

# MU Certified Strip Trial Program

## 2017 ILeVO® Trial Harvest Report

Site number: 4

County: Lafayette

Extension Contact – Kent Shannon, Agricultural Engineer

### Results Summary

- Whole strip yields indicate ILeVO increased yield 7 bushels/acre and there was 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 85% of the trial.
- Scouting confirmed extensive Sudden Death Syndrome at this location.
- Soil sampling in spring indicated primarily moderate to high levels of Soybean Cyst Nematode (SCN). There was a small decrease over the growing season. There was no evidence these differences were 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.**



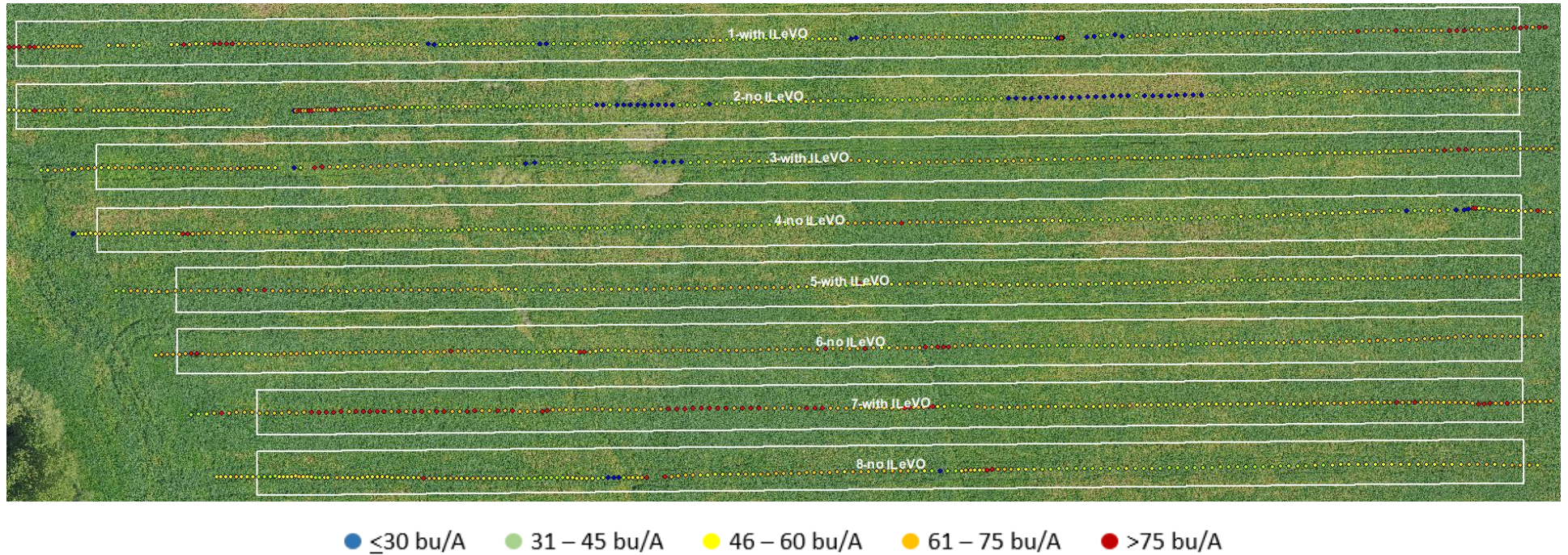
# MU Certified Strip Trial Program



**Figure 1.** Aerial photography taken September 1, 2017, showing strip trial layout in the field. Because of harvest issues, only strips one through eight were analyzed.



# MU Certified Strip Trial Program



**Figure 2.** Yield monitor data reported as bushels per acre. Soybeans were harvested November 1, 2017. Note that only strips one through eight were used in the analysis.

