

MU Certified Strip Trial Program

2018 ILeVO® Trial Harvest Report

Site Number: 10

Trial manager Contact: Tim Schnakenberg

Trial Harvest Summary

This is an ILeVO® trial testing the high rate of ILeVO® versus the same soybean variety with no ILeVO® seed treatment. The mean yield that was observed with ILeVO® was 3.1 bushels per acre greater than the yield of the strips without ILeVO®, but the difference at this location was not statistically significant. See Table/Graph 1 for a summary of yield results.

This field was scouted for Sudden Death Syndrome (SDS) on August 16th. Of the 18 points in the field that were scouted for SDS, symptoms of SDS were low to non-existent at all points. Due to low levels of SDS in both the ILeVO® treated and non- ILeVO® treated strips, the ILeVO® treatment likely did not contribute to SDS control in this study.

This location had low initial soybean cyst nematode (SCN) numbers and there was no evidence that ILeVO® affected SCN numbers at this location. See Table 2/Graph 2 for more information on preliminary SCN results.

Please note the section towards the end of the report that summarizes management information currently known about the trial. Missing information is highlighted in yellow. Please provide your extension contact the missing information as soon as possible and let us know if any other corrections or changes need to be made.

At the end of the report are two tables summarizing results from all of the 2017 and 2018 ILeVO® trials. Please note that all of the analysis is preliminary. These results suggest a small yield benefit of ILeVO® on yield and weak evidence that ILeVO® may reduce SCN reproductive success.

The MU Strip Trial program will have meetings throughout Missouri in February of 2019. *More information on location and dates will be sent out soon.* We encourage you to attend the strip trial meeting that is closest to you. This will be an opportunity for discussion on what was learned across farms and multiple years of trials. It will also be an opportunity for you to give feedback on how the trial worked on your farm and provide ideas for future trials.

Please follow us on Twitter at @MUStripTrials!

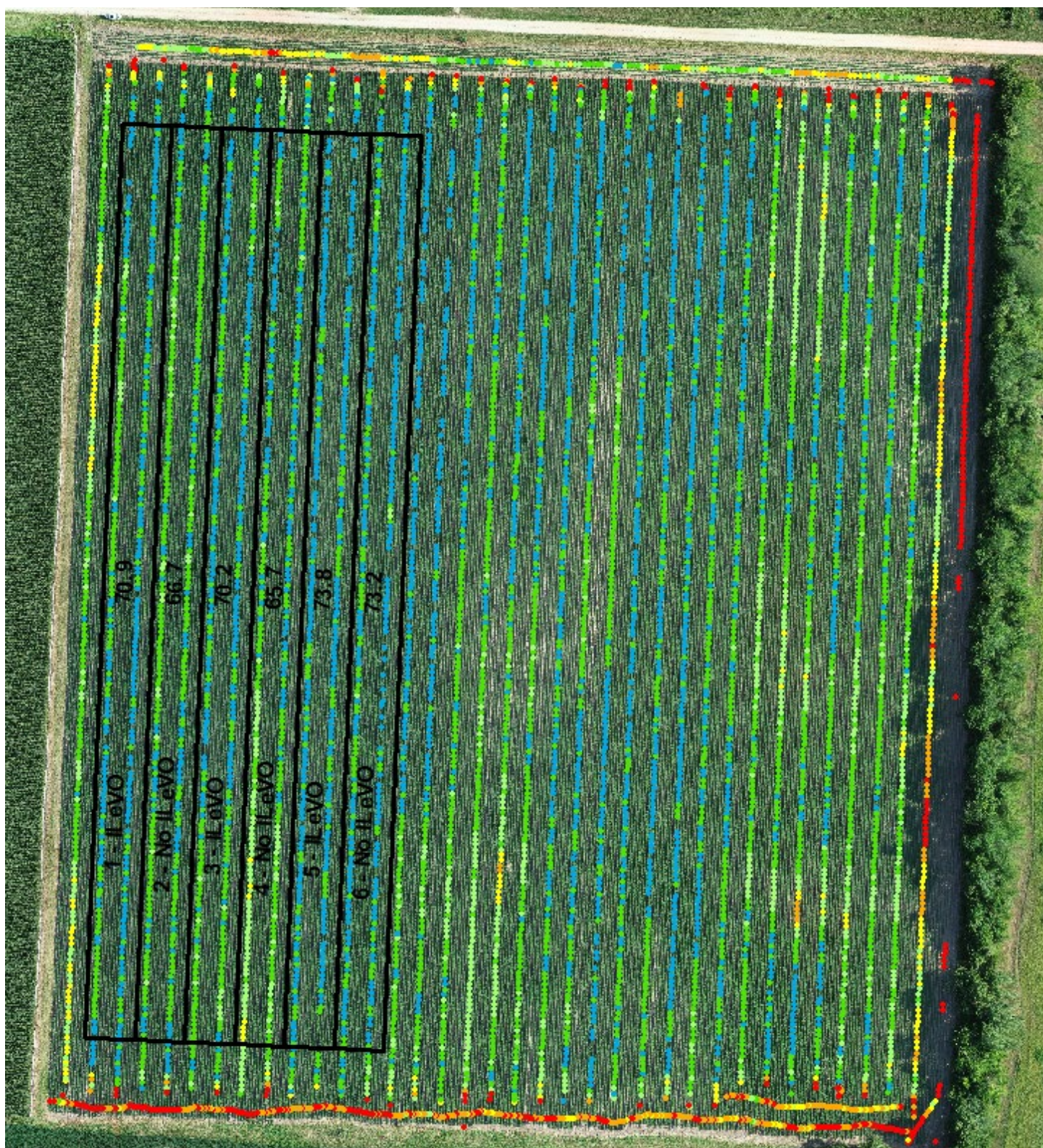
Thank you for agreeing to do this trial! It is one of ten cover crop trials in 2018.

