MU Certified Strip Trial Program

2017 ILeVO® Trial Harvest Report

Site number: 9
County: Warren
Extension Contact – Charles Ellis Agricultural Engineer

Results Summary

- Whole strip yields indicate ILeVO decreased yield 0.6 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 37% of the trial.
- Scouting found no confirmed Sudden Death Syndrome at this location.
- Soil sampling in spring indicated moderate to high levels of Soybean Cyst Nematode (SCN). Mean SCN numbers after harvest were six times higher than prior to planting. There was no 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.

MU Certified Strip Trial Program

Figure 1. Aerial photography taken August 24, 2017, showing strip trial layout in the field.

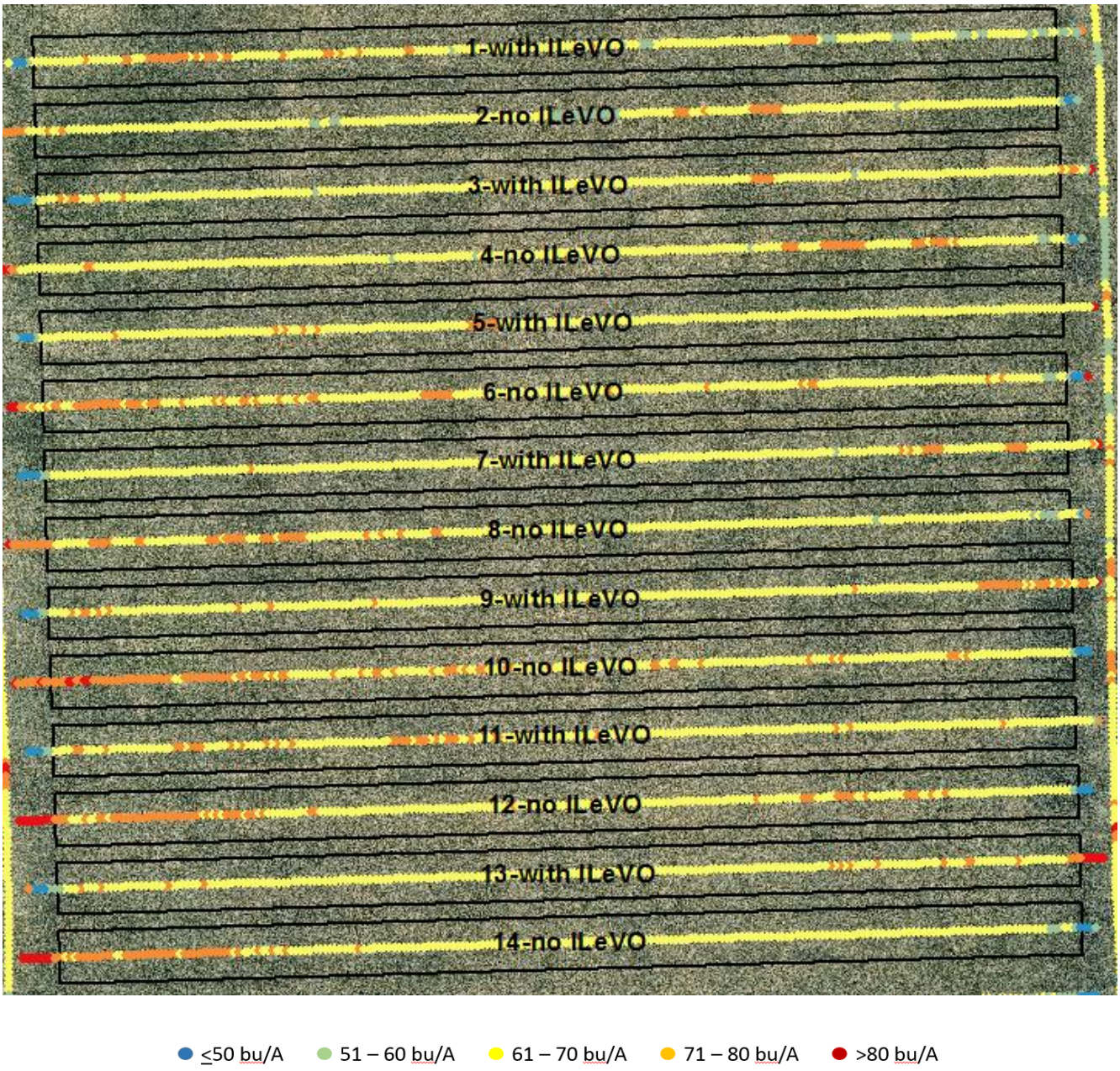


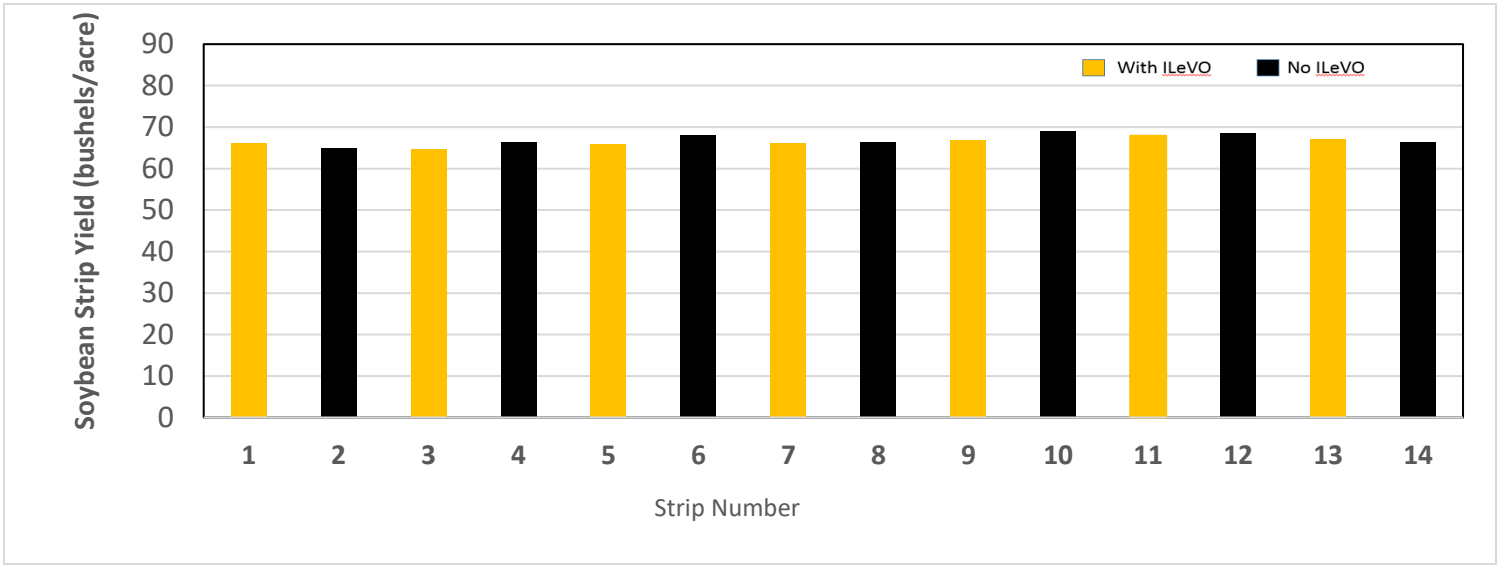
Figure 2. Yield monitor data reported as bushels per acre. Field was harvested September 26, 2017.

