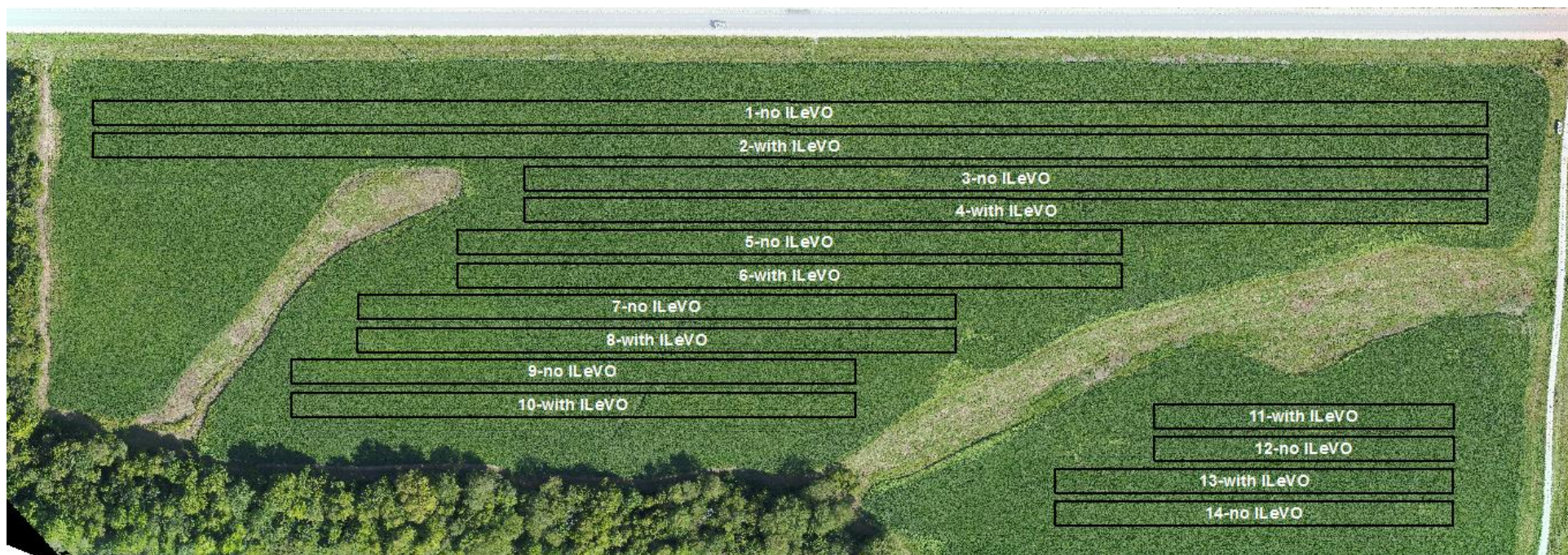


Figure 1. Aerial photography taken August 30, 2017, showing strip trial layout in the field.

