



**CrystalGreen®**  
5-28-0 with 10%Mg

**RESEARCH:**  
P SOURCE AFFECT ON LEACHING  
AND GRASS ESTABLISHMENT

## Two-Year Replicated Study Results Show Significant Difference in P Leaching and Grass Establishment with Crystal Green as a Phosphorus Source

### TURFGRASS MANAGERS CAN REDUCE PHOSPHORUS RATES AND RETAIN GRASS ESTABLISHMENT OVER TIME

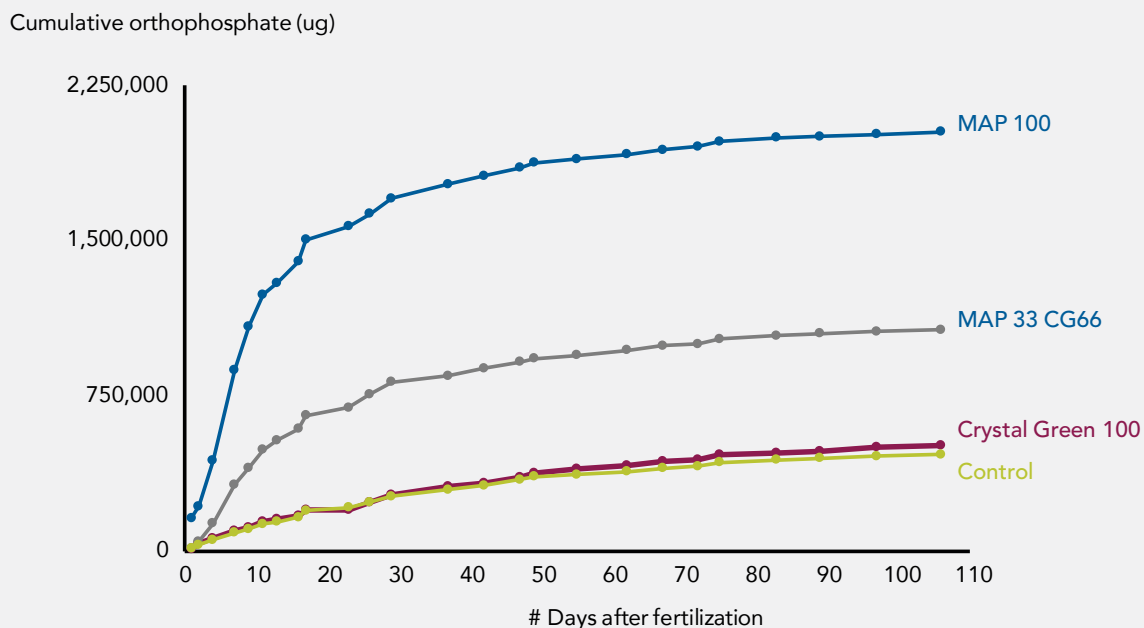
Auburn University Turfgrass and Nutrient Management Professor, Elizabeth Guertal, Ph.D, performed a two-year replication study comparing the application of conventional phosphorus fertilizers and the application of Crystal Green® on Bermuda grass. Results show that when the phosphorus source is Crystal Green, there is a significant difference in P-retention in soil, resulting in reduced leaching. With more P available in the soil, her team saw positive results on turfgrass establishment. This could allow turfgrass managers to reduce phosphorus fertilization rates and still get the same grass establishment over time. Further, the study showed when the phosphorus source has the ability to remain in the soil profile, turfgrass managers have a means to protect the environment and supply key nutrients to their plants.

### CRYSTAL GREEN PREVENTS LEACHING OF PHOSPHORUS INTO SOIL

Cumulative orthophosphate in leachate as affected by phosphorus source shows Crystal Green is considerably less prone to leaching when compared to water soluble P sources.