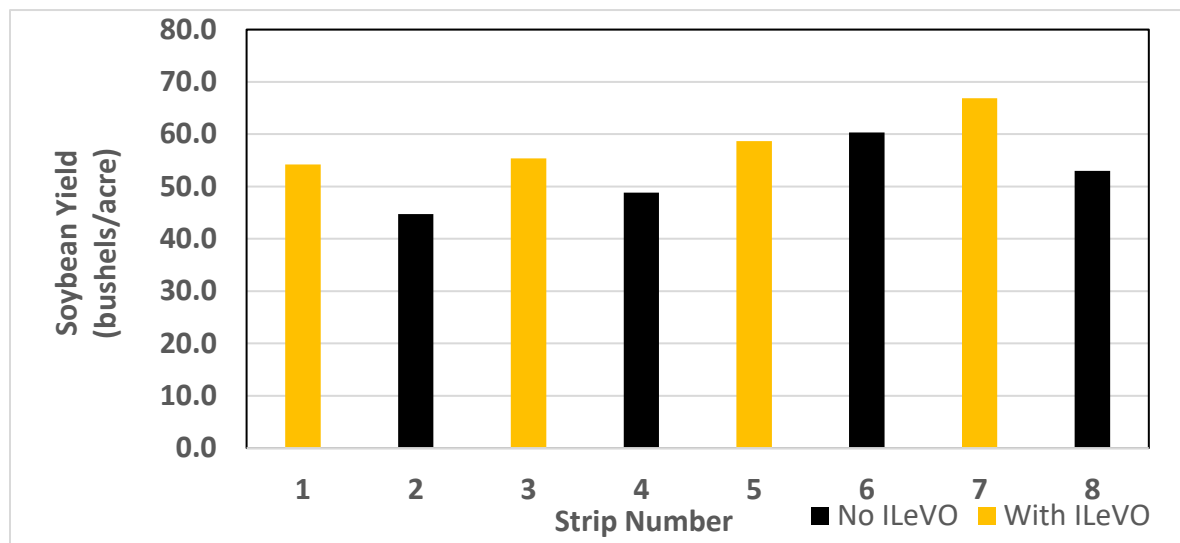
# MU Certified Strip Trial Program

**Table/Graph 1.** Whole Strip Yields:

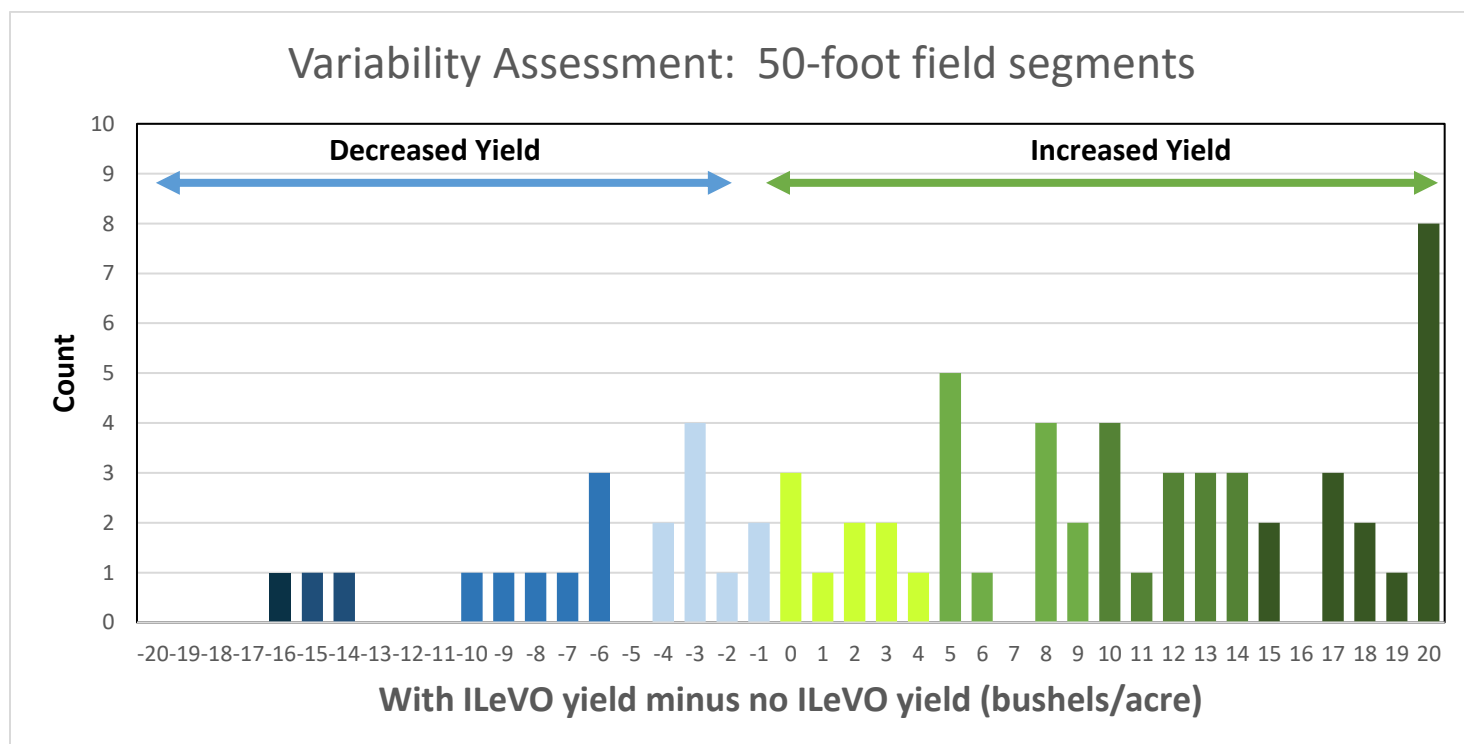
Mean yield for all strips was 55.5 bu/A (58.8 bu/A with ILeVO; 51.7 bu/A without).

