

# MU Certified Strip Trial Program

## 2018 ILeVO® Trial Harvest Report

**Site Number: 4**

**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 17th. Of the 30 points in the field that were scouted for SDS, symptoms of SDS were seen at 15 of the 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.

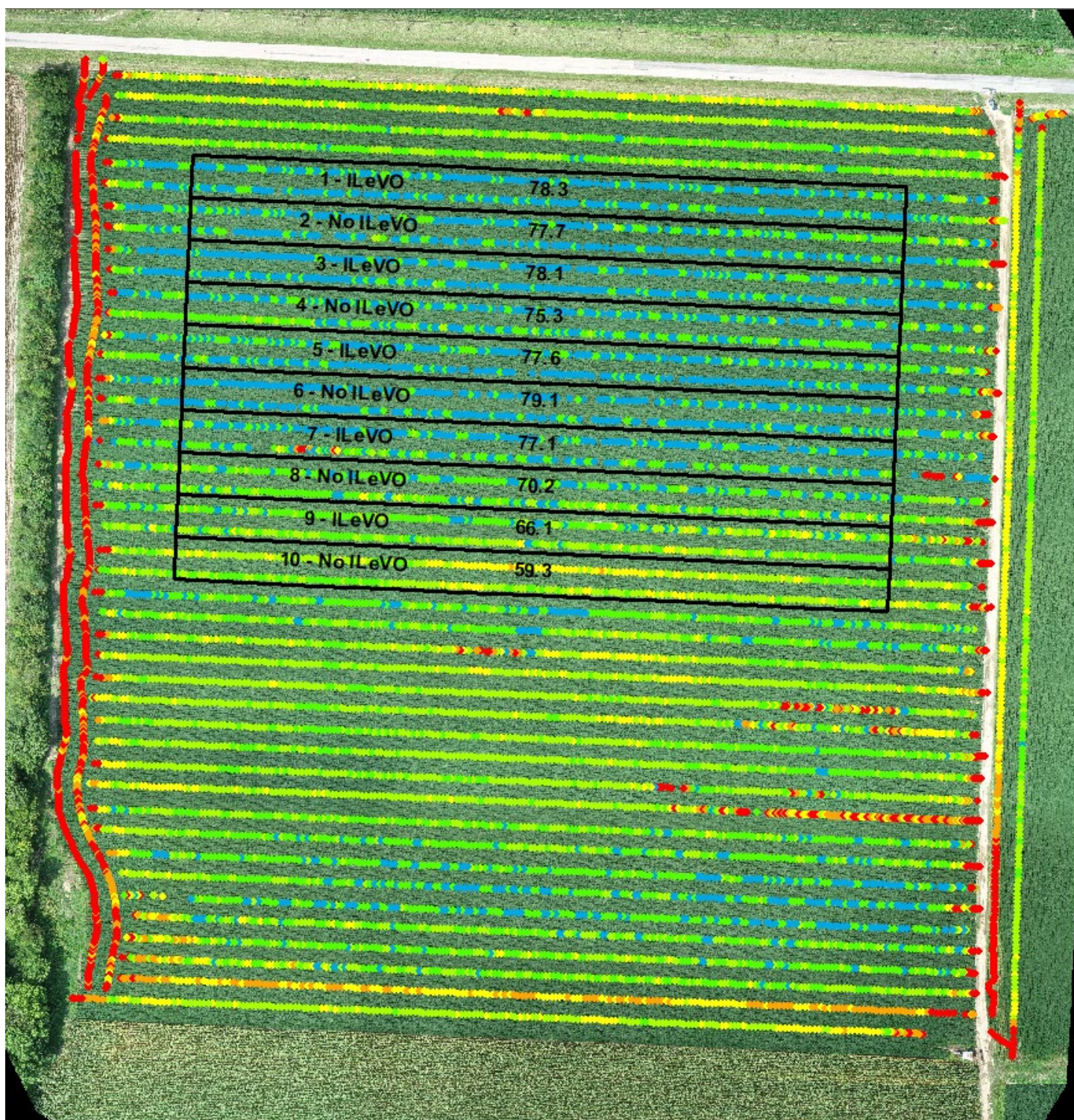
*The mission of the MU Certified Strip Trial Program is to help farmers validate management decisions on their farm and document efficiency and environmental stewardship.*

