Producer's Cooperative Association in Partnership with Landus Cooperative

Ostara's Crystal Green 5-28-0 with 10% Mg Dry Fertilizer

Product Overview

Crystal Green meets crop demand by releasing nutrients in response to organic acids naturally exuded by roots. As these organic acids solubilize Crystal Green, nutrients become over 90% plant available. This unique solubility ensures your crops have access to the nutrients they need during the critical stages of development. With ongoing access to phosphorus, Crystal Green safely and precisely supplies crops with the nutrients they need to maximize yield, reduce the amount of phosphate applied, and increase return on investment.

PCA's Interaction

Producer's Cooperative Association is currently conducting multiple field trials across Southeast Kansas and Southwest Missouri with regards to the sustainable phosphate product, Crystal Green. These field trials are in both corn and soybeans, with a heavier emphasis within corn production. Our agronomy team has been tracking growth development through vegetative stages as well as grain fill in reproductive stages of corn and the plants response to Crystal Green.

Comparison at V3. Two left plants applied with Crystal Green, two right plants with DAP

Comparison at V5. Two left plants applied with Crystal Green, two right plants with DAP

Comparison at V7. Far left two plants were applied with Crystal Green, other four left plants with DAP

The Breakdown

A 54.51 acre field in Southwest Missouri was split north and south with our field trial equaling 23.02 acres and the control 31.49 acres. We used diammonium phosphate (DAP) as our phosphate source, and a grower standard practice (GSP) recommendation of 70lbs P_2O_5 per acre, 152.17lbs DAP per acre, as our baseline. The conducted trial used the GSP at a 75% rate, with a quarter of that total being Crystal Green; approximately 46.88lbs of Crystal Green blended with 85.60lbs of DAP, equaling 132.47lbs total product. The control was a 39-100-100 blend of DAP and Potash, approximately 150lbs of DAP and 167lbs Potash applied per acre. Varying the price of DAP, there is roughly $5 in fertilizer savings per acre. Using a corn commodity price of $4.25 per bushel, a 3 bushel yield increase would provide roughly $18 worth of additional profit per acre.

Ear size comparison at R3

Cross section of Crystal Green ear

Cross section of DAP applied ear

Root development comparison at V9