

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

No.	Treatment	Wet Moisture	Treatment Average Yield/Acre
1	No P	19.98	109.55
2	Tri State	20.07	107.20

CV 15.13; No Significant Difference.



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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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