**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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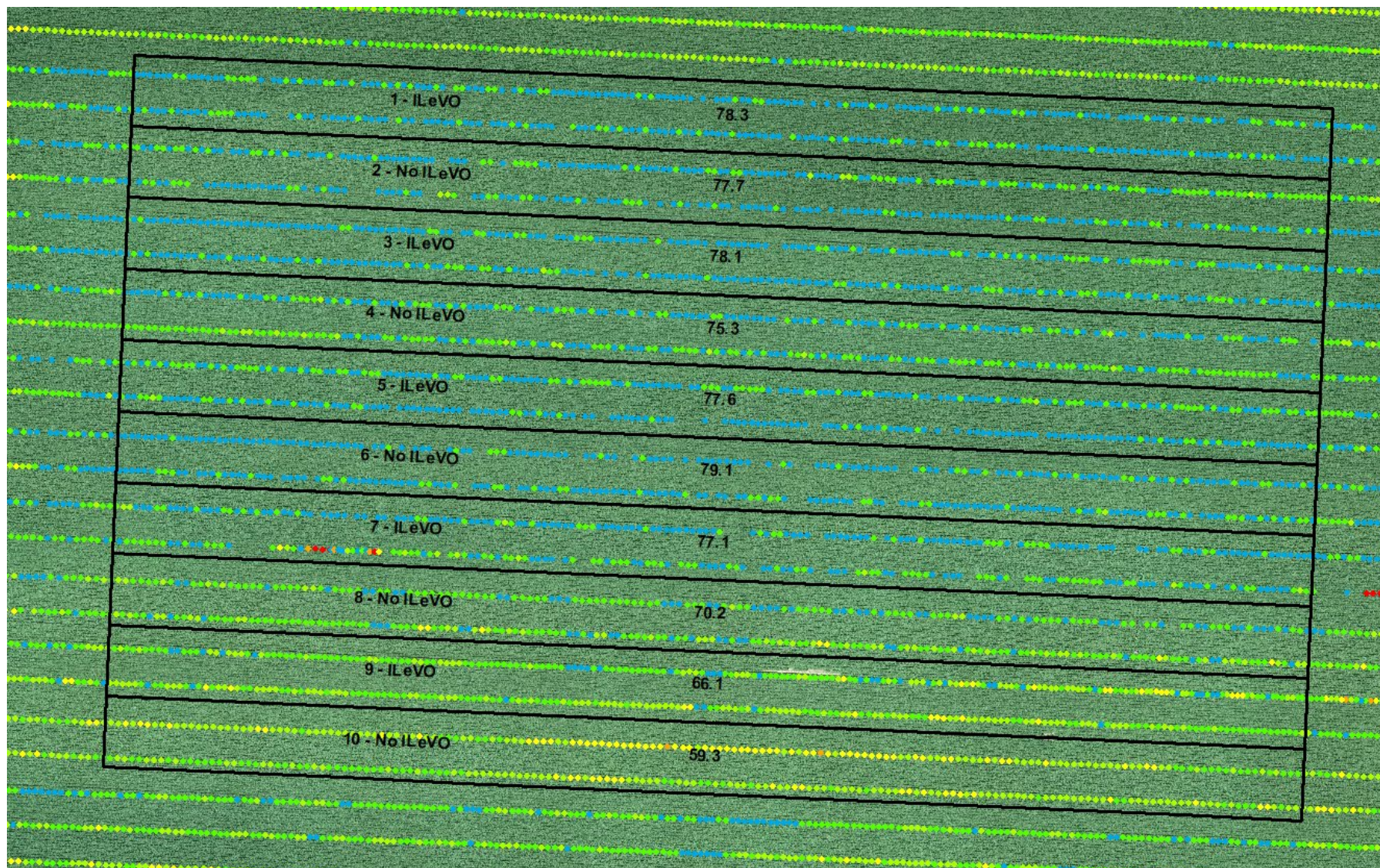




● < 35 bu/A    ● 35 – 45 bu/A    ● 45– 55 bu/A    ● 55 – 65 bu/A    ● 65 – 75 bu/A    ● >75 bu/A

**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 22, 2018.





● < 35 bu/A   
 ● 35 – 45 bu/A   
 ● 45– 55 bu/A   
 ● 55 – 65 bu/A   
 ● 65 – 75 bu/A   
 ● >75 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.



