Phosphorus Response in Corn Study

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Objective
To measure the effect of added phosphorus fertilizer on corn yield.

Background
Crop Year: 2016
Location: Bey Road
County/Town: Frenchtown
Soil Type: Blount Silt Loam/Pewamo/Glynwood
Drainage: Pattern
Previous Crop: Corn/Soybean

Tillage: Minimum Tool
Soil Test: pH 6.8, P 40 ppm M III, K 105 ppm
Planting Date: May 6, 2016
Nitrogen: 200 Pounds per acre
Seeding Rate: 32,000
Harvest Date: October 12, 2016

Methods
Phosphorus application of 10-34-0 was at the rate per Tri-State Fertility Guide recommendations versus zero application of phosphorus was replicated four times in a randomized complete block design. Treatments were applied at planting with a 12 row John Deere planter. All treatments received the same tillage, herbicide and non-P fertilizer applications. Seed used was Pioneer 1197. Plots were harvested with a commercial combine equipped with a 6 row corn head. Yields were verified using a grain cart. Moistures were taken for each treatment. Yields were adjusted to 15.5% moisture.

Treatments
1. 0 pounds of P
2. 70 pounds of P

Results

<table>
<thead>
<tr>
<th>No.</th>
<th>Treatment</th>
<th>Wet Moisture</th>
<th>Treatment Average Yield/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No P</td>
<td>19.98</td>
<td>109.55</td>
</tr>
<tr>
<td>2</td>
<td>Tri State</td>
<td>20.07</td>
<td>107.20</td>
</tr>
</tbody>
</table>

CV 15.13; No Significant Difference.
Summary
There was no significant difference in corn yield seen with the addition of the phosphorus treatment

Acknowledgement
The author expresses appreciation to on-farm collaborator Knapke Family Farms for the land use, planting and harvesting of this plot.

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