MicroEssentials® SZ™ Corn Zinc Rate Study

Objective

- Evaluate the yield response of MicroEssentials® SZ™ (12-40-0-10S-12Zn) compared to a MAP (11-52-0) + AS (21-0-0-24S) + ZnSO4 (0-0-0-16.5S-36Zn) blend at varying Zn rates.

Overview

- MAP + AS + ZnSO4 is often used as a fertilizer blend applied to corn.
- Nutrient recommendations often call for high rates of Zn due to uneven distribution and lack of crop uptake from a traditional blend.
- MicroEssentials SZ contains four nutrients fused into one nutritionally balanced granule, promoting uniform nutrient distribution, improved nutrient uptake and increased yield.

Trial Details

Locations and Crop Management:

CROP: Corn (Zea Mays)
YEARS: 2010–2012
LOCATIONS: 11 locations across the U.S. (IN, LA, MN, NE, OH, SC, SD, WI)
CROPPING CONDITIONS:
- Trials conformed to local cropping practices.
- N, P and S rates were balanced across treatments (80 lbs P2O5/ac, 20 lbs S/ac).

Treatments:

- MAP + AS + ZnSO4: 0, 2, 4, 6, and 10 lbs Zn/ac:
- MicroEssentials SZ: 2 lbs Zn/ac (200 lbs MicroEssentials SZ/ac)
- Application Timing: Preplant
- Application Method: Broadcast

Summary

- With a MAP + AS + ZnSO4 blend, corn yields increased with increasing rates of Zn.
- MicroEssentials SZ applied at 2 lbs Zn/ac produced the highest corn yield (186.2 bu/ac), which was statistically higher than 2, 4 and 6 lbs Zn/ac applied as a MAP blend.
- MicroEssentials SZ is at least 3X more efficient as a Zn source than a conventional MAP + AS + ZnSO4 blend.

Zinc deficiency symptoms on Check (left) and 6 lbs Zn/ac as a blend (middle) and finally the lack of symptoms for MicroEssentials SZ at 2 lbs Zn/ac (right).