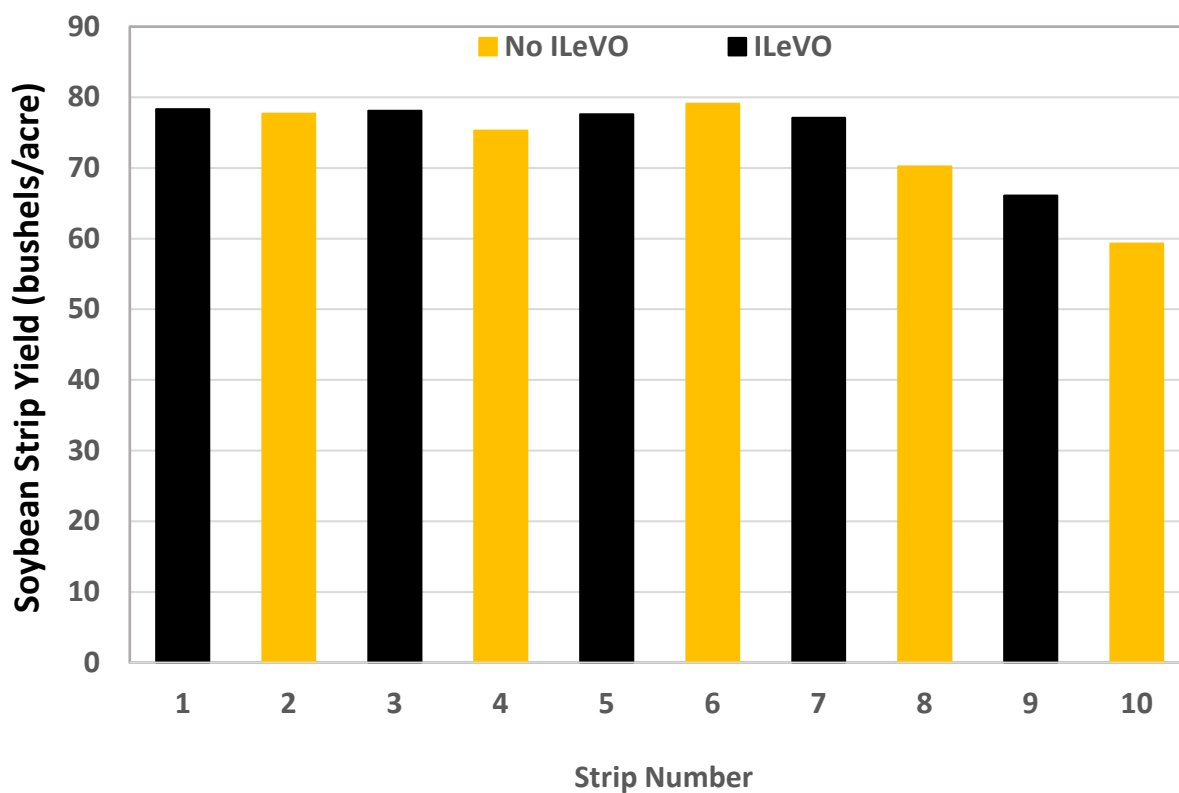
**Table 1/Graph 1.** Strip means of Soybean yield.

