

MU Certified Strip Trial Program

2018 ILeVO® Trial Harvest Report

Site Number: 8

Trial manager Contact: Kent Shannon

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 3.5 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 21st. Of the 30 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!

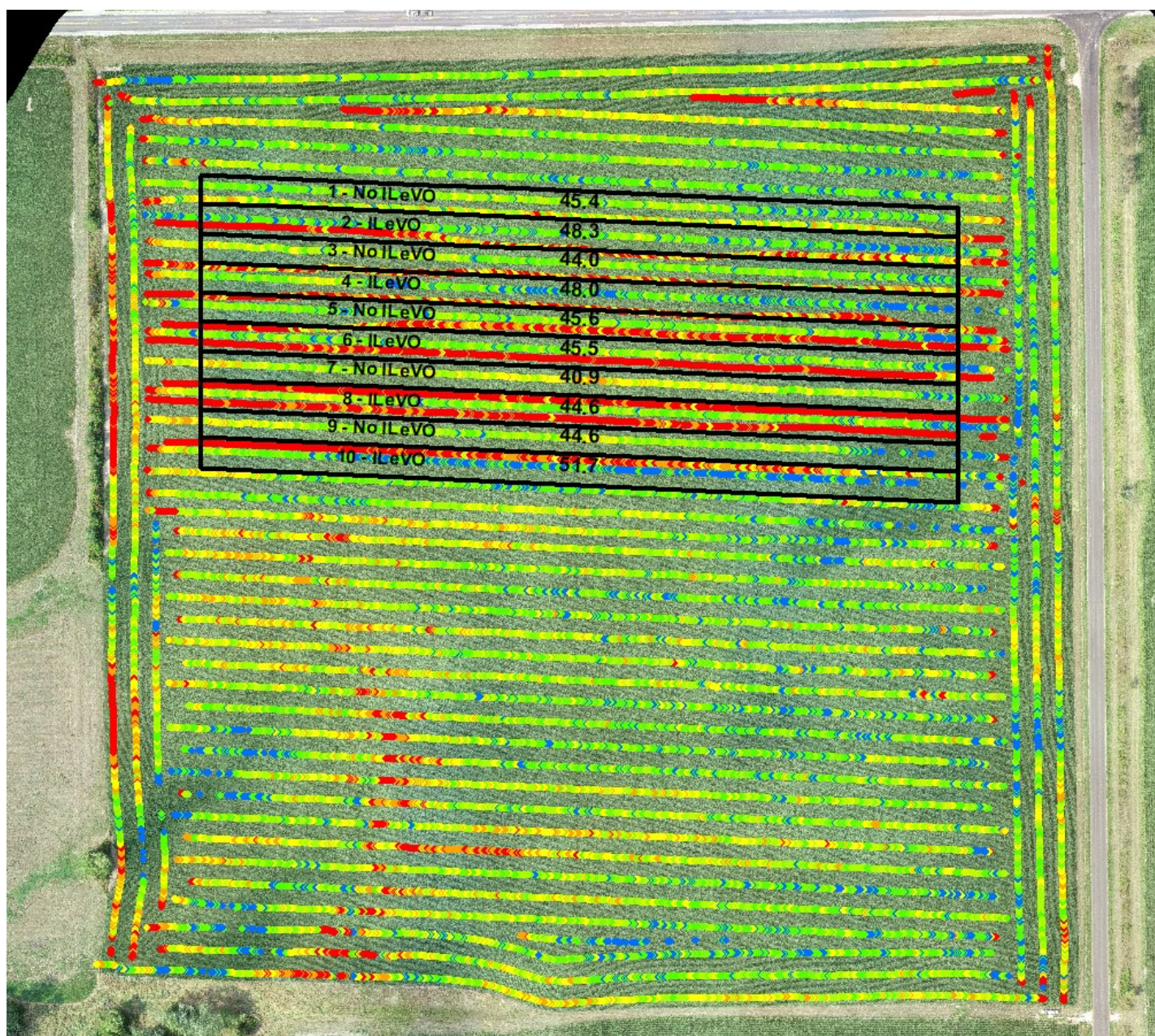
Thank you for agreeing to do this trial! It is one of ten cover crop trials in 2018.