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:

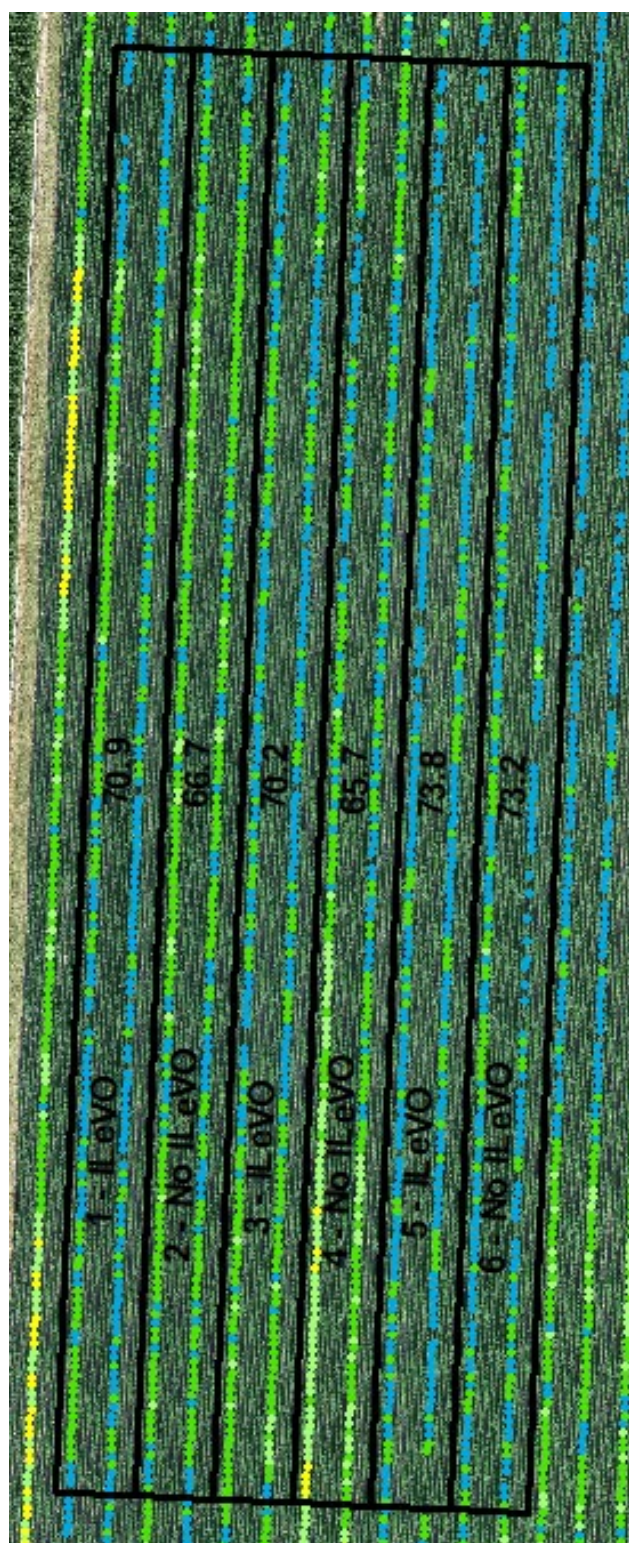
MU Extension, the Missouri Soybean Merchandising Council and the Missouri Corn Merchandising Council.