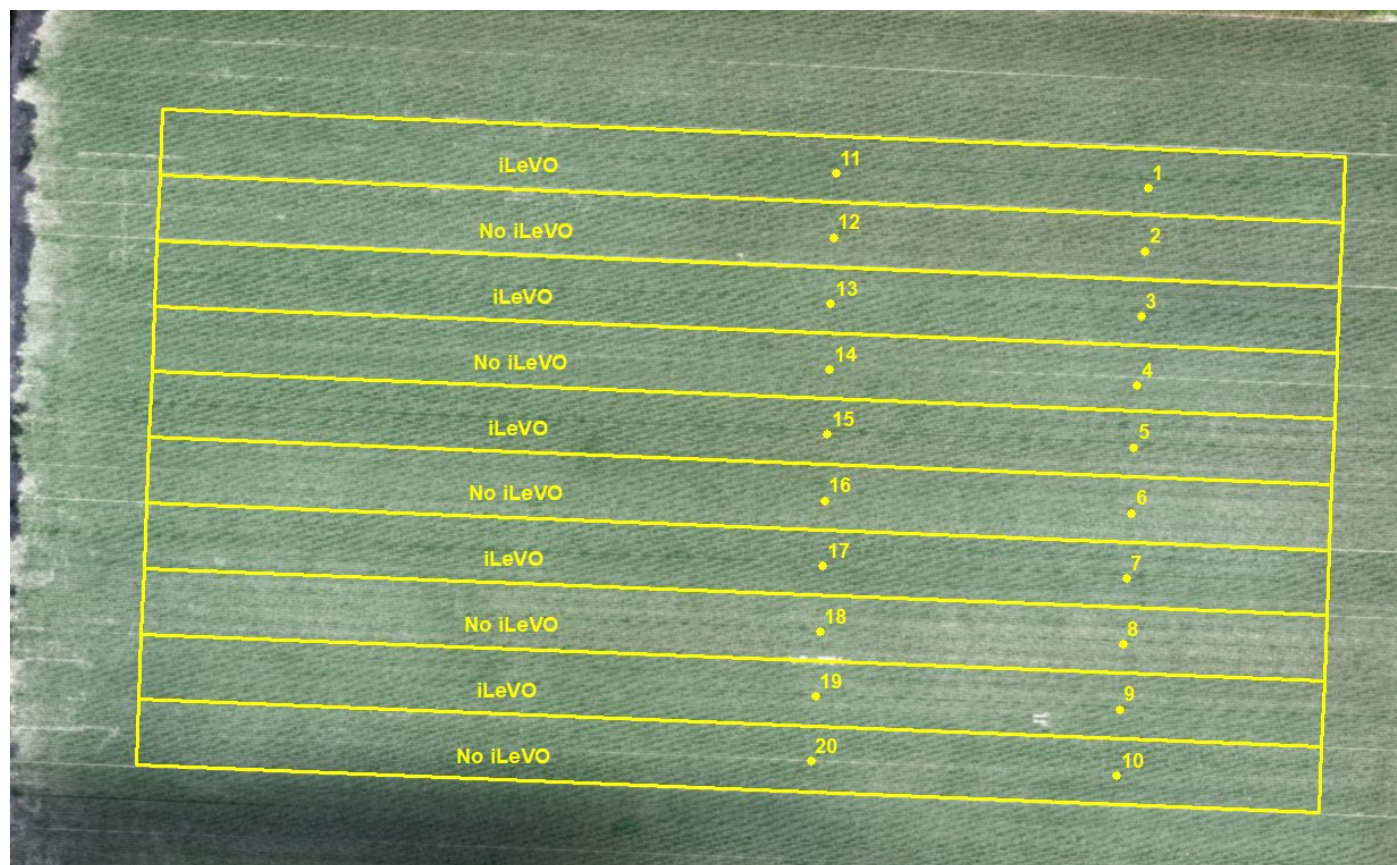
**Mean Soybean yields:**

All Strips: 73.9 bushels/acre  
 No ILeVO Treatment: 72.3 bushels/acre  
 ILeVO Treatment: 75.4 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	7	8	9	10
Treatment	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO	No
Yield (Bushels/Acre)	78.3	77.7	78.1	75.3	77.6	79.1	77.1	70.2	66.1	59.3





