Aspire® Corn High Population

Objective

- Evaluate the yield response of Aspire® (0-0-58-0.5B) compared to MOP (0-0-60) at four different corn plant populations.

Overview

- Corn high-yield management practices, which include increased planting populations, have heightened the need for balanced crop nutrition.
- Micronutrients such as boron (B) are crucial for cell growth, reproductive development and to increase yield.
- The role of B in high-stressed situations has been shown to be beneficial in various studies.
- Other research has shown that phosphorus (P) and potassium (K) fertilizers containing micronutrients in a single granule provide increased nutrient distribution and crop nutrient uptake compared to conventional fertilizer blends.
- Aspire is the first-of-its-kind micronutrient-enhanced potash fertilizer. Formed using Nutriform® technology, Aspire premium potash combines potassium and boron in each granule to help achieve balanced crop nutrition.

Trial Details

Location and Crop Management:
- CROP: Corn (Zea mays)
- YEAR: 2014
- DATA SOURCE: Field studies conducted by third-party, independent researchers.
- EXPERIMENTAL DESIGN: Small-plot RCBD with 4 replications.
- CROPPING CONDITIONS:
  - Hybrid: Trait-stacked technology
  - Planting Populations: 26, 32, 38 and 44K plants/ac
  - Fungicide: Applied at pollination.
  - K Rate: 60 lbs K₂O/ac applied as MOP or Aspire.
  - P Rate: Applied to entire trial area based on soil test.
  - Application Timing: Preplant
  - Application Method: Broadcast incorporate.

Summary

- Corn yield increased with increasing population from 26,000 to 44,000 plants/ac for both MOP and Aspire.
- Aspire and MOP yields were similar at populations of 26,000 and 32,000 plants/ac.
- Aspire outyielded MOP by 4.6 bu/ac at a population of 38,000 plants/ac.
- Aspire increased yield by 10.6 bu/ac over MOP at 44,000 plants/ac.
- Increased response to Aspire with increasing population indicates the importance of B and balanced crop nutrition to meet the needs of a dense population.
- The results demonstrate the benefits of B and uniform nutrient distribution in a high-yield management system.