Fluid Fertilizer Foundation

Fluid Facts

STARTER/FOLIAR FERTILIZERS IMPROVE CORN/SOYBEAN YIELDS

There is an increasing interest from producers about the potential benefits of foliar application of nutrients as a complement to their fertilization programs to maximize yields. Corn and soybean production under high yield environments may benefit from the combined use of starter and foliar fertilization, including macro and micronutrients. The use of alternative fertilizer application strategies can help to achieve maximum yields and enhance nutrient use efficiency (NUE), particularly under environments with high yield potential. Often a combination of broadcast and band fertilizer applications can provide optimum nutrient uptake in low fertility/low soil test conditions.

Summary Points

- *Average soybean yield across sites was slightly higher when micronutrients were added to the starter fertilizer (Figure 3).*
- *Early corn growth was significantly increased over the control with starter fertilizer, however no additional biomass increase was observed with the addition of micronutrients (Figure 4).*
- *Foliar application of N (derived from methylene urea and triazone) in corn showed average yield increases at all locations in addition to preplant application This suggests a possible additional benefit of foliar applications. Additional studies should evaluate different rates and application timing.*

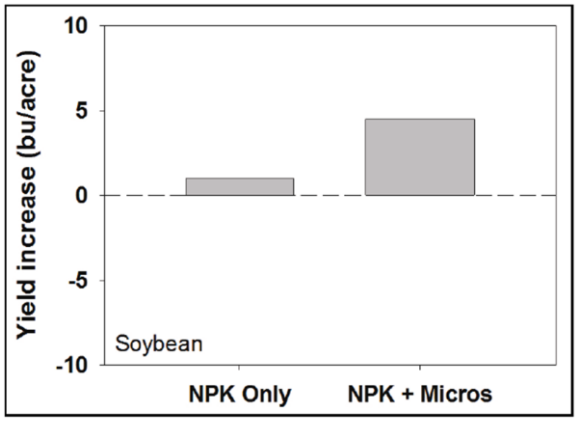

Figure 3. Effect of starter fertilizers with and without micronutrient application on soybean yield increase compared to the control.

Conclusions

- *With the increase in corn and soybean yields due to important genetic improvements, demand for nutrients has also increased*
- *Foliar fertilization could, in some cases, increase nutrient supply at early growth stages when the root system is not well developed.*

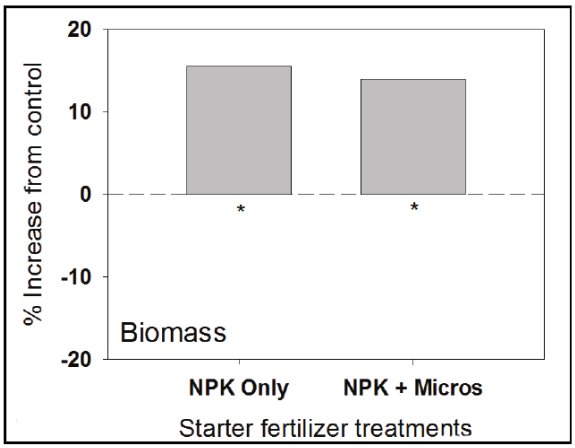

Figure 4. Increase in corn early growth biomass (V6) as affected by starter fertilizer treatments compared to the control. Asterisk (*) indicates statistically significant difference from zero at P≤ 0.05.

Research Credits

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Full paper is available from the Fluid Journal archives:
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