Mosaic® AgriFacts®

SOYBEAN

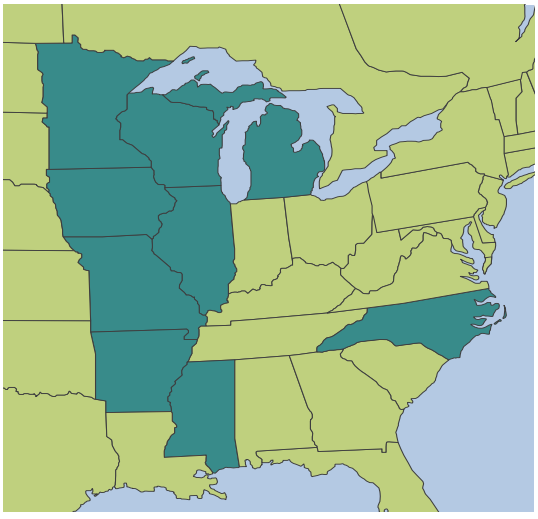
MicroEssentials S10® vs TSP in Soybeans

Objective

- Evaluate the yield response of soybeans to MicroEssentials S10® (12-40-0-10S) compared to Triple Super Phosphate (TSP, 0-46-0).

Overview

- The two forms of sulfur (S) in MicroEssentials ensures that S is available through grain fill. Sulfur is proven to increase soybean grain yields and is important for creating protein, a vital component of grain.
- Soybean nodulation does not begin until the V2–V3 stage, leaving a "nitrogen (N) gap" for the plants. The N in MicroEssentials consistently boosts early root and plant growth compared to phosphorus (P) only sources such as TSP.
- Academic research has shown that in soybeans, P fertilizers that contain N have proven to consistently outyield other P fertilizers that contain no N.
- The N found in MicroEssentials can help soil microbes begin to break down crop residue from previous crops more quickly, leading to the nutrients in that residue being available for the growing crop sooner.



LOCATIONS: 8 trials AR, IA, IL, MI, MN, MS, NC, WI

Trial Details

Locations and Crop Management:

CROP: Soybeans (*Glycine max* L.)

YEAR: 2024

DATA SOURCE: Replicated small-plot field studies conducted by university and/or independent third-party researchers

CROPPING CONDITIONS: All trials conformed to local cropping practices

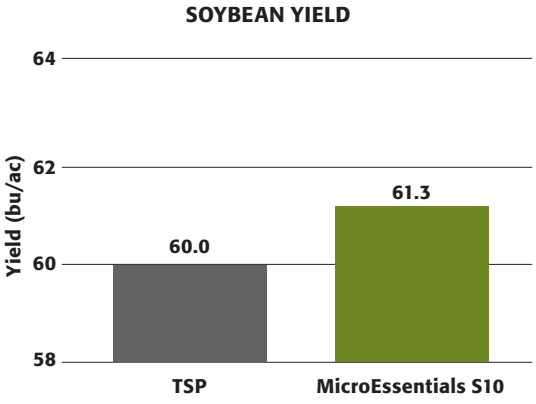
P Rate: 40 lbs P_2O_5/ac applied as MicroEssentials S10 or TSP. Treatment comparisons were balanced for P

K Rate: 60 lbs K_2O applied as MOP (0-0-60)

Application Timing: Preplant

Application Method: Broadcast

Results



Summary

- MicroEssentials increased yield 1.3 bu/ac over TSP averaged across 10 site-years.
- With N, P, and S, MicroEssentials provides complete crop nutrition for soybeans, with uniform distribution, and delivers nutrients more effectively than TSP or TSP blends.
- The small amount of nitrogen that is found in common rates of MicroEssentials has been shown to be advantageous for soybeans, resulting in higher yields than fertilizers with no N.

MicroEssentials®

1.3 bu/ac

Yield advantage for MicroEssentials over TSP in soybeans

Phosphate fertilizers that contain N meet early season needs of soybeans and fuel soil biology

Mosaic®

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.**

SoybFRT13, SoybOFM16, GLXMA-133-2024
ME 1678 5/2025