In–furrow DAP with Seed and Tolerance to Soil Acidity

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Producers used to banding DAP with wheat for both means of starter and soil acidity alleviation.

Canola however being a small oil seed is considered much more sensitive.

2 locs, Lahoma and Perkins

<table>
<thead>
<tr>
<th>Trt</th>
<th>Lbs DAP w/seed</th>
<th>Lbs N/P with seed</th>
<th>N pre-plant</th>
<th>Top-dress N</th>
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<tbody>
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<td>0</td>
<td>0/0</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
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<td>0</td>
<td>0/0</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0/0</td>
<td>50 N / 30 P</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>5.4/13.8</td>
<td>44.6</td>
<td>75</td>
</tr>
<tr>
<td>5</td>
<td>60</td>
<td>10.8/27.6</td>
<td>39.2</td>
<td>75</td>
</tr>
<tr>
<td>6</td>
<td>90</td>
<td>16.2/41.4</td>
<td>33.8</td>
<td>75</td>
</tr>
<tr>
<td>7</td>
<td>120</td>
<td>21.6/55.2</td>
<td>27.4</td>
<td>75</td>
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<tr>
<td>8</td>
<td>150</td>
<td>27/69</td>
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<tr>
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<td>16.2/41.4</td>
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<tr>
<td>13</td>
<td>120</td>
<td>21.6/55.2</td>
<td>0</td>
<td>103.4</td>
</tr>
</tbody>
</table>
Lahoma in January

- Visible stand reduction in all plots with 60+ DAP in furrow with seed.
Lahoma Yld and Oil

[Graph showing yield and percent oil for different rates of input]
2012 Summary

- Lahoma Low STP, Perk no-till low pH
- Perkins, yields <15 bu/ac
- Both locations N only trt had significantly lower oil content.
- At Lahoma stand loss little impact on yield. However environment was very good.
- Recommendation of 30 lbs of DAP with seed for promoted early season growth.
Soil Acidity Impact on Canola

- Across Oklahoma many Canola producers noticed low spots in fields. In many cases the poor growth was in low pH.
- This study evaluated 6 of the most popular cultivars grown in a range of soil pH of 4 to 7.
- Cultivars
  - DK 41–10
  - DK 44–10
  - DK 46–15
  - HC 110
  - HC 115
  - HC 154
46–15
Max Yield 35 bu.

41–10
Max Yield 21.1 bu.

44–10
Max Yield 34.6 bu.

41–10 had significant Shattering across plots (except 2 lowest pH) 15–20 % los: not accounted for in graph.
High Class % yld loss

HC 154
Max Yield 42.7 bu.

HC 115
Max Yield 24.3 bu.

HC 110
Max Yield 33 bu.

HC 115 had significant Shattering across all plots  20–25% loss, not accounted for in graph.
Soil Acidity x Cultivar

- In several Cultivar pH impacted Maturity/dry down. Higher pH’s matured quicker and resulted in high % shatter.
- Soil pH < 4.5 resulting in 95% loss in all but 1.
- HC 115 Most tolerant
- DK 44–10 Second most tolerant
- Critical Soil pH level of 5.5
Thank you!!!

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