MicroEssentials® S15™
Seed Safety Canola

Objectives
• Evaluate the seed safety of MicroEssentials® S15™ (13-33-0-15S) compared to MAP (11-52-0) + ammonium sulfate (AS, 21-0-0-24S) at different phosphorus (P) rates when applied with the seed.
• Evaluate the yield response of MicroEssentials S15 compared to MAP + AS at different P rates.

Overview
• MAP + AS is a common P and S fertilizer blend used in canola-growing regions of North America.
• Canola is very sensitive to seed placed in close proximity to P and S fertilizers. Conventional P and S fertilizers increase seed damage due to ammonium nitrogen and especially due to the high salt index of AS.
• MicroEssentials S15 contains N, P and S fused into one nutritionally balanced granule, and the estimated salt index is lower (21.1) compared to AS (68.3).

Trial Details
CROP: Canola (Brassica rapa cv. ‘canola’)
YEARS: 2011–2013
LOCATIONS: 17 locations across the U.S. and Canada
United States – ND
Canada – AB, MB, SK
DATA SOURCE: Field studies conducted by third-party, independent researchers.
EXPERIMENTAL DESIGN: Small-plot RCBD with 4 replications.
CROPPING CONDITIONS:
• N Rate: As recommended and balanced across all treatments.
• P Rate: 0, 17, 33 and 50 lbs P2O5/ac
• K Rate: Applied to entire trial area based on soil test.
• S Rate: Balanced at each P2O5 rate - 0, 7.7, 15 and 22.7 lbs S/ac.
• Application Timing and Method: Fertilizer was applied with the seed at planting.

Summary
• MicroEssentials S15 outyielded MAP + AS by 1.7 bu/ac at 33 lbs and by 2.6 bu/ac at a 50-lb P2O5 rate across all locations.
• MAP + AS had statistically significant lower plant populations than MicroEssentials S15 at 17- and 33-lb P2O5 rates and numerically lower at the 50-lb P2O5 rate.
• MicroEssentials S15 can successfully increase canola yields over MAP + AS when applied at the same P2O5 rate.
• These results demonstrated the additional seed safety that can be achieved with MicroEssentials S15.