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
 ● 31 – 35 bu/A
 ● 36 – 40 bu/A
 ● 41 – 45 bu/A
 ● 46 – 50 bu/A
 ● >51 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 November 16, 2018.

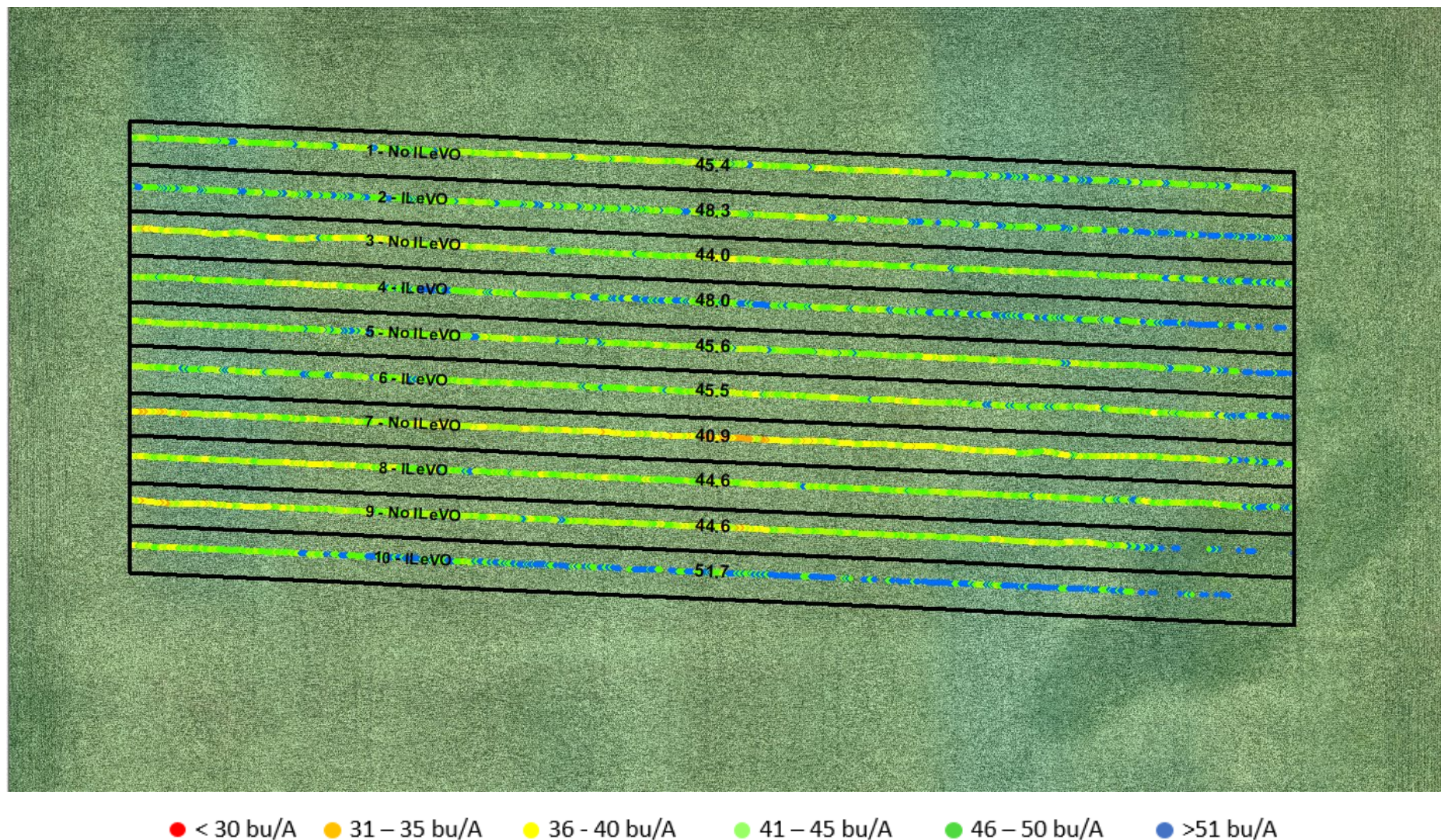


Figure 1b. Close-up of strips showing soybean dry yield data reported as bushels per acre (bu/A). Strips are labeled with their respective treatment and mean yield.

