Site number: 9  
County: Warren  
Extension Contact – Charles Ellis Agricultural Engineer

Results Summary

- Whole strip yields indicate ILeVO decreased yield 0.6 bushels/acre and the difference was statistically significant.

- An assessment of within-strip variability estimated that the benefit of ILeVO was greater than or equal to zero for about 37% of the trial.

- Scouting found no confirmed Sudden Death Syndrome at this location.

- Soil sampling in spring indicated moderate to high levels of Soybean Cyst Nematode (SCN). Mean SCN numbers after harvest were six times higher than prior to planting. There was no evidence that ILeVO reduced this increase.

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.
Figure 1. Aerial photography taken August 24, 2017, showing strip trial layout in the field.
Figure 2. Yield monitor data reported as bushels per acre. Field was harvested September 26, 2017.
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Table/Graph 1. Whole Strip Yields:

Mean yield for all strips was 66.7 bu/A (66.4 bu/A with ILeVO; 67.0 bu/A without ILeVO).

<table>
<thead>
<tr>
<th>Strip</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILeVO?</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Yield (bu/A)</td>
<td>66.1</td>
<td>64.7</td>
<td>64.9</td>
<td>66.3</td>
<td>65.8</td>
<td>68.2</td>
<td>66.1</td>
<td>66.3</td>
<td>66.9</td>
<td>69.0</td>
<td>67.9</td>
<td>68.5</td>
<td>67.2</td>
<td>66.3</td>
</tr>
</tbody>
</table>

Graph 2. Field variability: Estimated yield “benefit” of ILeVO.

Variability Assessment: 50-foot field segments

Reduced Yield

Increased Yield

With ILeVO yield minus no ILeVO yield (bushels/acre)
**Figure 3.** Field variability in the yield effect of ILeVO: Colors match previous figure. Green segments are where the calculated yield difference was $\geq 0$; blue segments are where yield effect was negative.
### MU Certified Strip Trial Program

**Table 2.** Soybean Cyst Nematode (SCN) soil sampling results (eggs/cup or soil).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Pre-Plant SCN (eggs/cup)</th>
<th>Pre-Plant SCN Rating</th>
<th>Post-Harvest SCN (eggs/cup)</th>
<th>Post-Harvest SCN Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ILeVO</td>
<td>7,125</td>
<td>Moderate</td>
<td>73,000</td>
<td>High</td>
</tr>
<tr>
<td>With ILeVO</td>
<td>18,375</td>
<td>High</td>
<td>64,500</td>
<td>High</td>
</tr>
<tr>
<td>No ILeVO</td>
<td>9,750</td>
<td>Moderate</td>
<td>97,875</td>
<td>High</td>
</tr>
<tr>
<td>With ILeVO</td>
<td>7,500</td>
<td>Moderate</td>
<td>78,000</td>
<td>High</td>
</tr>
<tr>
<td>No ILeVO</td>
<td>20,250</td>
<td>High</td>
<td>39,750</td>
<td>High</td>
</tr>
<tr>
<td>With ILeVO</td>
<td>24,750</td>
<td>High</td>
<td>90,000</td>
<td>High</td>
</tr>
<tr>
<td>No ILeVO</td>
<td>13,875</td>
<td>High</td>
<td>56,625</td>
<td>High</td>
</tr>
<tr>
<td>With ILeVO</td>
<td>15,000</td>
<td>High</td>
<td>126,750</td>
<td>High</td>
</tr>
<tr>
<td>No ILeVO</td>
<td>17,625</td>
<td>High</td>
<td>117,750</td>
<td>High</td>
</tr>
<tr>
<td>With ILeVO</td>
<td>42,750</td>
<td>High</td>
<td>113,625</td>
<td>High</td>
</tr>
<tr>
<td>Mean</td>
<td>17,700</td>
<td>High</td>
<td>85,788</td>
<td>High</td>
</tr>
</tbody>
</table>

**Graph 3.** Graphical representation of Soybean Cyst Nematode (SCN) numbers pre-plant and post-harvest from 10 sampling points in the field.

Samples were taken 4/25/2017 (pre-plant) and 11/9/2017 (post-harvest) in the same 10 locations in the field. Sampling points were 12 feet circles along transect across the plots about 250 feet from the western edge of the strips.
To assess the effect of ILeVO on SCN numbers, the ratio of SCN numbers were calculated at post-harvest divided by SCN numbers at pre-plant (Post-harvest SCN #/Pre-plant SCN #) for each of the 10 sampling points.

In the figure below, no change in SCN numbers =1. Above 1, SCN numbers increased over the growing season.

**Graph 4.** Increase in SCN numbers between pre-plant and post-harvest samplings.

![Graph showing the effect of ILeVO on SCN numbers]

SCN numbers averaged six times higher in fall compared to spring. There was no evidence that ILeVO affected this change (6.6 times higher with no ILeVO; 5.7 times higher with ILeVO).
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Management Information

Location characteristics: Trial size: 30 acres Dominant soil type: Silt Loam
Crop rotation: Previous crop: Corn Current crop: Soybean
Soybean variety: Beck's 424L4 SCN resistant: Yes SDS resistant: Yes
Other seed treatments: Poncho 1250
SDS history: History of SDS: No Confirmed SDS in 2017: No

Location Notes:

- This field was an ILeVO treated field that had seven strips of no-ILeVO seed.
- There were some areas of concern in this field from images taken August 29th that at this point are attributed to beginning of senescence.