

# MU Certified Strip Trial Program

## 2018 ILeVO® Trial Harvest Report

**Site Number: 9**

**Trial manager Contact: Charles Ellis**

### **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 -5.1 bushels per acre less 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 36 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.**



● < 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 24, 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.

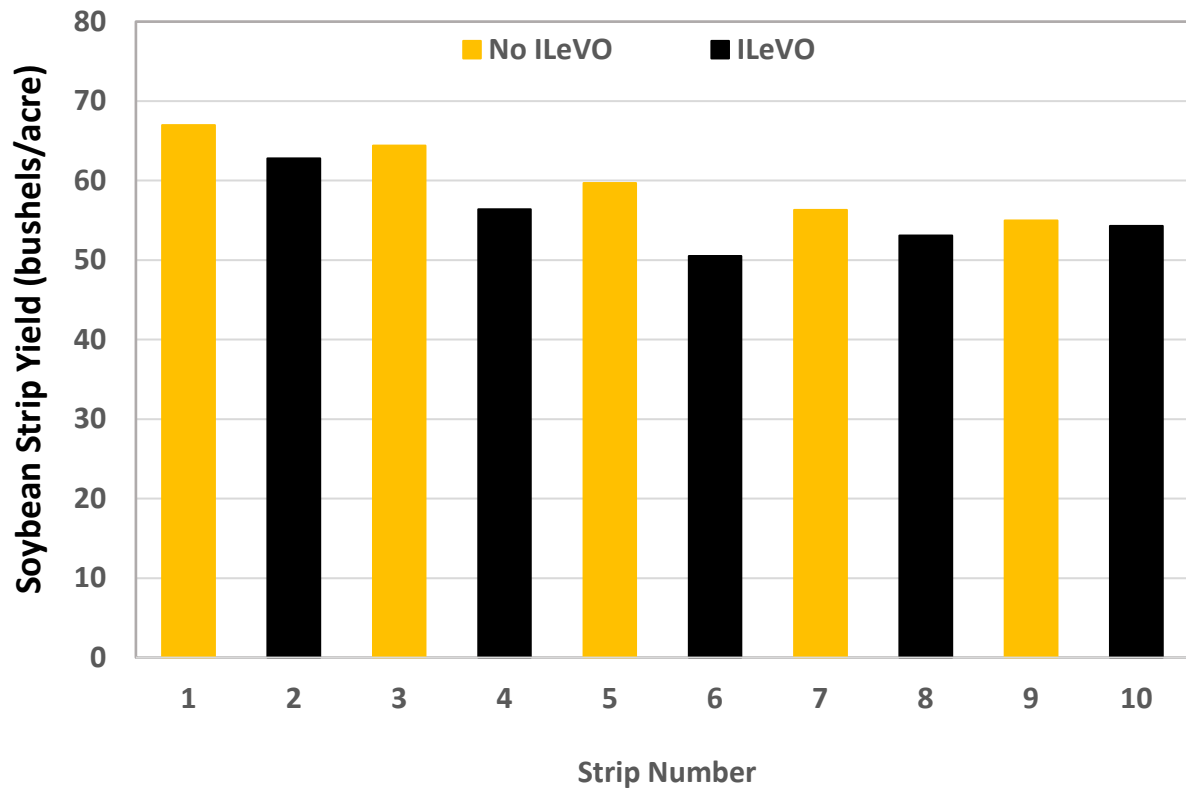
**Table 1/Graph 1.** Strip means of soybean yield.