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● < 30 bu/A ● 30 – 40 bu/A ● 40– 50 bu/A ● 50 – 60 bu/A ● 60 – 70 bu/A ● >70 bu/A

Figure 1a. Whole field showing soybean dry yield data reported as bushels per acre (bu/A). Strips are labeled with their respective treatment. The field was harvested October 29, 2018.



● < 30 bu/A
 ● 30 – 40 bu/A
 ● 40– 50 bu/A
 ● 50 – 60 bu/A
 ● 60 – 70 bu/A
 ● >70 bu/A

Figure 1b. Close-up of strips showing soybean dry yield data reported as bushels per acre (bu/A). Strips are labeled with their respective treatment and mean yield.

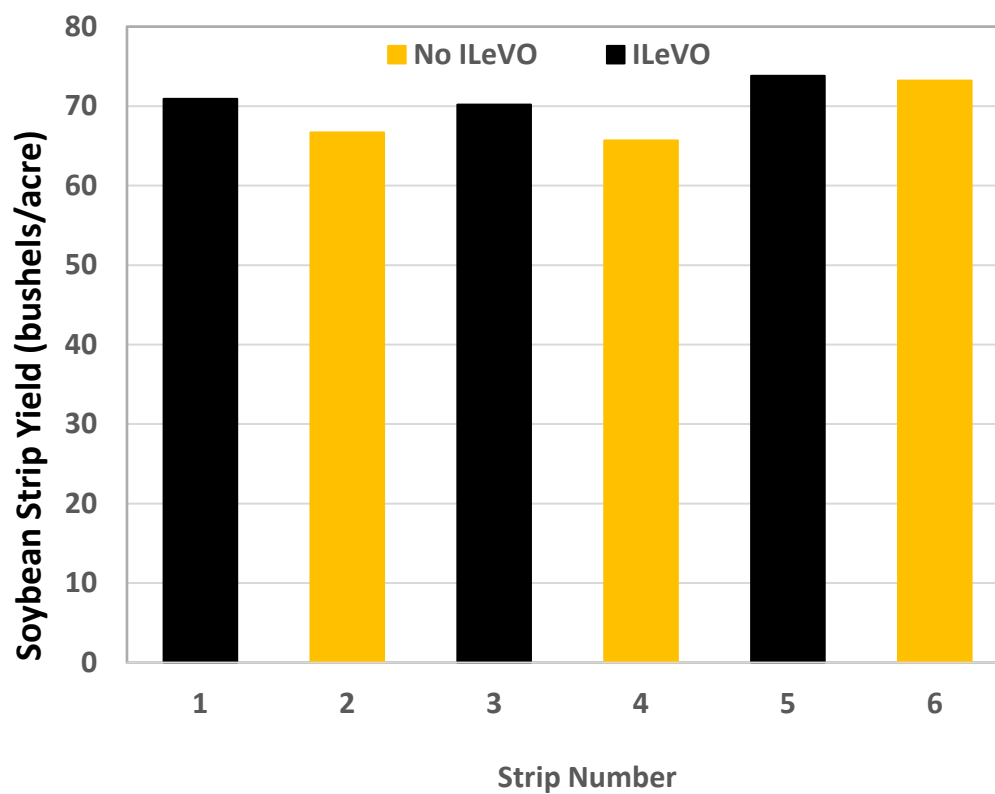
Table 1/Graph 1. Strip means of soybean yield.

Mean Soybean yields:

All Strips: 70.1 bushels/acre
No ILeVO Treatment: 68.5 bushels/acre
ILeVO Treatment: 71.6 bushels/acre
Treatment difference: 3.1 bushels/acre

Preliminary analysis shows that this difference was not statistically significant.