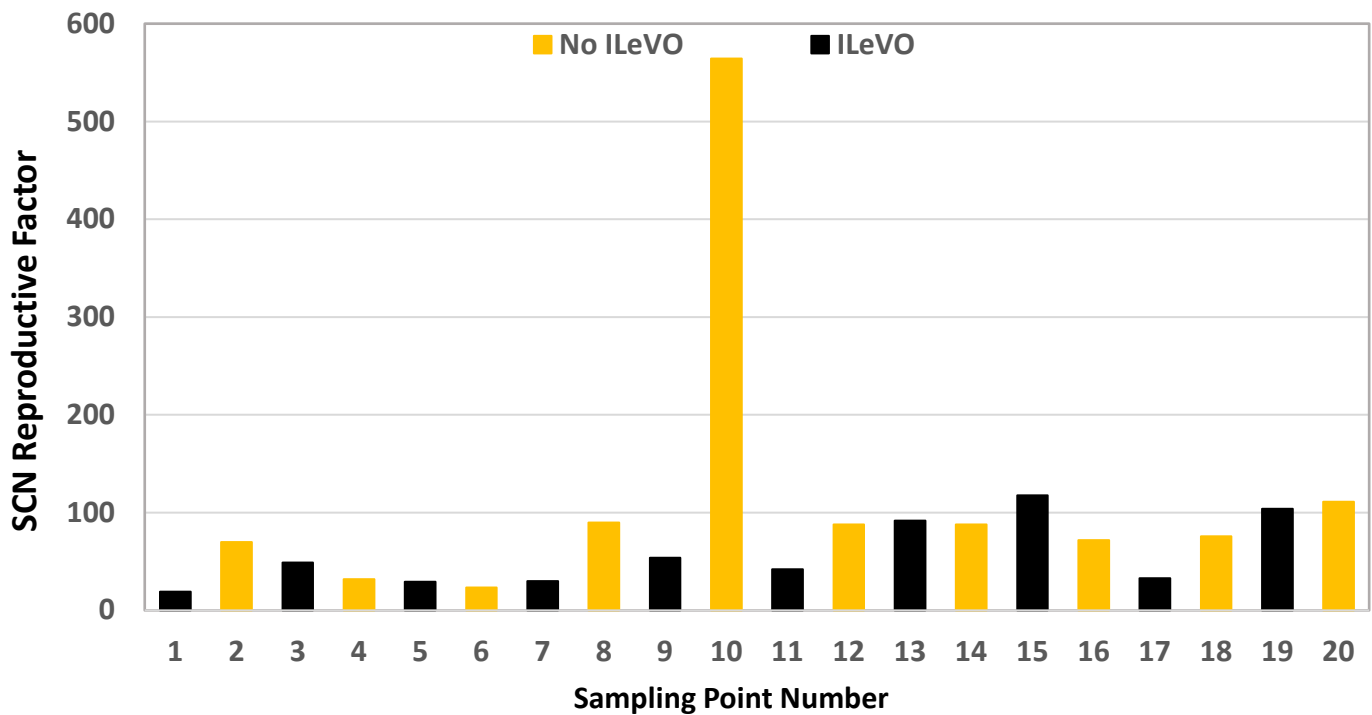
**Figure 2.** Location of the 20 soil sampling points. Points were sampled on June 6, 2018, after planting and on November 7, 2018, after harvest. Strips are labeled with their respective treatments: iLeVO and No iLeVO. Soil sampling results are below in Table 2 Below.

**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	750	Moderate	14,250	High
2	No ILeVO	188	Low	13,125	High
3	ILeVO	375	Low	18,375	High
4	No ILeVO	938	Moderate	30,000	High
5	ILeVO	1125	Moderate	33,000	High
6	No ILeVO	563	Moderate	13,125	High
7	ILeVO	375	Low	11,250	High
8	No ILeVO	188	Low	16,875	High
9	ILeVO	563	Moderate	30,375	High
10	No ILeVO	188	Low	106,125	High
11	ILeVO	563	Moderate	23,625	High
12	No ILeVO	188	Low	16,500	High
13	ILeVO	188	Low	17,250	High
14	No ILeVO	188	Low	16,500	High
15	ILeVO	188	Low	22,125	High
16	No ILeVO	188	Low	13,500	High
17	ILeVO	375	Low	12,375	High
18	No ILeVO	188	Low	14,250	High
19	ILeVO	188	Low	19,500	High
20	No ILeVO	375	Low	41,625	High
	<b>Overall Mean (Rf<sup>1</sup>)</b>	<b>394</b>	<b>Low</b>	<b>24,188</b>	<b>High</b>
	<b>No ILeVO Mean (Rf)</b>	<b>469</b>	<b>Low</b>	<b>20,213 (121.4)</b>	<b>High</b>
	<b>ILeVO Mean (Rf)</b>	<b>319</b>	<b>Low</b>	<b>28,163 (57.0)</b>	<b>High</b>

<sup>1</sup> 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
6/1/18	Pioneer P44T63R	140,000	10/22/18
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 and 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	