**Mean Soybean yields:**

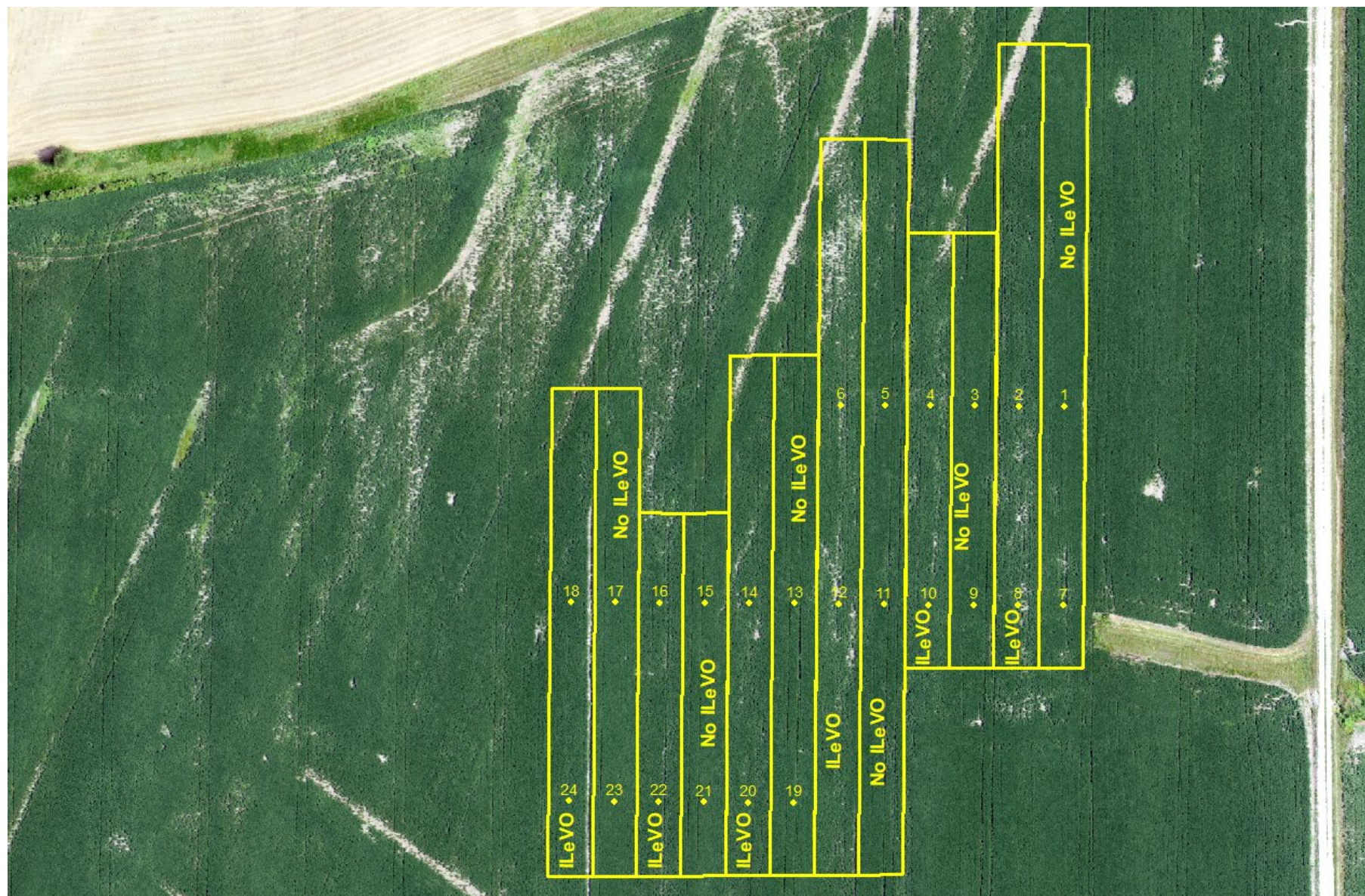
All strips: 58.0 bushels/acre  
 No ILeVO Treatment: 60.5 bushels/acre  
 ILeVO Treatment: 55.4 bushels/acre  
 Treatment difference: -5.1 bushels/acre

Preliminary analysis shows that this difference was not statistically significant.

Strip	1	2	3	4	5	6	7	8	9	10
Treatment	No	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO	No	ILeVO
Yield (Bushels/Acre)	67.0	62.8	64.4	56.4	59.7	50.5	56.3	53.1	55.0	54.3







**Figure 2.** Location of the 24 soil sampling points. Points were sampled on May 15, 2018, after planting, and on October 29, 2018, after harvest. Strips are labeled with their respective treatments: ILeVO and No ILeVO. Soil sampling results are in Table 2 below.

