Field Evaluation of Supplemental Foliar Phosphorus Applications in Grain Corn

EXPERIMENT INFO

Planted: 06/02/2025

Hybrid: MZ 4049SMX with Fortenza + Vibrance Cinco + Lumiante + Stamina (2975 CHU)

Population: 32,000 seeds/acre

Row Width: 30”

Prev. Crop: Soybeans

Plot Size: 12 rows x 675’

Replications: 3

Pre-Plant N Application
Date: 04/23/2025
Rate: 15 GPA High NRG-N

Starter Program
3 GPA Pro-Germinator + 3 GPA Kalibrate + 1 L/ac Micro 500 + 1 L/ac eNhance + 1 L/ac MicroLink Ca + 1 L/ac Boron

Sidedress Application
Date: 07/05/2025
Rate: 30 GPA High NRG-N

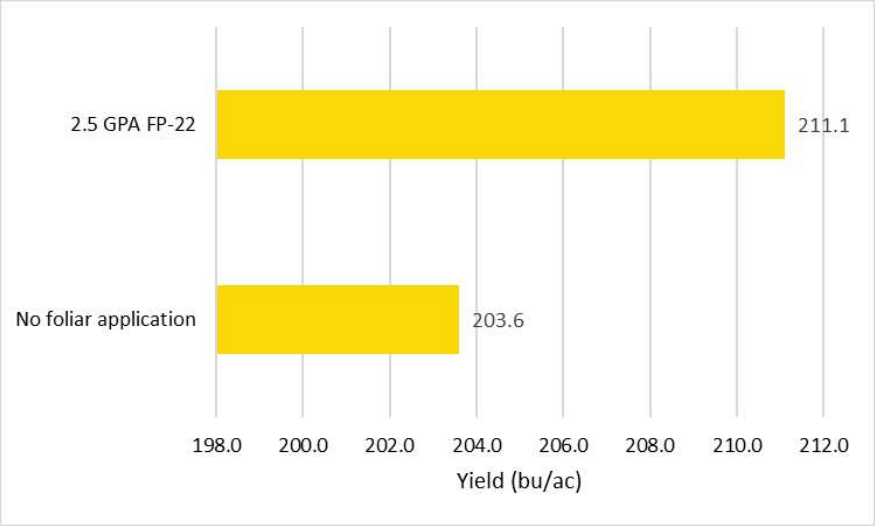
Fungicide Application
Date: 08/21/2025
Rate: 237 mL/ac Delaro Complete + 82 mL/ac Proline

Harvested: 11/27/2025

Soil Data

pH:	**6.6 – 7.8**
CEC:	**7.1 – 15**
% OM:	**2.2 – 3.8**
P (bicarb):	**24 – 55 ppm**
% K:	**1.5 – 5.0**
% Mg:	**7.1 – 18.9**
Ca:	**840 – 2730 ppm**

Phosphorus plays a critical role in early corn plant development, energy transfer, and root growth. It is a key component of adenosine triphosphate (ATP), which drives many metabolic processes required for plant growth. Adequate phosphorus availability promotes strong root systems, improves early vigor, and supports kernel development, all of which contribute to higher grain yield. However, phosphorus availability in soil can be limited, particularly in cool or compacted soils where root uptake is reduced. In these situations, foliar phosphorus applications can help supplement plant nutrition by delivering small amounts of readily available phosphorus directly to the leaves. While foliar phosphorus cannot replace soil-applied phosphorus, it can serve as a useful management tool to support plant growth during periods when soil phosphorus uptake is restricted.



Treatment	Average moisture (%)
No foliar fertilizer application	25.4
2.5 GPA FP-22	25.1

The AgroLiquid foliar phosphorous program yielded an **additional 7.5 bushels** over the check.