



**OSTARA**  
CrystalGreen®

## **GROW VIBRANT, HEALTHY TURF THAT HAS STRONGER ROOTS AND EARLIER HARVEST TIME**

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.

### **HOW CRYSTAL GREEN WORKS**

Crystal Green is Root-Activated™; as the roots release organic acids, such as citrates, Crystal Green responds with a healthy release of phosphorus to feed the plants. As plant demand decreases, nutrient release from Crystal Green is reduced; minimizing excess phosphorus in the soil and lowering the risk of tie-up, leaching, and runoff. Crystal Green also contains 10% magnesium, which is essential for capturing the sun's energy for photosynthesis, enhancing the natural, vibrant color of the sod.

“WITH CRYSTAL GREEN WE ARE ACHIEVING MAXIMUM TENSILE STRENGTH ABOUT FOUR MONTHS EARLIER THAN WE USED TO.”

- MATT HOLLOWAY  
Production Head, Quantico Creek Sod Farms, Hebron, MD

### **SEE THE DIFFERENCE WITH CRYSTAL GREEN**

Crystal Green is a 99.6% pure crystalline granule phosphate fertilizer. Unlike conventional water soluble phosphate fertilizers, Crystal Green has continuous release capabilities; it lasts all season long and feeds sod on demand. This improves sod health, provides better seed establishment, and facilitates earlier harvest time.

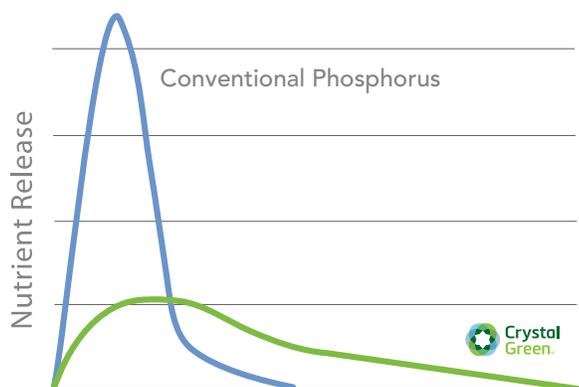
### **DEEPER ROOTED TURF THAT STANDS UP TO ALL**

Each granule of Crystal Green delivers phosphorus, plus nitrogen and magnesium for up to 30% more root length and density — for improved tensile strength and durability.



## NUTRIENT RELEASE CURVE

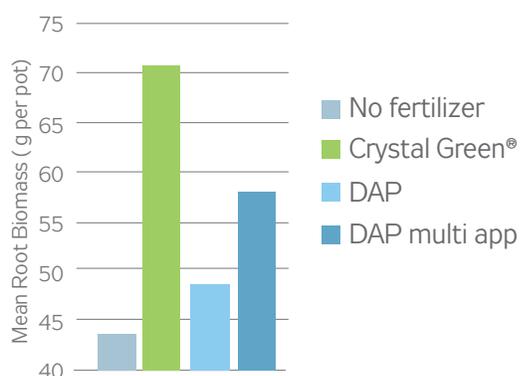
Crystal Green vs. Conventional Phosphorus



Source: Accelerated Nutrient Release Study, Applied Chemical Technologies (2012)

## GET LONGER, STRONGER ROOTS

A study conducted by Cornell University investigated the effect of Crystal Green and DAP on the root mass of Kentucky bluegrass eight months after seeding.



The study compared a single application of Crystal Green at seeding (2 lbs P<sub>2</sub>O<sub>5</sub> per 1000 sq. ft.) with a single application of DAP at seeding (2 lbs P<sub>2</sub>O<sub>5</sub> per 1000 sq. ft.) and multiple applications of DAP over the course of the eight-month study (0.25 lbs P<sub>2</sub>O<sub>5</sub> per 1000 sq. ft. per month).

The results showed that turf treated with a single application of Crystal Green had a root mass that was nearly **22% larger** than eight metered applications of DAP and approximately **45% larger** than a single application of DAP. Stronger roots means optimized nutrient uptake, improved stress recovery, and better stand.

## PERFORMANCE & BENEFITS

- ▶ Early seedling establishment
- ▶ Denser root mass
- ▶ Increased stress tolerance
- ▶ Improved tensile strength
- ▶ Reduced risk of runoff and leaching
- ▶ Improved color and stand

Crystal Green is recognized by: 

## GUARANTEED ANALYSIS

Total Nitrogen (N) .....	5%
5% ammoniacal nitrogen	
Available Phosphorus (P <sub>2</sub> O <sub>5</sub> ) .....	28%
Magnesium (Mg) .....	10%

Derivation: Magnesium ammonium phosphate hexa-hydrate (MgNH<sub>4</sub>PO<sub>4</sub>•6H<sub>2</sub>O)

## APPLICATION RECOMMENDATIONS

(Ideal rate depends on soil type, sod type and climate.)

### New Seeding and Sprigging

- Rates from 4-8 lbs of Crystal Green / 1000 sq. ft.
- For a nutrient boost upfront, provide 2/3 of the required P<sub>2</sub>O<sub>5</sub> as Crystal Green, combined with 1/3 from a quick release P source.

Ostara Nutrient Division

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Crystal Green® is sustainably produced by:



**OSTARA**