MU Certified Strip Trial Program

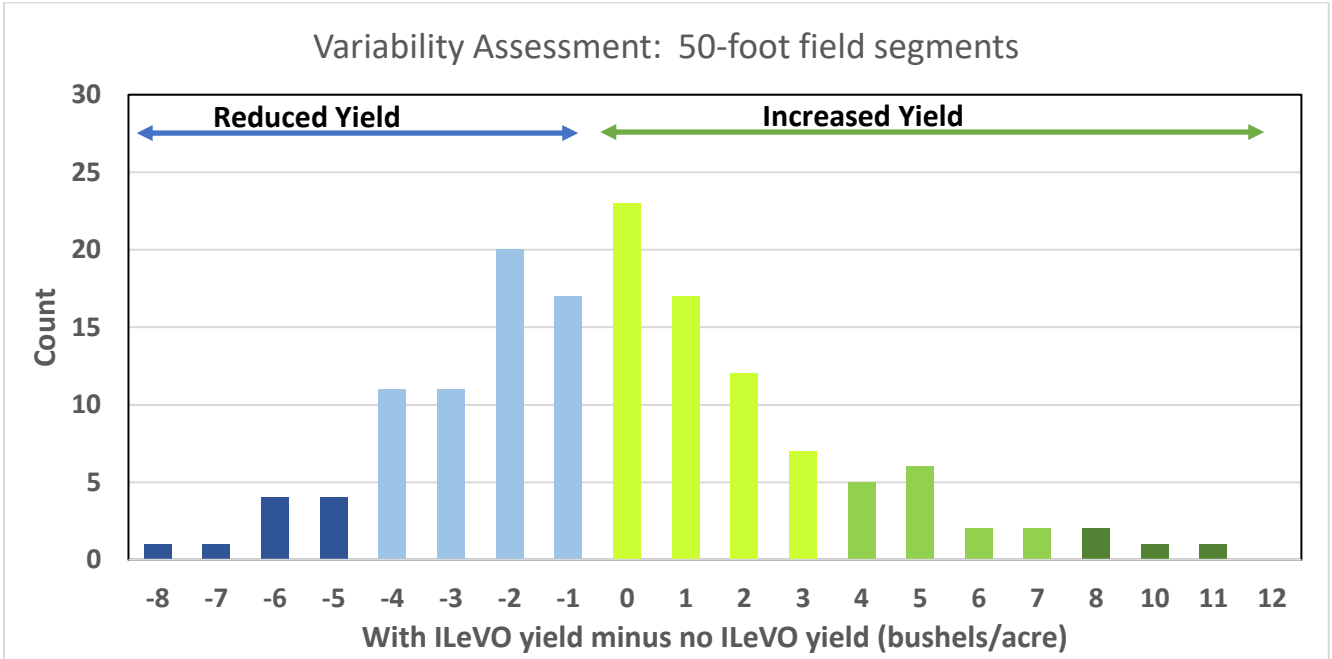
Table/Graph 1. Whole Strip Yields:

Mean yield for all strips was 66.7 bu/A (66.4 bu/A with ILeVO; 67.0 bu/A without ILeVO).

Strip	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ILeVO?	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Yield (bu/A)	66.1	64.7	64.9	66.3	65.8	68.2	66.1	66.3	66.9	69.0	67.9	68.5	67.2	66.3