Strip	1	2	3	4	5	6
Treatment	ILeVO	No ILeVO	ILeVO	No ILeVO	ILeVO	No ILeVO
Yield (Bushels/Acre)	70.9	66.7	70.2	65.7	73.8	73.2



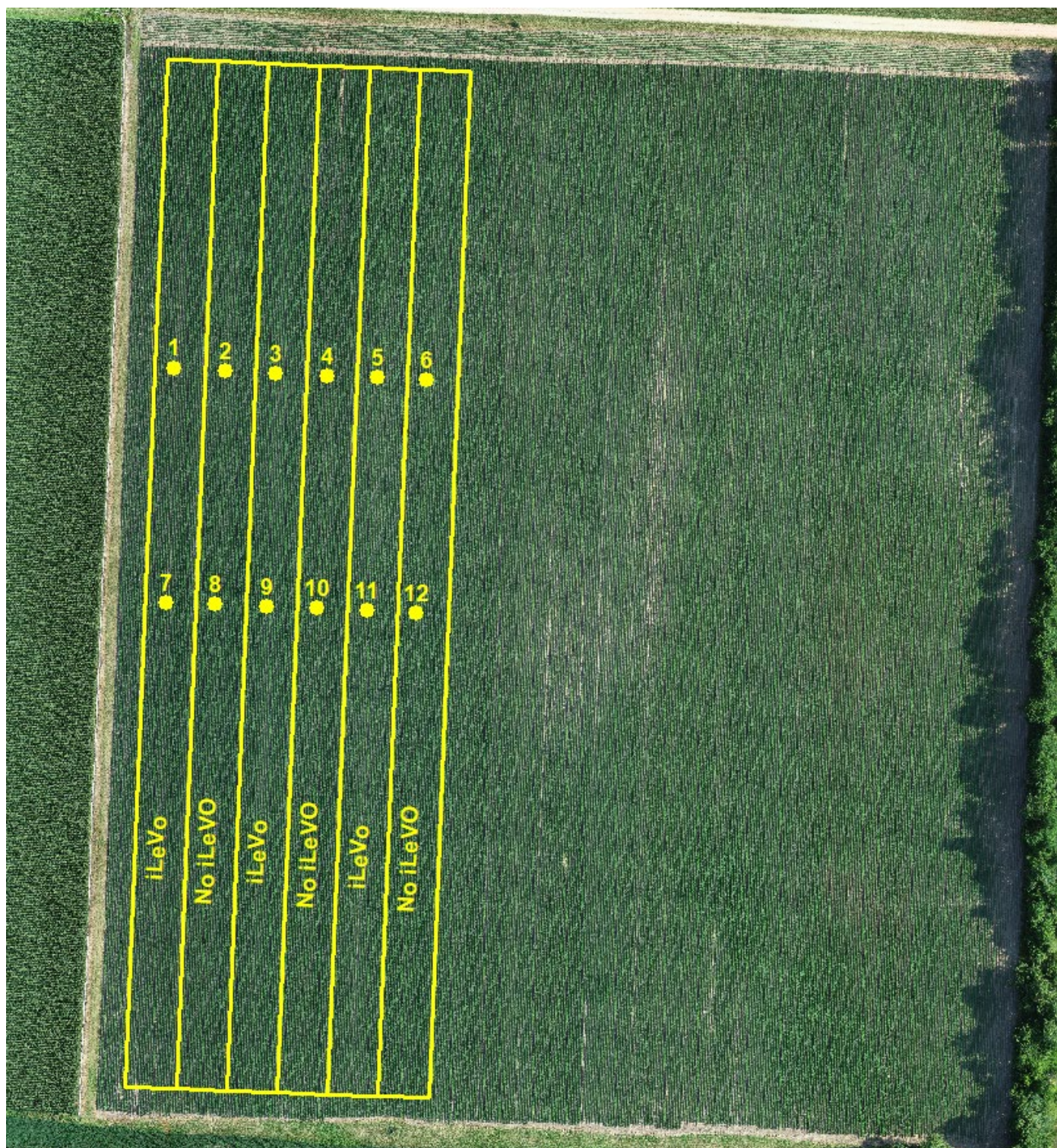


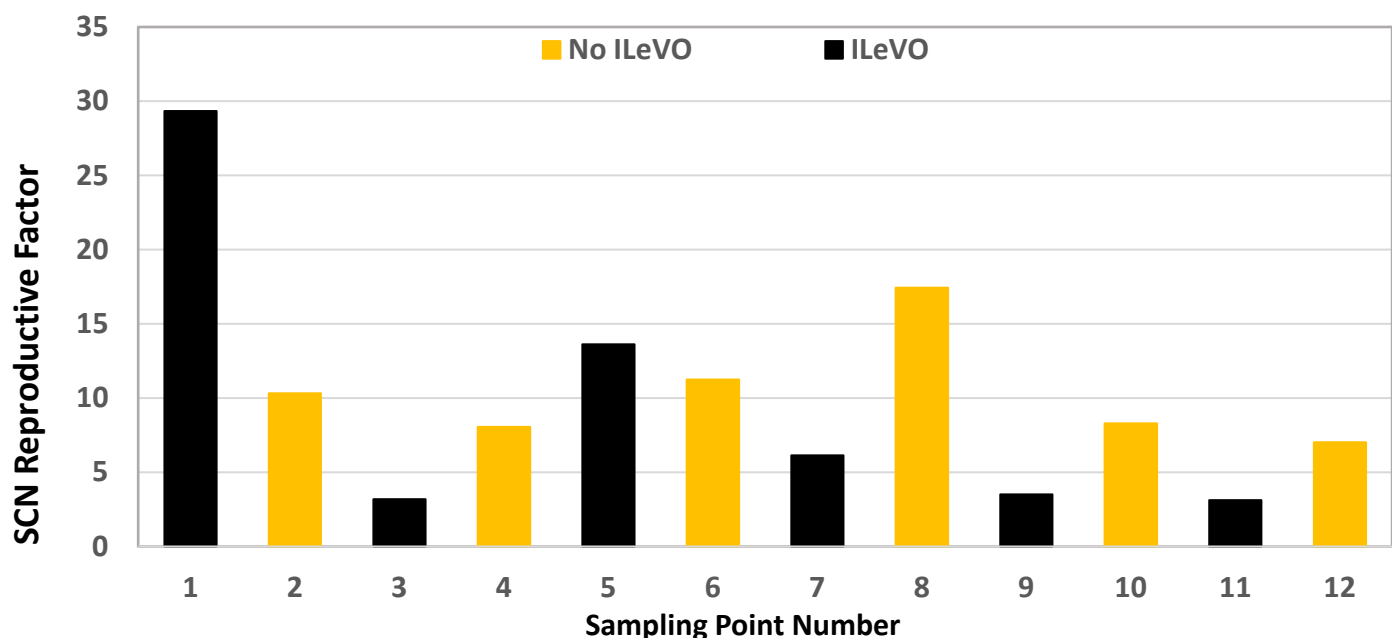
Figure 2. Location of the 12 soil sampling points. Points were sampled June 6, 2018, after planting, and on November 7, 2018, after harvest. Strips are labeled with their respective treatments: iLeVO and No iLeVO. Soil sampling results are in Table 2 below.

Table 2. Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup of soil) taken after planting on June 6, 2018, and after harvest on November 7, 2018. Results are labeled by respective treatments: ILeVO (strips with ILeVO treatment), No ILeVO (strips without ILeVO treatment).

Sample ID #	Treatment	After Planting		After Harvest	
		SCN Results (eggs/cup of soil)	SCN Rating	SCN (eggs/cup of soil)	SCN Rating
1	ILeVO	3,375	Moderate	99,000	High
2	NO ILeVO	6,000	Moderate	61,875	High
3	ILeVO	16,500	High	52,500	High
4	NO ILeVO	5,625	Moderate	43,375	High
5	ILeVO	4,875	Moderate	66,375	High
6	NO ILeVO	10,875	High	122,250	High
7	ILeVO	16,875	High	103,500	High
8	NO ILeVO	2,625	Moderate	45,750	High