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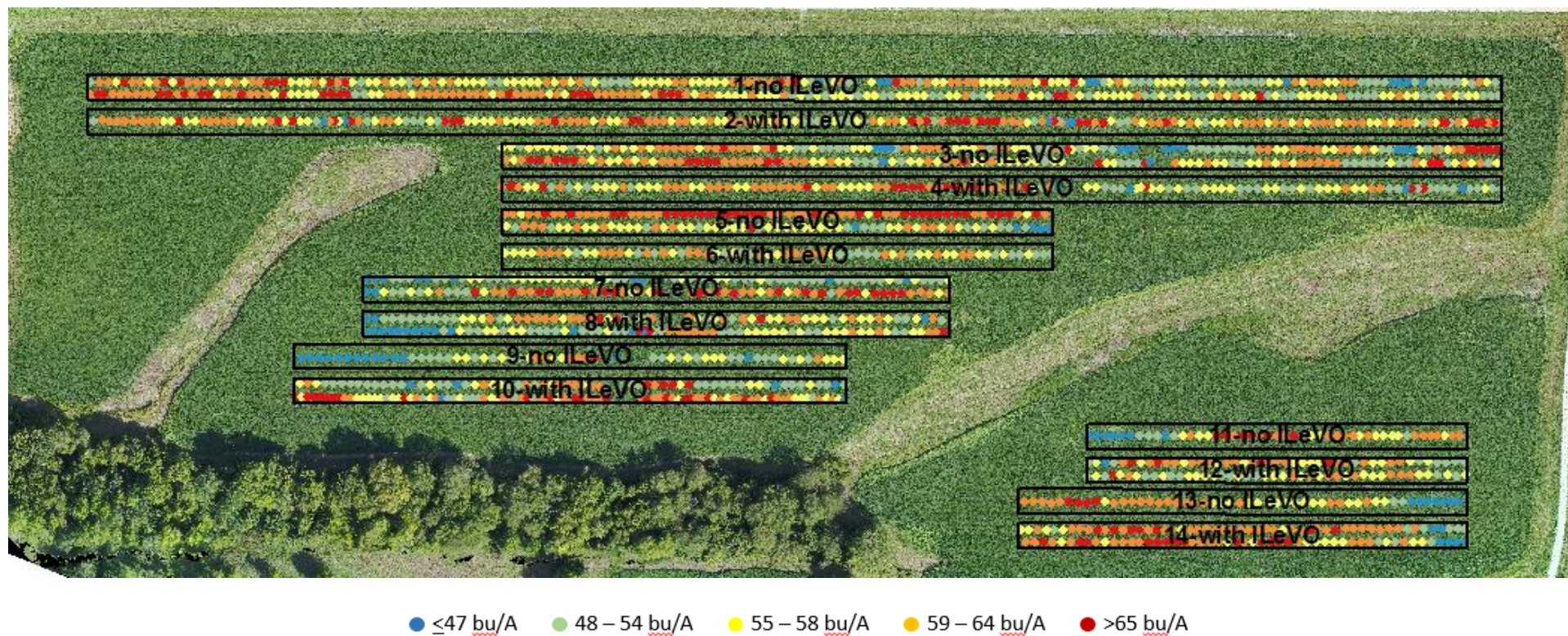


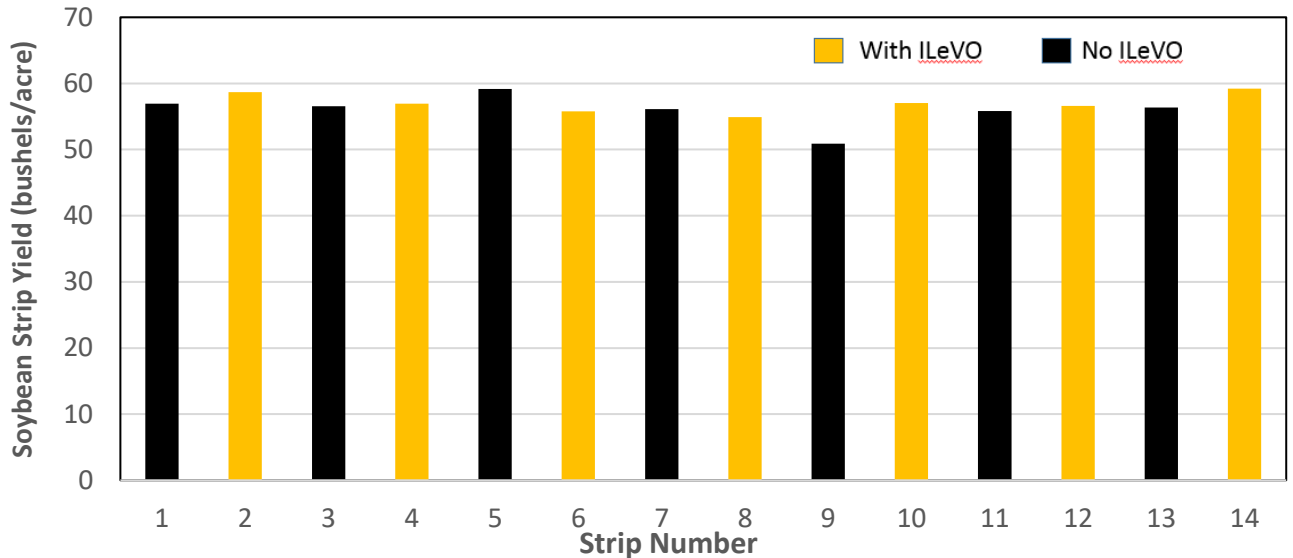
Figure 2. Yield monitor data reported as bushels per acre. Field was harvested September 30, 2017.

