K-Mag® Blend Study

Objective
• Evaluate soybean 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 soybean production.
• New university research highlights the need for sulfur (S) on soybean due to higher grain yields and lower atmospheric deposition.
• 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: Soybean (Glycine max)
YEARS: 2018-2019
DATA SOURCE: Field studies conducted by third-party, independent researchers.
EXPERIMENTAL DESIGN: Small-plot RCBD with 4 replications.
CROPPING CONDITIONS: All trials conformed to local cropping practices
P Rate: 40 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

<table>
<thead>
<tr>
<th>Yield (bu/ac)</th>
<th>Control (N+P)</th>
<th>MOP (60)</th>
<th>MOP (50) + K-Mag (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean Yield</td>
<td>55.0</td>
<td>56.3</td>
<td>58.5</td>
</tr>
</tbody>
</table>

LOCATIONS: 22 trials across the following states/provinces - IA, IL, IN, KY, MN, NE, OH, ON, WI

Summary
• Replacing a small amount of MOP with K-Mag increased soybean yield by 2.2 bu/ac over MOP when averaged across 22 trials (2018-19).
• These results demonstrate the value of K, Mg, and S for current soybean genetics and production systems.
• Access additional yield data, ROI calculators, and resources at KMag.com/Performance.