9	ILeVO	9,375	Moderate	33,000	High
10	NO ILeVO	6,375	Moderate	52,875	High
11	ILeVO	13,500	High	42,000	High
12	NO ILeVO	12,375	High	87,000	High
	Overall Mean	9,031	Moderate	67,458	High
	No ILeVO Mean (Rf¹)	10,750	High	66,063 (10.4)	High
	ILeVO Mean (Rf)	7,313	Moderate	68,854 (9.8)	High

¹ Rf is the reproductive factor calculated as fall SCN numbers divided by planting SCN numbers; a value of Rf>1 implies SCN number increased over the growing season.

Graph 2. Effect of ILeVO on Soybean Cyst Nematode (SCN) reproductive factor (Rf). Rf is the reproductive factor calculated as fall SCN numbers divided by planting SCN numbers; a value of Rf>1 implies SCN number increased over the growing season.



Grain Crop Management Information

Planting Date	Variety	Seeding Rate	Harvest Date
6/2/18	Croplan RX4825	140,000	10/29/18
Other Seed Treatments	Fortix fungicide, 5 oz/A		
Rate of ILeVO used: High		Has this field had SDS in the past? Yes	
Crop Rotation	Corn - Soybean		
Tillage System	Ridge Tillage		

Equipment Specifics

Equipment	Type	Width (in feet)
Planter	Case IH 955	30
Combine	JD 9870 STS	30
Yield Monitor	Greenstar	