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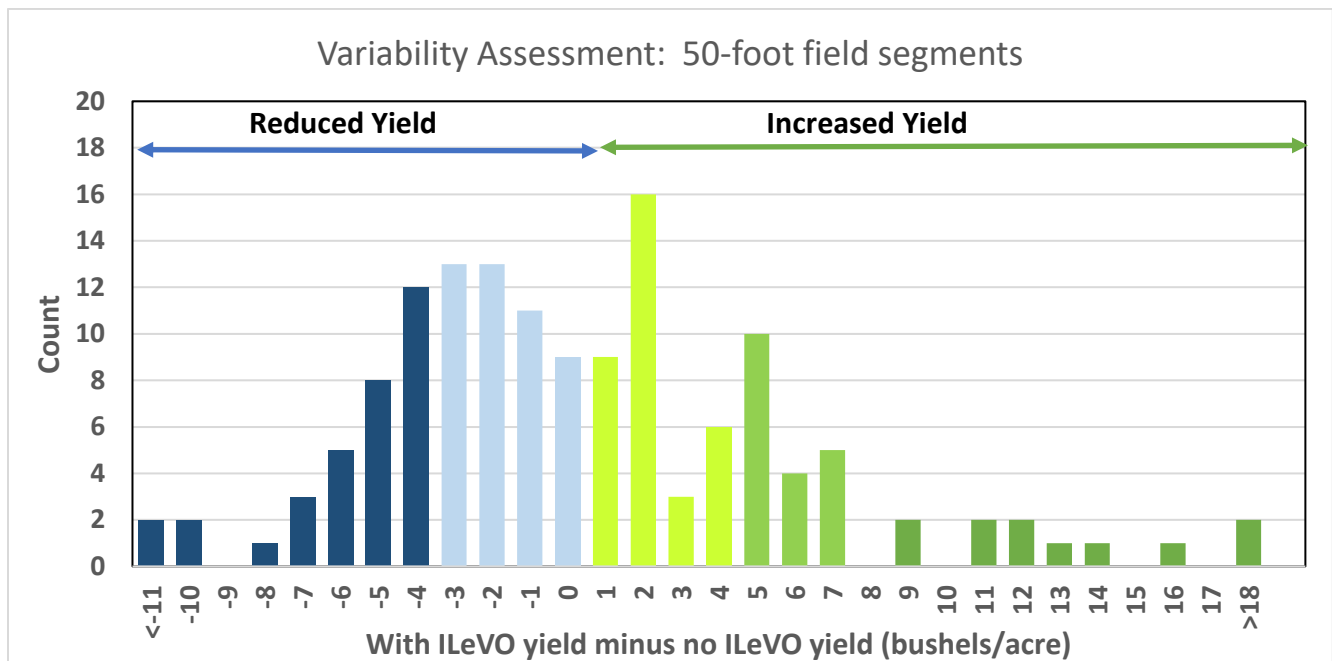
Table/Graph 1. Whole Strip Yields:

Mean yield for all strips was 56.5 bu/A (57.0 bu/A with ILeVO; 56.0 bu/A without ILeVO).

Strip	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ILeVO?	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Yield Monitor	56.9	58.7	56.6	56.9	59.2	55.8	56.1	54.9	50.9	57.1	55.8	56.6	56.4	59.2



