



CORN

MicroEssentials[®] SZ[®] Phosphorus Uptake (Greenhouse Trial) vs DAP and DAP Blend in V6 Corn

Objective

- Quantify the increase of phosphorus uptake with MicroEssentials[®] SZ[®] (12-40-0-10S-1Zn) applied to corn compared to DAP (18-46-0) and DAP + Ammonium Sulfate (AS, 21-0-0-24S) + Zinc Sulfate (ZnSO₄, 17.5-0-0-35.5Zn) blends in V6 corn.

Overview

- Balanced crop nutrition is critical for corn production.
- MicroEssentials SZ supplies nitrogen, phosphorus, sulfur, and zinc in one nutritionally balanced granule.
- The MicroEssentials Fusion[®] technology process creates a unique chemistry that results in increased nutrient uptake and crop yield compared to alternative sources.

Trial Details

CROP: Corn (*Zea mays*)

YEAR: 2023

LOCATION: Sabanci University, Turkey

DATA SOURCE: Dr. Ismail Cakmak

EXPERIMENTAL DESIGN: Pot trials conducted under greenhouse conditions and averaged across two soil types and two fertilizer rates:

- Loam (7.9 pH, 4 ppm P, 0.1 ppm Zn)
- Sandy Clay Loam (7.8 pH, 13 ppm P, 0.2 ppm Zn)
- Phosphorus fertilizer was applied representing a low and high P rate to each soil and balanced among fertilizer sources
- DAP + AS + ZnSO₄ blend was balanced for phosphorus, sulfur, and zinc rates

Summary

- Corn phosphorus uptake was greater with MicroEssentials SZ than any other treatment.
- MicroEssentials SZ treated plants showed an increase in plant dry matter (biomass) when compared to DAP or a DAP + AS + ZnSO₄ blend.
- MicroEssentials SZ treated plants had 39% greater phosphorus uptake at V6 growth stage than plants treated with DAP or a DAP + AS + ZnSO₄ blend.

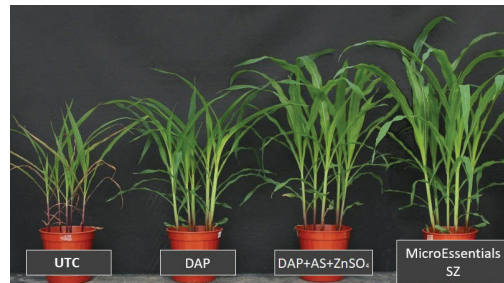
TREATMENTS:

- No phosphorus (UTC)
- DAP
- DAP + AS + ZnSO₄
- MicroEssentials SZ

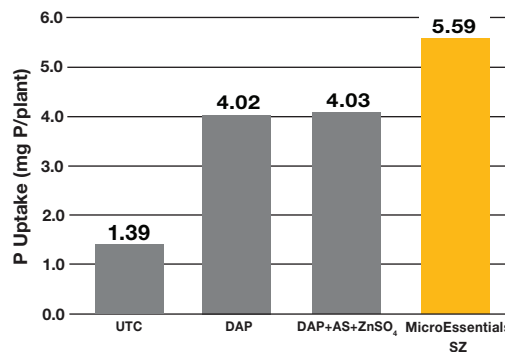
STUDY DETAILS:

- Fertilizers were homogeneously mixed with soil, simulating broadcast and incorporated applications.
- Above-ground dry matter and nutrient uptake was determined on 32-day-old/V6 corn.

Results



PHOSPHORUS UPTAKE BY FERTILIZER SOURCE



MicroEssentials[®]

39%

Increased P uptake with MicroEssentials SZ compared to DAP or a DAP + AS + ZnSO₄ blend at V6.



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Individual results may vary, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.

For more information, go to MicroEssentials.com.