



MicroEssentials® S10® Phosphorus Uptake (Greenhouse Trial)

Objective

- Quantify the increase of phosphorus (P) uptake with MicroEssentials® S10® (12-40-0-10S) applied to corn compared to DAP (18-46-0) and DAP-based blends that supply the same rate of nitrogen (N), P and sulfur (S).

Overview

- Balanced crop nutrition is critical for corn production.
- MicroEssentials S10 supplies N, P and S in one nutritionally balanced granule.
- Two forms of S, sulfate sulfur (immediately available) and elemental sulfur (slowly available), provide season-long S availability.
- MicroEssentials' patented Fusion® technology process creates a unique chemistry that results in increased nutrient uptake and crop yield compared to alternative sources.

Trial Details

Locations and Crop Management:

CROP: Corn (*Zea mays*)

YEAR: 2013

LOCATION: Sabancı University, Turkey

DATA SOURCE: Dr. Ismail Cakmak

EXPERIMENTAL DESIGN: Pot trials conducted under greenhouse conditions on a clay loam soil.

Treatments:

- DAP (18-46-0)
- DAP + ammonium sulfate (21-0-0-24S)
- MicroEssentials S10 (12-40-0-10S)

Study Details:

- All S in the blend was supplied in the sulfate form.
- Fertilizers were homogeneously mixed with the soil, simulating broadcast incorporation.
- Corn above-ground dry matter, P concentration and P uptake were determined 20 days after planting.



23%

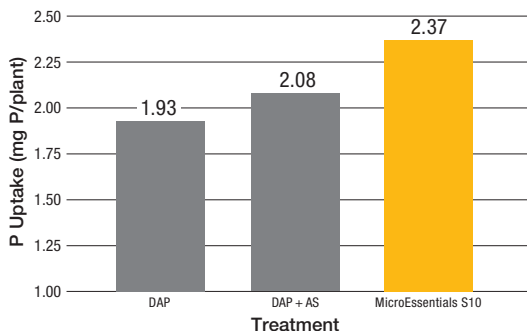
Increased P uptake with MicroEssentials S10 compared to DAP

14%

Increased P uptake with MicroEssentials S10 compared to DAP + AS blend

Results

Phosphorus Uptake by P Fertilizer Source



Measurement of plant dry matter (biomass) and P concentration for DAP, DAP + AS and MicroEssentials S10 treatments.

Parameter	Treatments		
	DAP	DAP + AS	MicroEssentials S10
Dry Matter (g/plant)	0.50	0.53	0.54
P Concentration (%)	0.39	0.39	0.44

Summary

- MicroEssentials S10 increased P uptake by 23% compared to the DAP and 14% compared to DAP + AS.
- MicroEssentials S10 increased P uptake through increases in both plant dry matter (biomass) and P concentration (%).
- MicroEssentials with Fusion technology combines N, P and S into one nutritionally balanced granule and promotes improved P uptake.



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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.