There was evidence that this difference was statistically significant.

Strip	1	2	3	4	5	6	7	8
ILeVO?	Yes	No	Yes	No	Yes	No	Yes	No
Yield (bu/A)	54	45	55	49	59	60	67	53

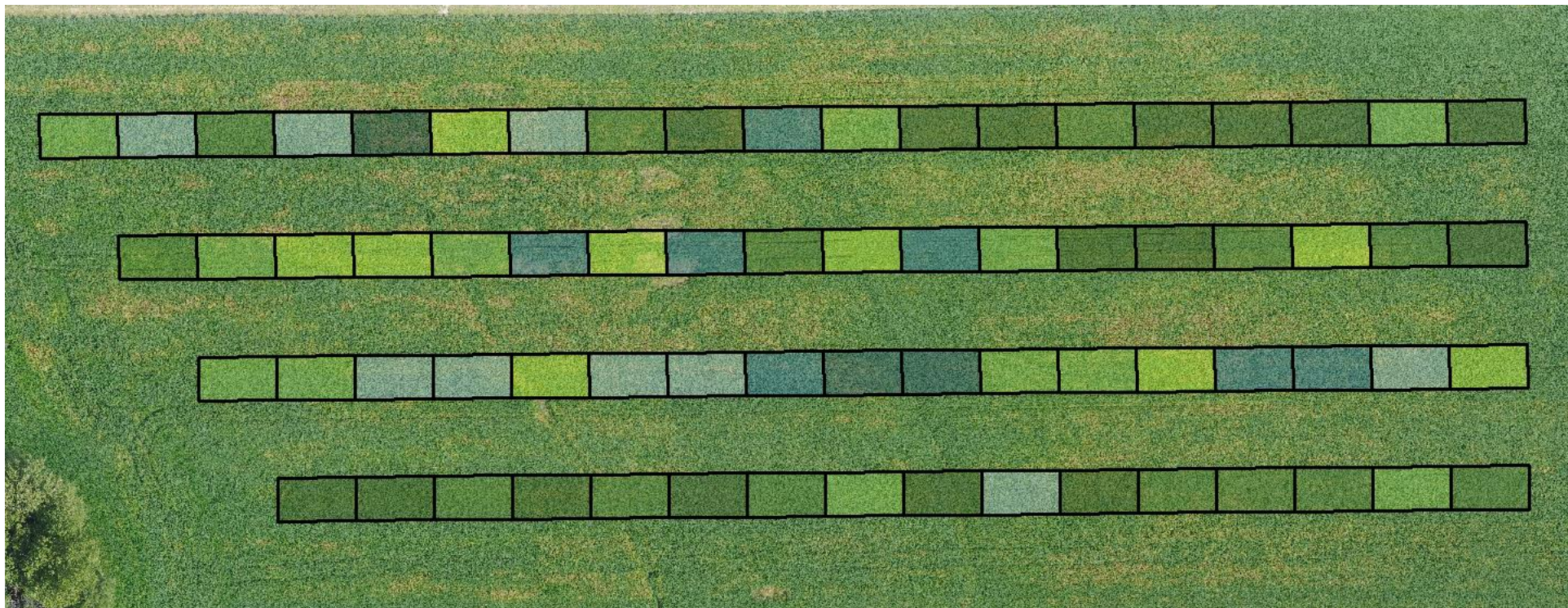


**Graph 2.** Field variability: Estimated yield “benefit” of ILeVO.





## MU Certified Strip Trial Program



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

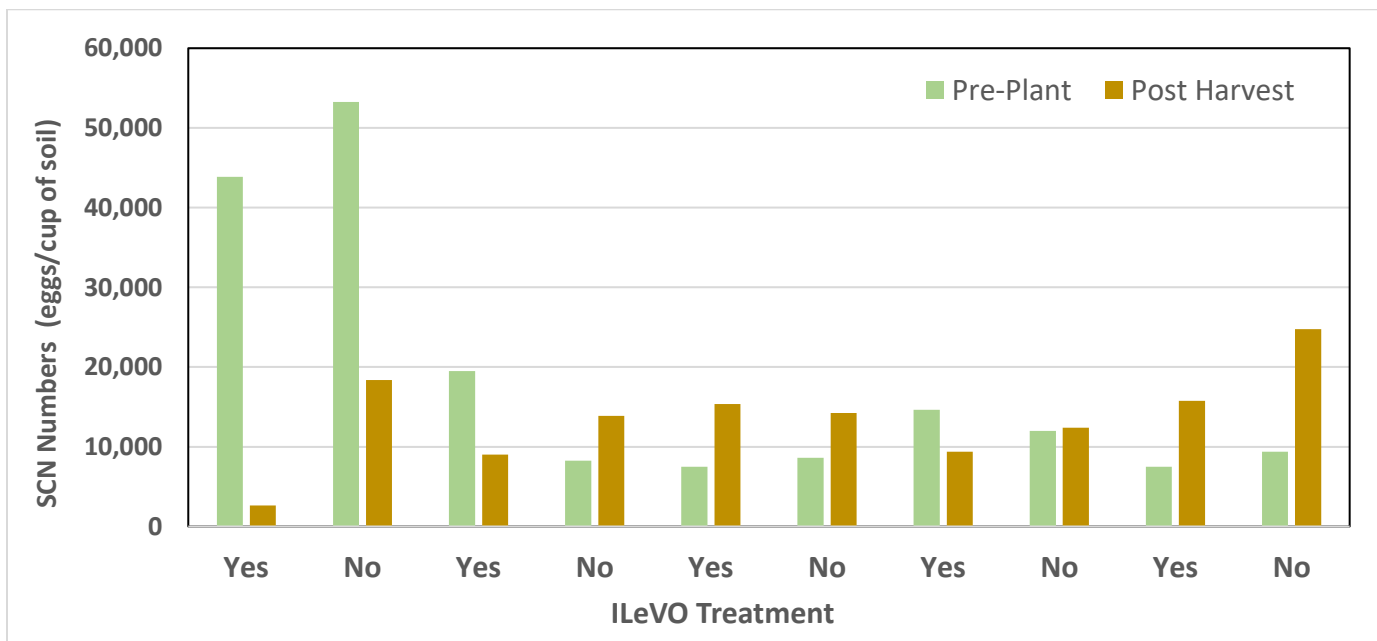
# MU Certified Strip Trial Program

Soil samples were taken just after planting and after soybean harvest and tested for soybean cyst nematode (SCN). Soil samples were taken 6/2/2017 (pre-plant) and 11/9/2017 (post-harvest) from sampling points that were 12 feet circles along transect across the plots about 150 feet from the eastern side of the plot area. There was no evidence that ILeVO affected SCN numbers at this location.