VARIETY: Bermuda Grass

RESEARCHER: Elizabeth Guertal



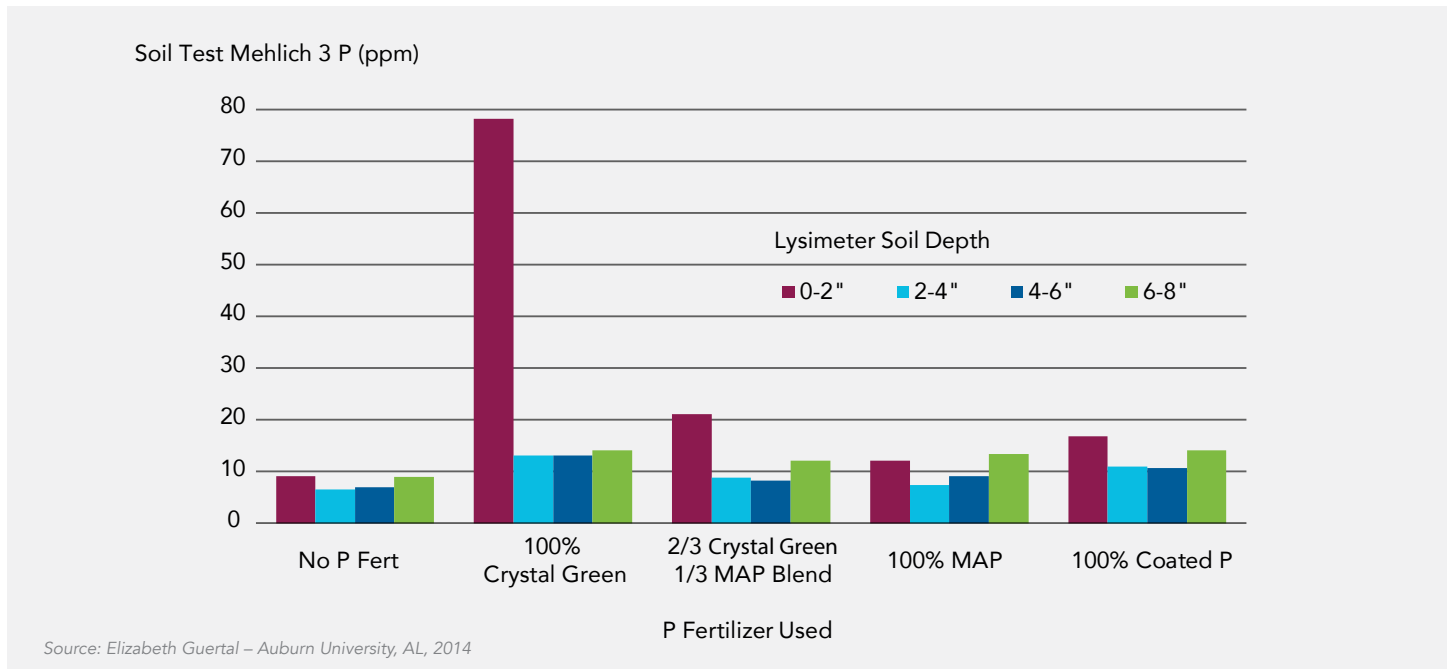
Source: Elizabeth Guertal – Auburn University, AL, 2014-2015

## CRYSTAL GREEN REMAINS IN ROOT ZONE WEEKS AFTER APPLICATION

Extractable soil test – as affected by sampling depth and P source – following eleven weeks of Bermuda grass establishment, shows Crystal Green remains in the soil profile for many weeks following application, providing long lasting supply of key nutrients.

VARIETY: Bermuda Grass

RESEARCHER: Elizabeth Guertal



## THE GRASS REALLY IS GREENER

Crystal Green is the first Root-Activated™ nutrient technology to offer phosphorus, with nitrogen and magnesium, in one continuous release granule. Its plant-available formulation offers a season-long release of nutrients that minimizes tie-up and reduces the risk of leaching and runoff.

Unlike conventional water-soluble phosphorus fertilizers, Crystal Green granules use a citrate soluble mode of action activated by organic acid production. As the roots produce citrates, Crystal Green responds with a healthy release of phosphorus, fertilizing turf on demand. As plant demand decreases, nutrient release from Crystal Green is reduced, minimizing excess phosphorus in the soil and lowering the risk of tie-up. Crystal Green provides the nutrients that turf needs all season long.



HERE IS A TOOL THAT  
SUPERINTENDENTS CAN USE AND  
KNOW THEY ARE PROTECTING THE  
ENVIRONMENT, YET STILL SUPPLYING  
NUTRIENTS TO THE PLANT.

- ELIZABETH GUERTAL, Ph.D.  
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Crystal Green® is sustainably produced by:

