

MU Certified Strip Trial Program

2018 ILeVO® Trial Harvest Report

Site Number: 2

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 1.7 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 21 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!

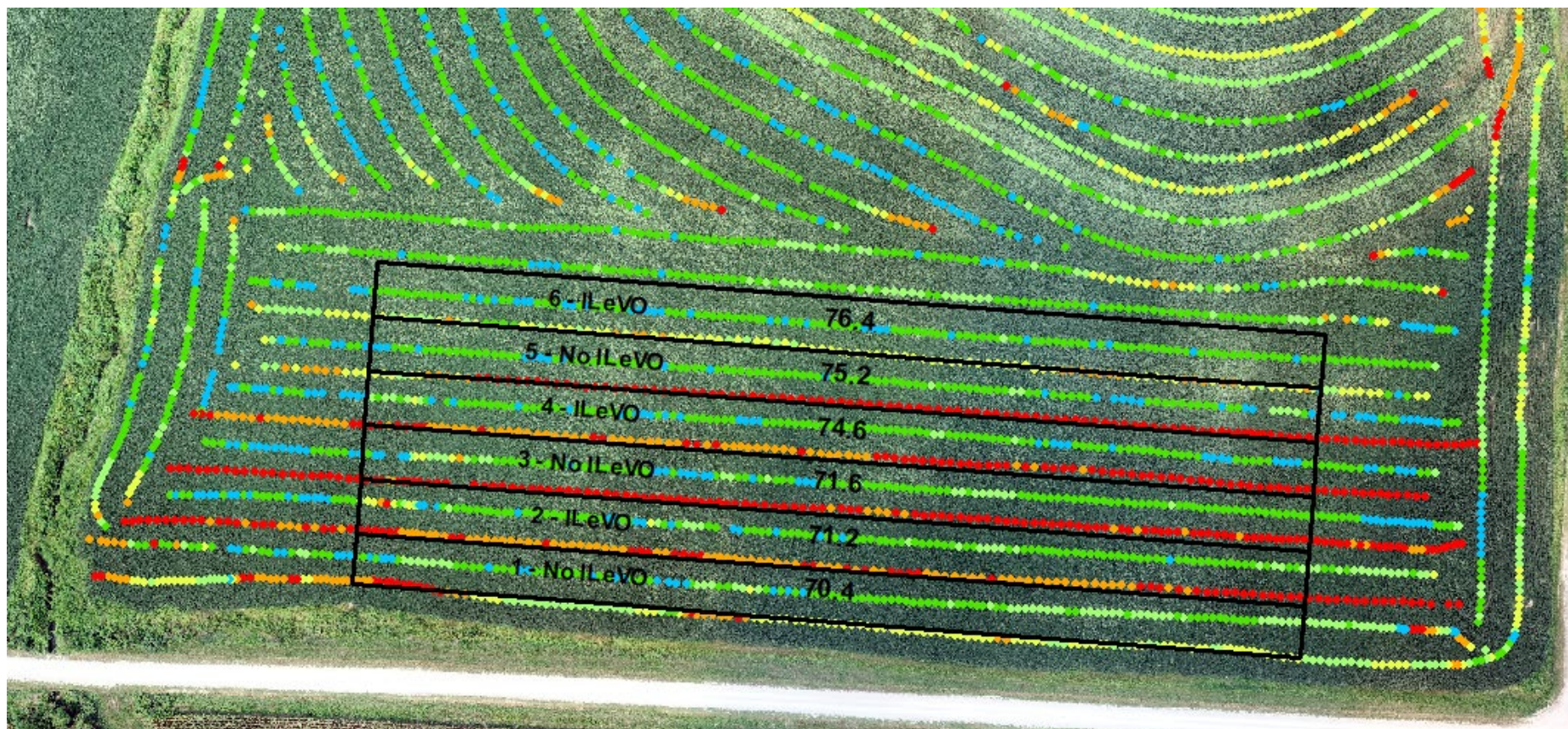
Thank you for agreeing to do this trial! It is one of ten cover crop trials in 2018.

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:

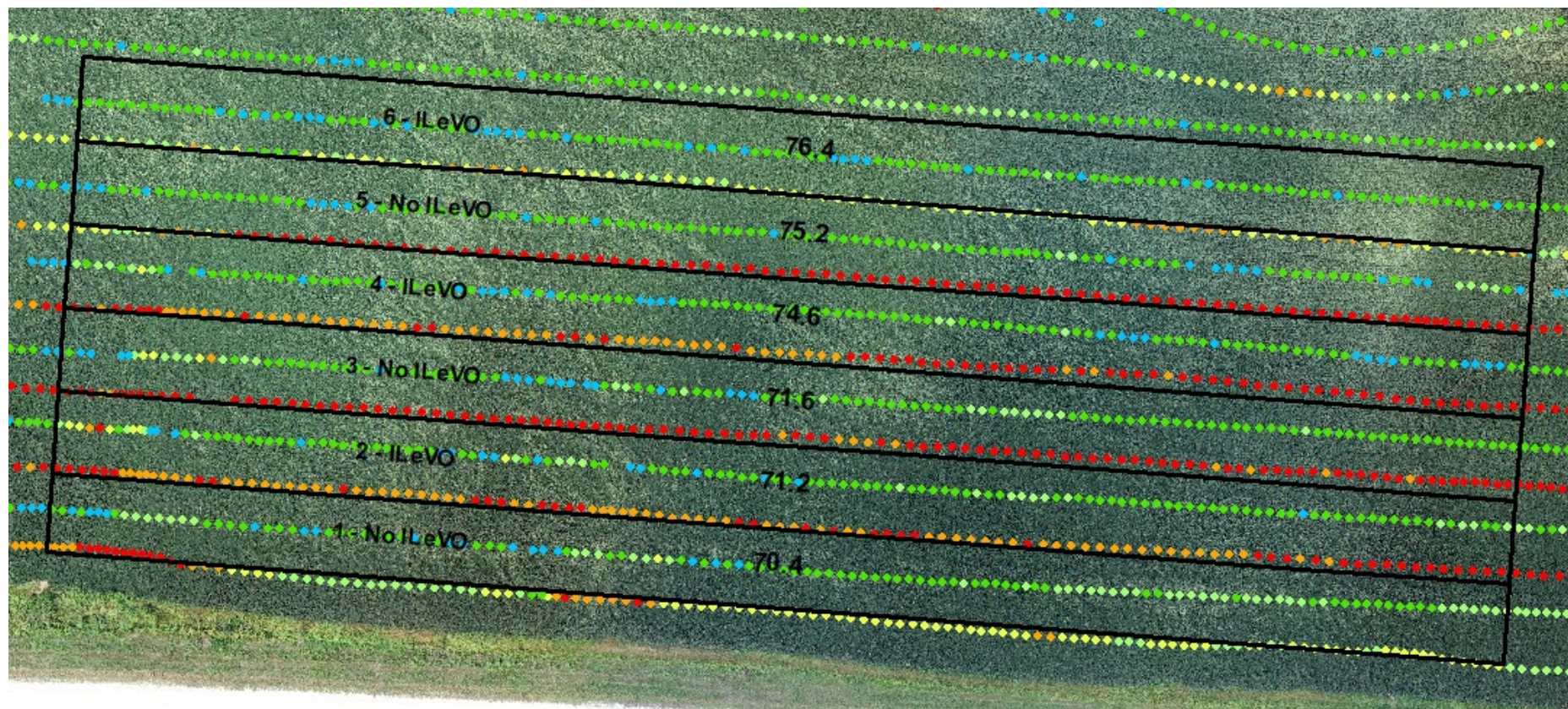
MU Extension, the Missouri Soybean Merchandising Council and the Missouri Corn Merchandising Council.

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● < 20 bu/A
 ● 20 – 35 bu/A
 ● 35– 50 bu/A
 ● 50 – 65 bu/A
 ● 65 – 80 bu/A
 ● >80 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.



● < 20 bu/A ● 20 – 35 bu/A ● 35– 50 bu/A ● 50 – 65 bu/A ● 65 – 80 bu/A ● >80 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: 73.2 bushels/acre
No ILeVO Treatment: 72.4 bushels/acre
ILeVO Treatment: 74.1 bushels/acre
Treatment difference: 1.7 bushels/acre

Preliminary analysis shows that this difference was not statistically significant.

Strip	1	2	3	4	5	6
Treatment	No ILeVO	ILeVO	No ILeVO	ILeVO	No ILeVO	ILeVO
Yield (Bushels/Acre)	70.4	71.2	71.6	74.6	75.2	76.4

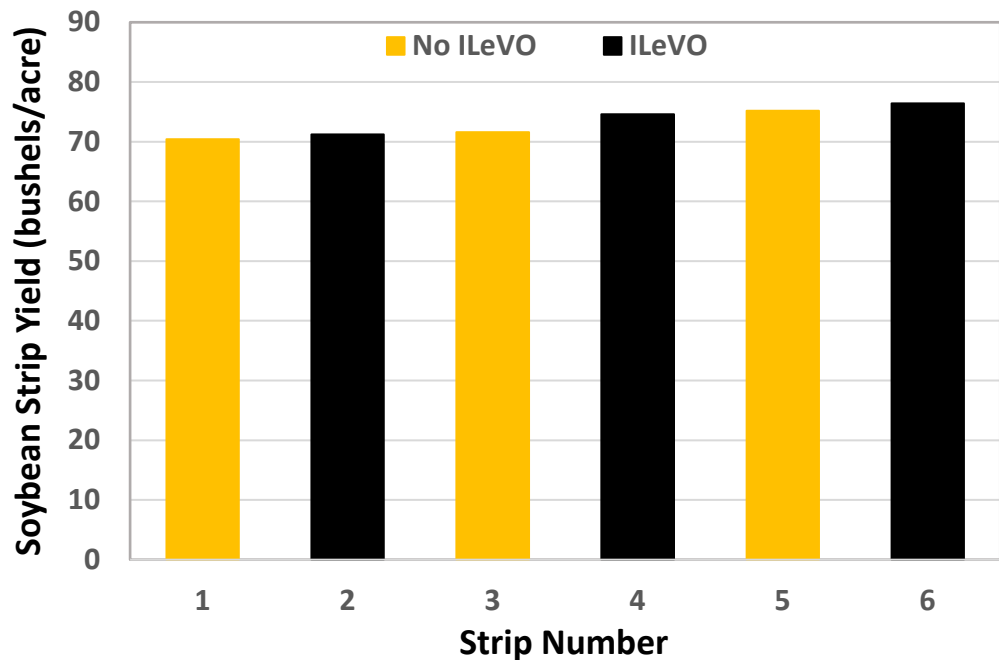




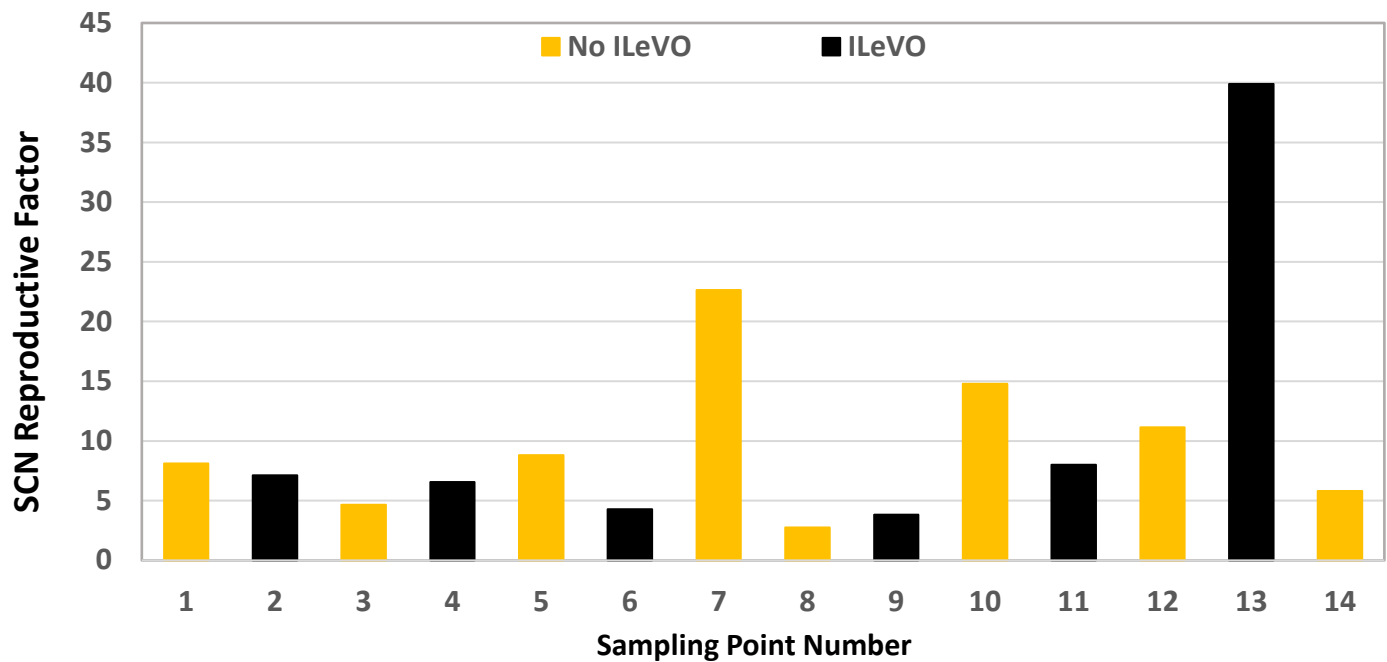
Figure 2. Location of the 14 soil sampling points. Points were sampled on May 11, 2018, after planting and on October 23, 2018, after harvest. Strips are labeled with their respective treatments: ILeVO and No ILeVO. Soil sampling results are below in Table 2 below.

Table 2. Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup of soil) taken after planting on May 11, 2018, and after harvest on October 23, 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	3,000	Moderate	24,375	High
2	ILeVO	3,000	Moderate	21,375	High
3	NO ILeVO	5,625	Moderate	36,250	High
4	ILeVO	3,375	Moderate	22,125	High
5	NO ILeVO	3,370	Moderate	33,000	High
6	ILeVO	6,375	Moderate	27,375	High
7	NO ILeVO	563	Moderate	12,750	High
8	NO ILeVO	750	Moderate	2,063	Moderate
9	ILeVO	2,250	Moderate	8,625	Moderate
10	NO ILeVO	938	Moderate	13,875	High
11	ILeVO	375	Low	3,000	Moderate
12	NO ILeVO	1,313	Moderate	14,625	High
13	ILeVO	188	Low	7,500	Moderate
14	NO ILeVO	1,875	Moderate	10,875	High
	Overall Mean (Rf¹)	4,527	Moderate	16,987	High
	No ILeVO Mean (Rf)	1,937	Moderate	16,424 (9.8)	High
	ILeVO Mean (Rf)	2,594	Moderate	15,000 (11.6)	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
5/5/18	Channel 3907 R2	150,000	10/22/18
Other Seed Treatments?			
Rate of ILeVO used: High	Has this field had SDS in the past? Yes		
Crop Rotation	Soybean and Corn		
Tillage System	No Till		

Equipment Specifics

Equipment	Type	Width (in feet)
Planter	JD 1790	20
Combine	JD S660	30
Yield Monitor	Greenstar	