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



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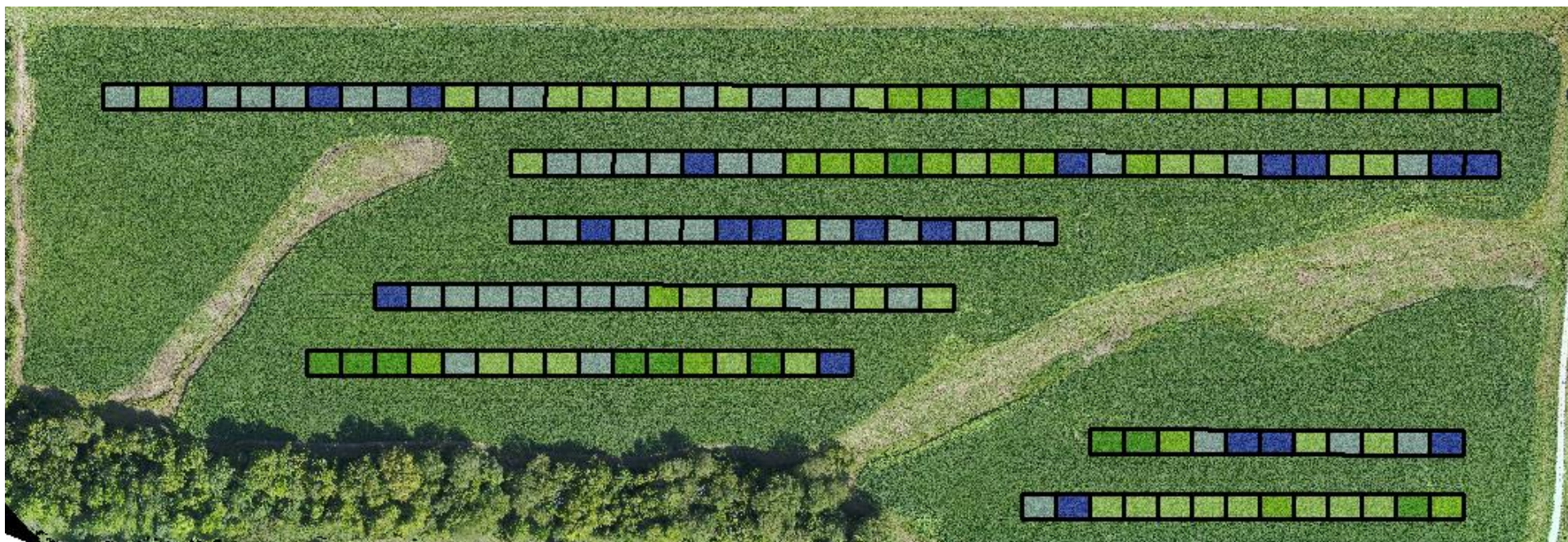


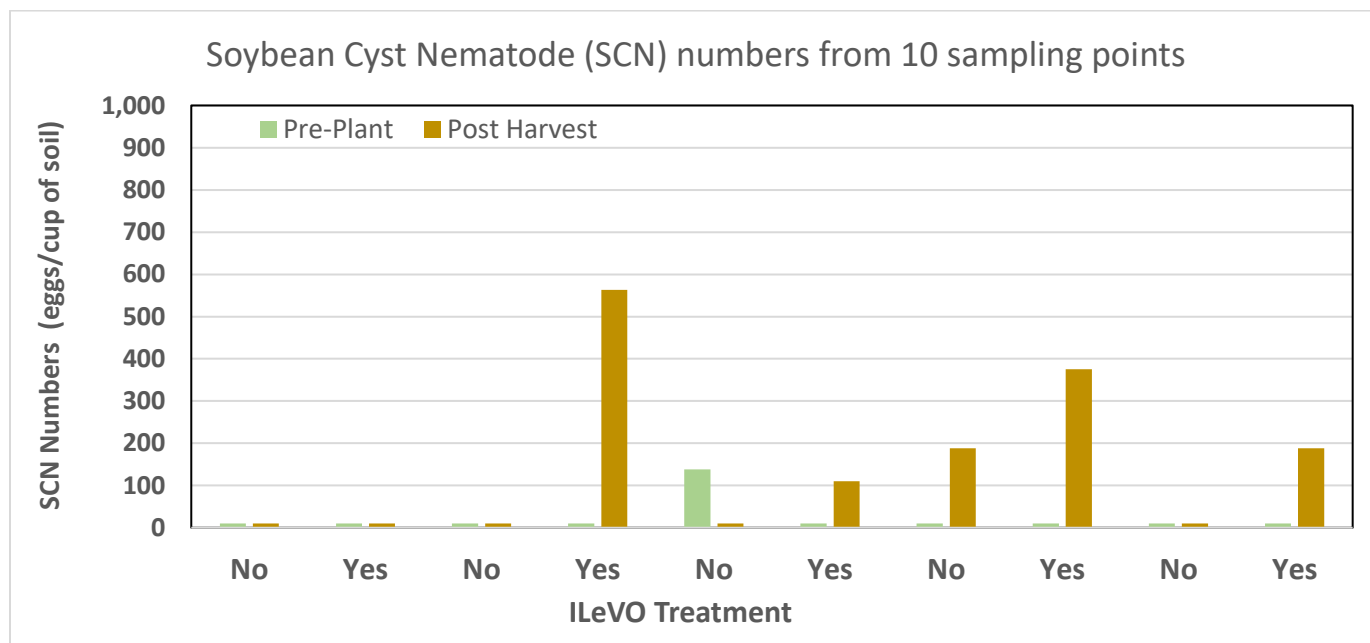
Figure 3. Field variability in the yield effect of ILeVO: Colors match previous figure. Green segments are where the yield effect was ≥ 0 ; blue segments are where yield effect was predicted negative.