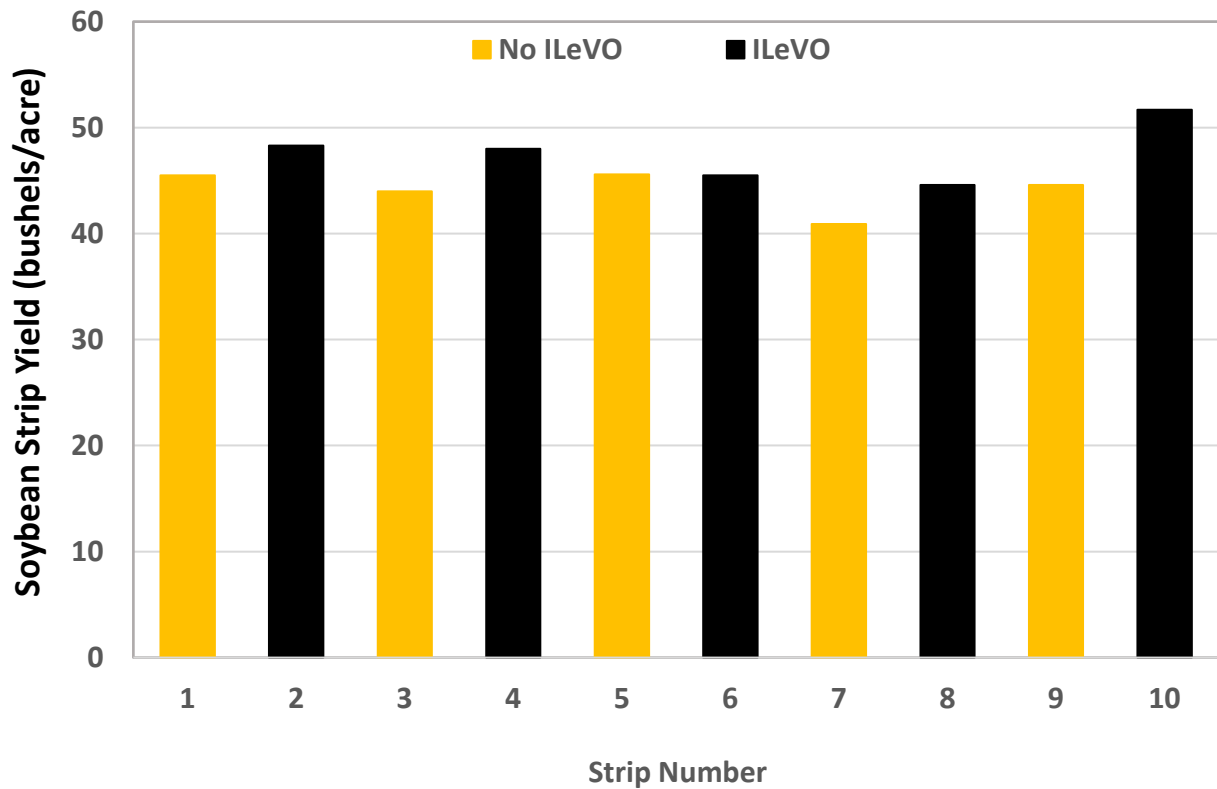
Table 1/Graph 1. Strip means of soybean yield.

Mean Soybean yields:

All Strips: 45.9 bushels/acre
No ILeVO Treatment: 44.1 bushels/acre
ILeVO Treatment: 47.6 bushels/acre
Treatment difference: 3.5 bushels/acre

Preliminary analysis shows that this difference was not statistically significant.

Strip	1	2	3	4	5	6	7	8	9	10
Treatment	No	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO
Yield (Bushels/Acre)	45.4	48.3	44.0	48.0	45.6	45.5	40.9	44.6	44.6	51.7



