J Boyer Farms’ Journey with Interseeding

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Outline

- Research Project Update
  - 2014 Seed Corn CC Seeding Date vs Biomass/N capture
  - 2015 Field Corn Interseeding in V4 Corn
  - 2016 Seed Corn Interseeding in V4 Corn
  - 2017 Field Corn Interseeding in V4 Corn
2014
Seed Corn-Cover Crop
Seeding Date Trial
Cover Crop Seeding Date Trial

- 1st seeding 8/19/2014
- 2nd Seeding 8/29/2014
- 3rd Drilled 9/25/2014
CC Seeding Date - Biomass

Aboveground biomass (lb/ac)

- Nov. 13, 2014
  - Early aerial: a
  - Late aerial: a
  - Drill: b

- May 3, 2015
  - Early aerial: A
  - Late aerial: A
  - Drill: B
Available N

Spring Available N

<table>
<thead>
<tr>
<th></th>
<th>Plant Available N</th>
<th>Soil Available N</th>
<th>Total Available N</th>
</tr>
</thead>
<tbody>
<tr>
<td>T0</td>
<td>57.1</td>
<td>57.4</td>
<td>57.1</td>
</tr>
<tr>
<td>T1</td>
<td>106.0</td>
<td>30.2</td>
<td>136.2</td>
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<tr>
<td>T2</td>
<td>99.8</td>
<td>30.1</td>
<td>130.9</td>
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<tr>
<td>T3</td>
<td>73.7</td>
<td>31.1</td>
<td>104.8</td>
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</table>
2015
Field Corn-Cover Crop
Interseeding @ V4
2015

Field Corn-Cover Crop Interseeding @ V4

Photo 8-14-15
9 weeks post
2016
Seed Corn-Cover Crop Interseeding @ V4
2016

Seed Corn-Cover Crop Interseeding @ V4
2017
Field Corn-Cover Crop
Interseeding @ V4
2017
Field Corn-Cover Crop Interseeding @ V4
2017
Field Corn-Cover Crop Interseeding @ V4

Mid July

Before harvest, after frost
Oct

After Harvest
Corn Yield Comparison

Corn yields, Boyer

LSD (0.05) = 8 bu/ac

<table>
<thead>
<tr>
<th>Corn Leaf Orientation</th>
<th>Not-interseeded</th>
<th>Interseeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal</td>
<td>298</td>
<td>283</td>
</tr>
<tr>
<td>Vertical</td>
<td>254</td>
<td>221</td>
</tr>
</tbody>
</table>
Conclusions:
- Corn Leaf Architecture had no significant effect on biomass
- Corn variety had significant effect on yield
- Presence of Cover had negative effect on yield.
- Species all survived (Cowpeas dominate)
- No difference in light or ground temp between corn varieties
What’s Next?

- Repeat test with larger trial?
- Try some new cover species?
- Try wider row spacing (60”?), with higher row population
- Looking for more species to survive & provide N during growing season
Questions?