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



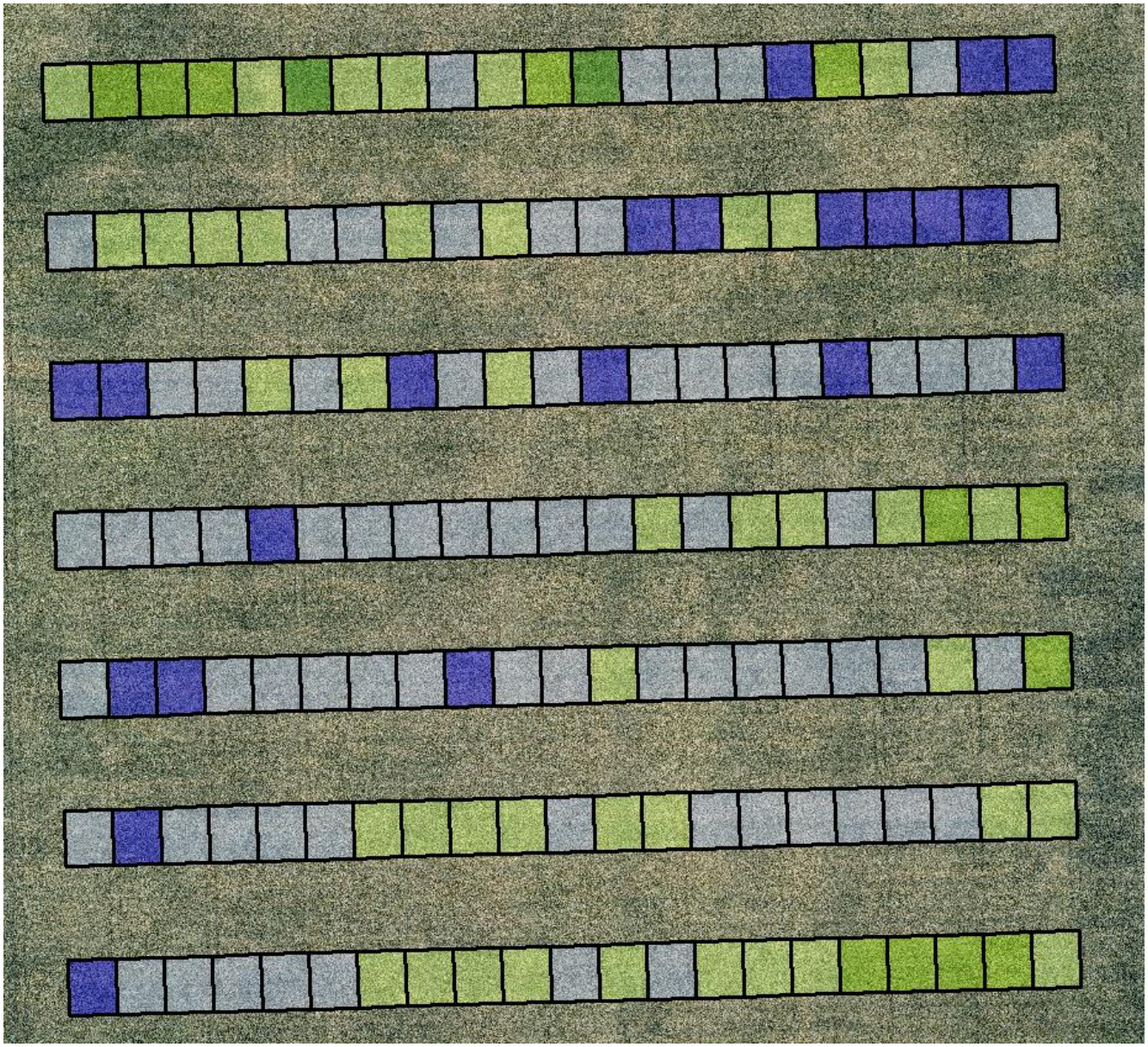


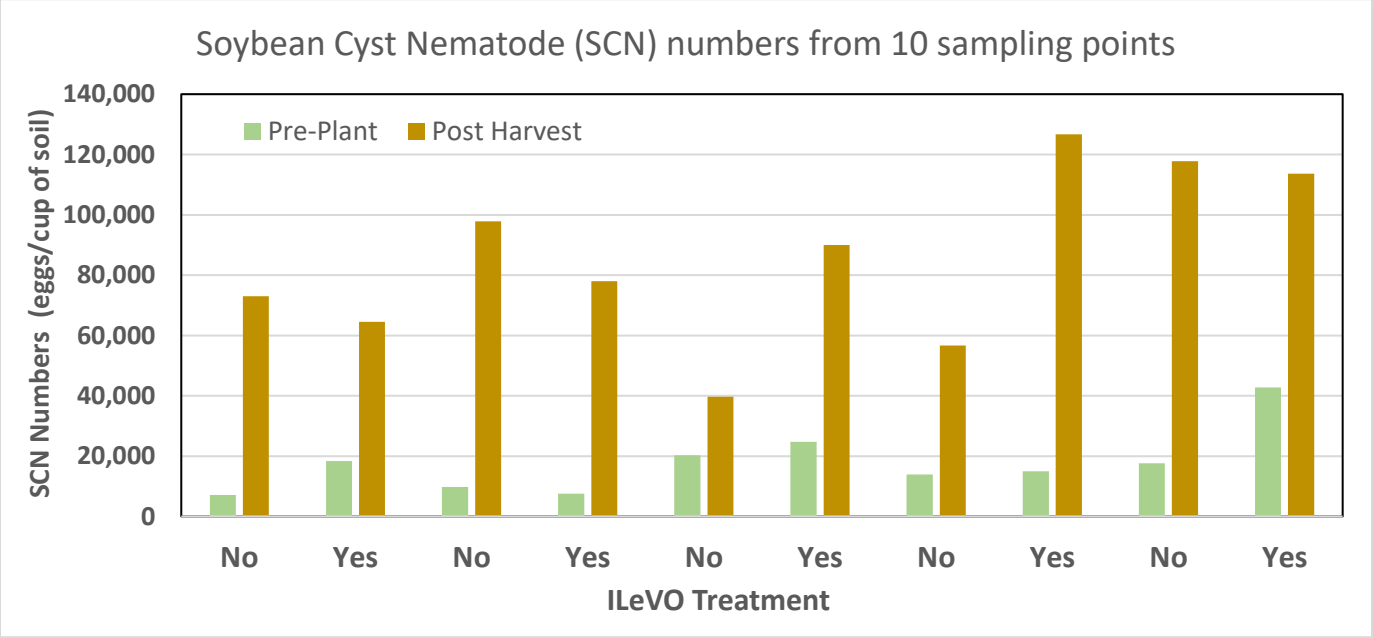
Figure 3. Field variability in the yield effect of ILeVO**:** Colors match previous figure. Green segments are where the calculated yield difference was $\geq$ 0; blue segments are where yield effect was negative.