**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
With ILeVO	43,875	High	2,625	Moderate
No ILeVO	53,250	High	18,375	High
With ILeVO	19,500	High	9,000	Moderate
No ILeVO	8,250	Moderate	13,875	High
With ILeVO	7,500	Moderate	15,375	High
No ILeVO	8,625	Moderate	14,250	High
With ILeVO	14,625	High	9,375	Moderate
No ILeVO	12,000	High	12,375	High
With ILeVO	7,500	Moderate	15,750	High
No ILeVO	9,375	Moderate	24,750	High
Means	18,450		13,575	

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

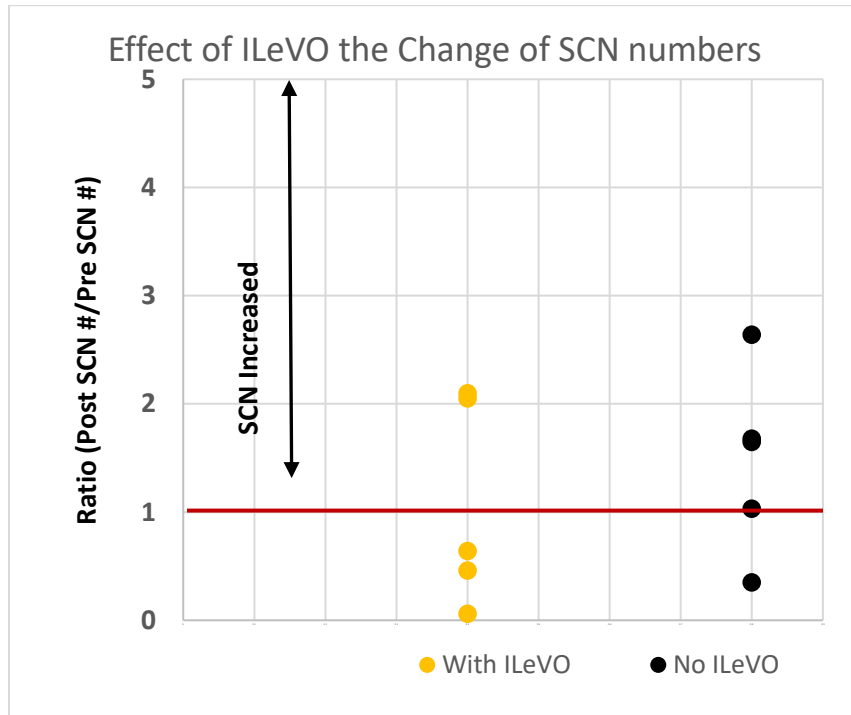


# MU Certified Strip Trial Program

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 less in fall compared to spring (about three times less with ILeVO) and the increase in numbers was close to zero for both (1.1 times higher with ILeVO and 1.5 times higher with no ILeVO). There was no statistical evidence that ILeVO affected this change.



# MU Certified Strip Trial Program

## Management Information

Location characteristics:	Trial size: 9 acres	Dominant soil type: Silt Loam
Crop rotation:	Previous crop: Corn	Current crop: Soybean
Soybean variety:	Lewis 4572X	SCN resistant: Yes    SDS resistant: Moderate
Agronomic information:	Planted: 5/16/2017	Harvested: 11/1/2017
Other seed treatments:	Acceleron	
SDS history:	History of SDS: No	Confirmed SDS in 2017: Yes

## Location Notes:

- This field was a split-planter trial field that had 12 strips. Problems with the harvest resulted in using the northern-most eight strips.
- There was an aerial survey completed September 1, 2017.
- There was evidence of extensive SDS at this location.

