K-Mag® Blend Study

Objective

- Evaluate corn yield response to MOP (0-0-60) and K-Mag® Premium (0-0-21.5-10.5Mg-21S).

Overview

- Muriate of Potash (MOP) is a common potassium (K) fertilizer used in corn production.
- Higher corn yields combined with lower atmospheric sulfur deposition has accelerated the need for sulfur (S) on corn.
- Soluble magnesium (Mg) has been documented to improve photosynthesis, enzyme activation, and grain yield.
- K-Mag is a unique 3-in-1 nutrient source that features low chloride, water soluble nutrients, and does not affect soil pH; regardless of rate.

Trial Details

- Locations and Crop Management:
  - CROP: Corn (Zea mays)
  - YEARS: 2018-2019
  - DATA SOURCE: Field studies conducted by third-party, independent researchers.
  - EXPERIMENTAL DESIGN: Small-plot RCBD with 4 replications.
- CROPPING CONDITIONS:
  - N Rate: Applied according to local recommendations
  - P Rate: 80 lbs P2O5/ac applied as DAP (18-46-0) or MAP (11-52-0)
  - K Rate: 60 lbs K2O/ac as either MOP or a blend of MOP (50 lbs K2O/ac) + K-Mag (10 lbs K2O/ac)
  - Application Timing: Preplant
  - Application Method: Broadcast Incorporated

Results

- LOCATIONS: 23 trials across the following states - DE, IL, IN, KY, MS, NC, OH, PA, SC, WI

Summary

- Replacing a small amount of MOP with K-Mag increased corn yield by 4.5 bu/ac over MOP when averaged across 23 trials (2018 and 2019).
- These results demonstrate the value of K, Mg, and S for current yield levels and corn production systems.
- Access additional yield data, ROI calculators, and resources at KMag.com/Performance.

Increased yield with a small amount of K-Mag in the blend

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