MU Certified Strip Trial Program

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	7,125	Moderate	73,000	High
With ILeVO	18,375	High	64,500	High
No ILeVO	9,750	Moderate	97,875	High
With ILeVO	7,500	Moderate	78,000	High
No ILeVO	20,250	High	39,750	High
With ILeVO	24,750	High	90,000	High
No ILeVO	13,875	High	56,625	High
With ILeVO	15,000	High	126,750	High
No ILeVO	17,625	High	117,750	High
With ILeVO	42,750	High	113,625	High
Mean	17,700	High	85,788	High

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



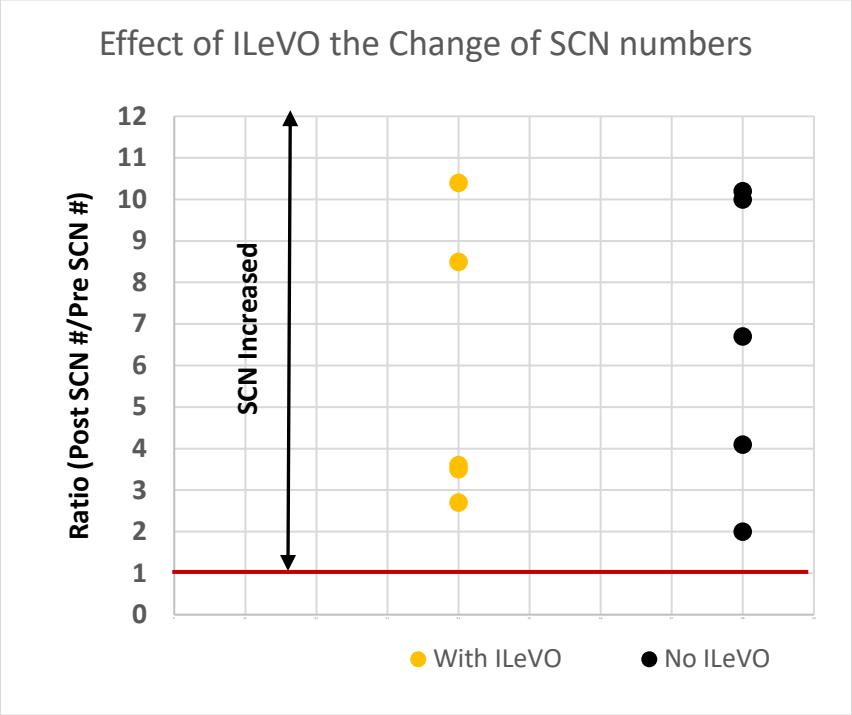
Samples were taken 4/25/2017 (pre-plant) and 11/9/2017 (post-harvest) in the same 10 locations in the field. Sampling points were 12 feet circles along transect across the plots about 250 feet from the western edge of the strips.

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 six times higher in fall compared to spring. There was no evidence that ILeVO affected this change (6.6 times higher with no ILeVO; 5.7 times higher with ILeVO).

MU Certified Strip Trial Program

Management Information

Location characteristics:	Trial size: 30 acres	Dominant soil type: Silt Loam	
Crop rotation:	Previous crop: Corn	Current crop: Soybean	
Soybean variety:	Beck's 424L4	SCN resistant: Yes	SDS resistant: Yes
Agronomic information:	Planted: 4/25/2017	Harvested: 9/26/2017	
Other seed treatments:	Poncho 1250		
SDS history:	History of SDS: No	Confirmed SDS in 2017: No	

Location Notes:

- This field was an ILeVO treated field that had seven strips of no-ILeVO seed.
- There were some areas of concern in this field from images taken August 29th that at this point are attributed to beginning of senescence.