2007 Soybean Management Field Days

Nutrient Management Issues for Soybean Production
**Nutrient Management Issues for Soybean Production**

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**Soybean N need**

- Early pod fill
- 50 lb in ND and RRV of MN
- 6% yield increase with 15 lb in Brookings, 2x2
- Ogallala
- No yield advantage further south, e.g. MN, MO
- What about no-till irrigated C-C-SB?
- ~7 bu gain if >80 bu/A in KS
- Guidelines for Nebraska

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**Lime use to amend acid soils**

1. Site specific application  
   a. Variability in lime need  
   b. Sampling  
   • grid sampling  
   • Veris pH +EC  
   • Management Zone

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**Lime use to amend acid soils**

- Field 1  
- Field 2  
- Field 3

- Percentage of samples

- Soil pH

- Length of a Grid Cell, in m

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Improving fertilizer P recovery

1. Are they effective?
2. Will more P need to be applied eventually?

How common are acid and alkaline soils in Nebraska?

<table>
<thead>
<tr>
<th>Percent of Samples by pH Range for Zip Code Areas</th>
<th>68000-68099</th>
<th>68300-68399</th>
<th>68700-68799</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH &lt;= 5.3</td>
<td>7.2%</td>
<td>10.3%</td>
<td>17.7%</td>
</tr>
<tr>
<td>5.3 &lt; pH &lt;= 6.2</td>
<td>59.2%</td>
<td>61.8%</td>
<td>34.9%</td>
</tr>
<tr>
<td>6.2 &lt; pH &lt;= 7.2</td>
<td>20.4%</td>
<td>26.3%</td>
<td>25.0%</td>
</tr>
<tr>
<td>7.2 &lt; pH &lt;= 7.8</td>
<td>7.1%</td>
<td>1.5%</td>
<td>16.7%</td>
</tr>
<tr>
<td>7.8 &lt; pH</td>
<td>0.0%</td>
<td>0.1%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Randomized Complete Block Design
Three or more treatments
(Four blocks required—Five preferred)

Block 1  Block 2  Block 3  Block 4
A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P

Assume treatment A, B, C & D strips are each 16 rows wide (40 feet)
Combine head 20 feet wide
Harvest 20 feet out of center for each treatment
10 feet of discard/buffer remaining on each side of harvested strips