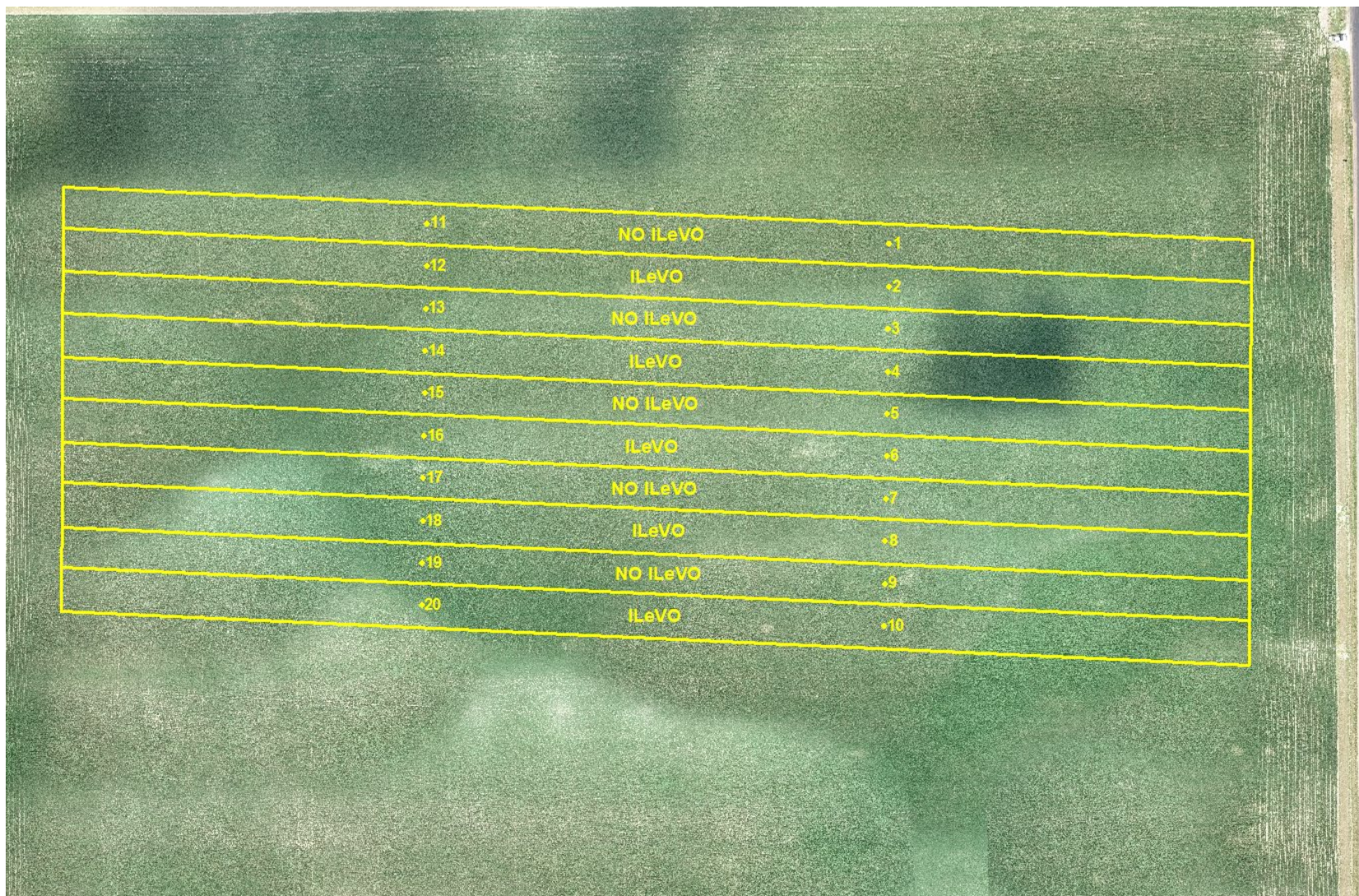


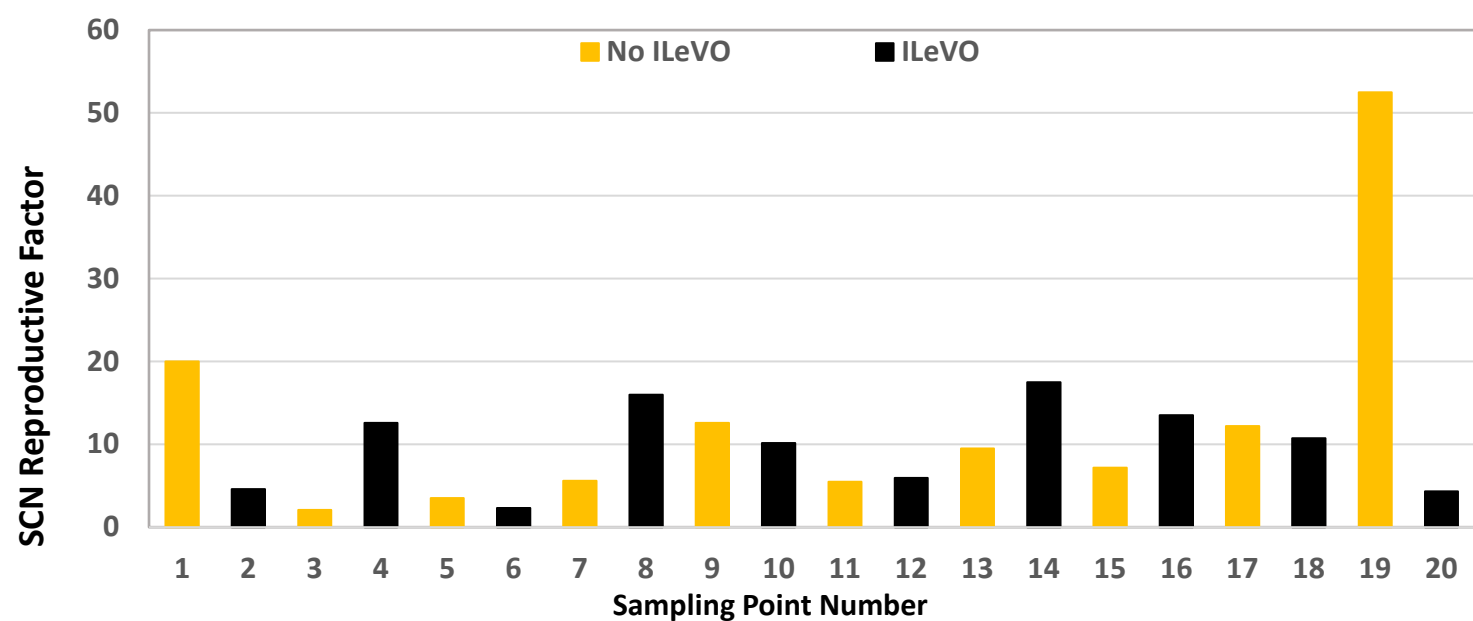
Figure 2. Locations of the 20 soil sampling points. Points were sampled May 25, 2018, after planting, and on November 21, 2018, after harvest. Strips are labeled with their respective treatments: ILeVO and No ILeVO. Soil sampling results are in Table 2 below.

Table 2. Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup of soil) taken after planting on May 25, 2018, and after harvest on November 21, 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	No ILeVO	750	Moderate	15,000	High
2	ILeVO	1,875	Moderate	8,625	Moderate
3	No ILeVO	5,625	Moderate	11,625	High
4	ILeVO	1,875	Moderate	23,625	High
5	No ILeVO	3,750	Moderate	13,125	High
6	ILeVO	6,000	Moderate	13,875	High
7	No ILeVO	3,750	Moderate	21,000	High
8	ILeVO	2,625	Moderate	42,000	High
9	No ILeVO	2,625	Moderate	33,000	High
10	ILeVO	4,875	Moderate	49,500	High
11	No ILeVO	3,750	Moderate	20,625	High
12	ILeVO	5,625	Moderate	33,375	High
13	No ILeVO	2,250	Moderate	21,375	High
14	ILeVO	1,500	Moderate	26,250	High
15	No ILeVO	2,250	Moderate	16,125	High
16	ILeVO	2,250	Moderate	30,375	High
17	No ILeVO	3,375	Moderate	41,250	High
18	ILeVO	4,500	Moderate	48,375	High
19	No ILeVO	0	Low	13,125	High
20	ILeVO	2,250	Moderate	9,750	Moderate
	Overall Mean	2,944	Moderate	24,600	High
	No ILeVO Mean (Rf¹)	2,813	Moderate	20,625 (14.8)	High
	ILeVO Mean (Rf)	1,297	Moderate	28,575 (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
5/15/18 & 5/29/18	Pioneer P37T09L	162,000	11/16/18
Other Seed Treatments	Fungicide		
Rate of ILeVO used: High		Has this field had SDS in the past? Yes	
Crop Rotation	Corn - Soybean		
Tillage System	No Till		

Equipment Specifics

Equipment	Type	Width (in feet)
Planter	JD	19.375
Combine	JD S660	30
Yield Monitor	JD	