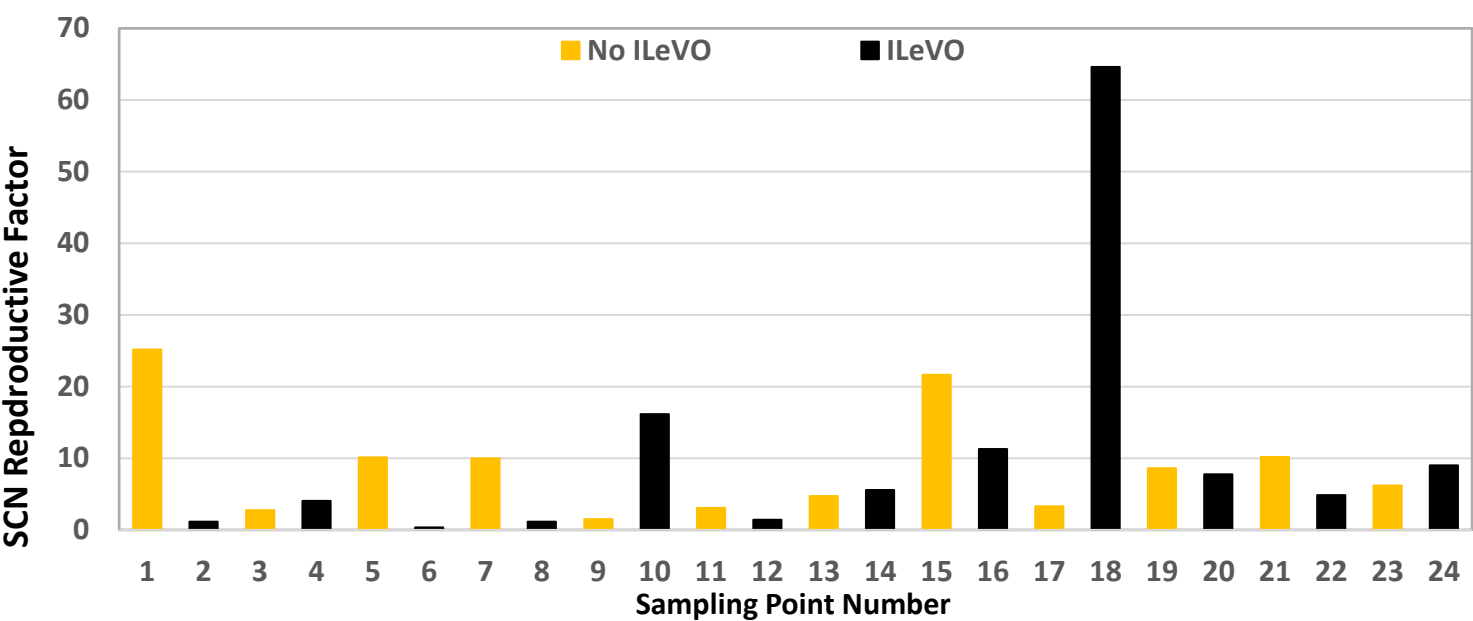


**Table 2.** Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup of soil) taken after planting on May 15, 2018, and after harvest on October 29, 2018. Results are labeled by respective treatments: ILeVO (strips with ILeVO treatment), No ILeVO (strips without ILeVO treatment).

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	938	Moderate	23,625	High
2	ILeVO	10,500	High	12,000	High
3	NO ILeVO	1,500	Moderate	4,125	Moderate
4	ILeVO	10,500	High	42,375	High
5	NO ILeVO	2,625	Moderate	26,625	High
6	ILeVO	1,125	Moderate	375	Low
7	NO ILeVO	6,000	Moderate	60,000	High
8	ILeVO	4,500	Moderate	5,250	Moderate
9	NO ILeVO	10,125	High	15,375	High
10	ILeVO	5,250	Moderate	84,750	High
11	NO ILeVO	6,375	Moderate	19,500	High
12	ILeVO	6,375	Moderate	9,000	Moderate
13	NO ILeVO	7,875	Moderate	37,125	High
14	ILeVO	4,500	Moderate	25,125	High
15	NO ILeVO	3,375	Moderate	73,125	High
16	ILeVO	2,625	Moderate	29,625	High
17	NO ILeVO	13,125	High	43,500	High
18	ILeVO	563	Moderate	36,375	High
19	NO ILeVO	3,000	Moderate	25,875	High
20	ILeVO	3,375	Moderate	26,250	High
21	NO ILeVO	4,875	Moderate	49,500	High
22	ILeVO	7,500	Moderate	36,375	High
23	NO ILeVO	3,750	Moderate	23,250	High
24	ILeVO	0	Low	2,250	Moderate
	<b>Overall Mean</b>	<b>5,016</b>	<b>Moderate</b>	<b>29,641</b>	<b>High</b>
	<b>No ILeVO Mean (Rf<sup>1</sup>)</b>	<b>5,297</b>	<b>Moderate</b>	<b>33,469 (9.2)</b>	<b>High</b>
	<b>ILeVO Mean (Rf)</b>	<b>4,734</b>	<b>Moderate</b>	<b>25,813 (20.2)</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
5/11/18	Beck’s Escalate 394L4 LL	150,000	10/24/18
Other Seed Treatments	Beck Seed treatment of Escalate		
Rate of ILeVO used: High		Has this field had SDS in the past? No	
Crop Rotation	Variable		
Tillage System	No Till		

## Equipment Specifics

Equipment	Type	Width (in feet)
Planter	JD 750	15
Combine	JD 7720	22
Yield Monitor	Ag Leader	