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

	Pre-Plant		Post-Harvest	
Treatment	SCN (eggs/cup)	SCN Rating	SCN (eggs/cup)	SCN Rating
No ILeVO	0	Low	0	Low
With ILeVO	0	Low	0	Low
No ILeVO	0	Low	0	Low
With ILeVO	0	Low	563	Moderate
No ILeVO	138	Low	0	Low
With ILeVO	0	Low	0	Low
No ILeVO	0	Low	188	Low
With ILeVO	0	Low	375	Low
No ILeVO	0	Low	0	Low
With ILeVO	0	Low	188	Low
Means	14		131	

Graph 2. Graphical representation of Soybean Cyst Nematode (SCN) numbers pre-plant and post-harvest from 10 sampling points in the field.



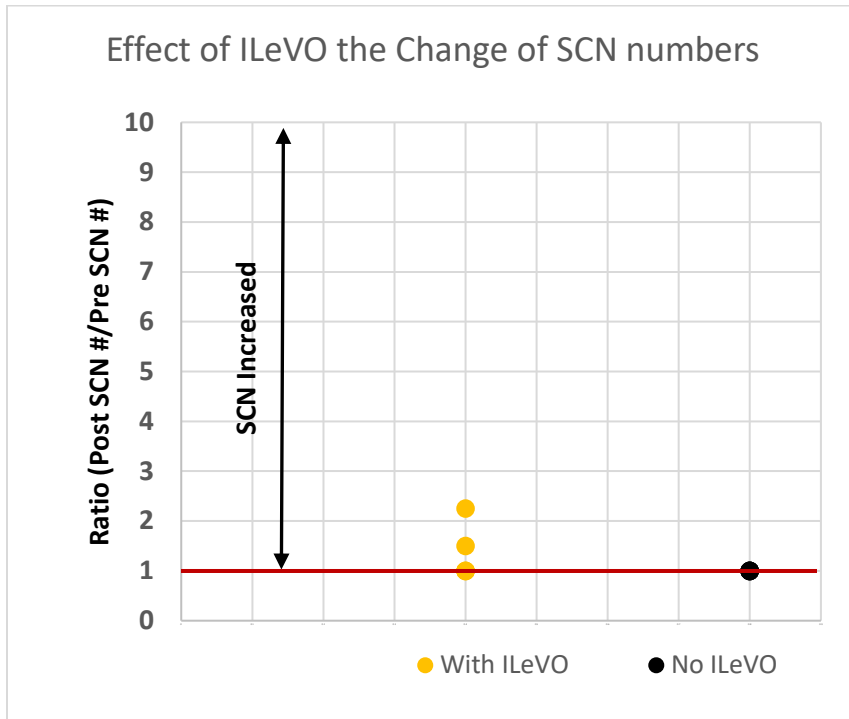
Samples were taken 4/25/2017 (pre-plant) and 10/11/2017 (post-harvest) in the same 10 locations in the field. Sampling points were 12 feet circles along north-south transect a little west of the entry point to the north side of the field.

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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 1.2 times higher in fall compared to spring. There was no evidence that ILeVO affected this change (no change (ratio=1.0) with no ILeVO; 1.4 times higher with ILeVO).

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Management Information

Location characteristics:	Trial size: 18 acres	Dominant soil type: Silt Loam	
Crop rotation:	Previous crop: Corn	Current crop: Soybean	
Soybean variety:	Channel 4009 RR2a	SCN resistant: Yes	SDS resistant: Yes
Agronomic information:	Planted: 5/18/2017	Harvested: 9/30/2017	
Other seed treatments:	Acceleron F&I		
SDS history:	History of SDS: Yes	Confirmed SDS in 2017: No	

Location Notes:

- This field had seven no ILeVO strips and seven ILeVO strips with both types of seed in the border areas.
- There were some areas of concern in this field from images taken August 29th that were attributed to the beginning of senescence.

