



Crystal Green®
5-28-0 with 10%Mg

Turn Problematic Struvite Into Premium, High Value, Market-Ready Fertilizer

The true differentiator in the Ostara process; Crystal Green® is the only continuous release, Root-Activated™ phosphorus fertilizer ready for commercial sale.

RECOVERY FOR BENEFICIAL REUSE

Created entirely from renewable resources using Ostara's Pearl® process, Crystal Green is a true innovation in fertilizer technology.

Proven to reduce nutrient leaching, Crystal Green can significantly reduce non-point source pollution, closing the loop on the phosphorus cycle.



How Crystal Green Works:

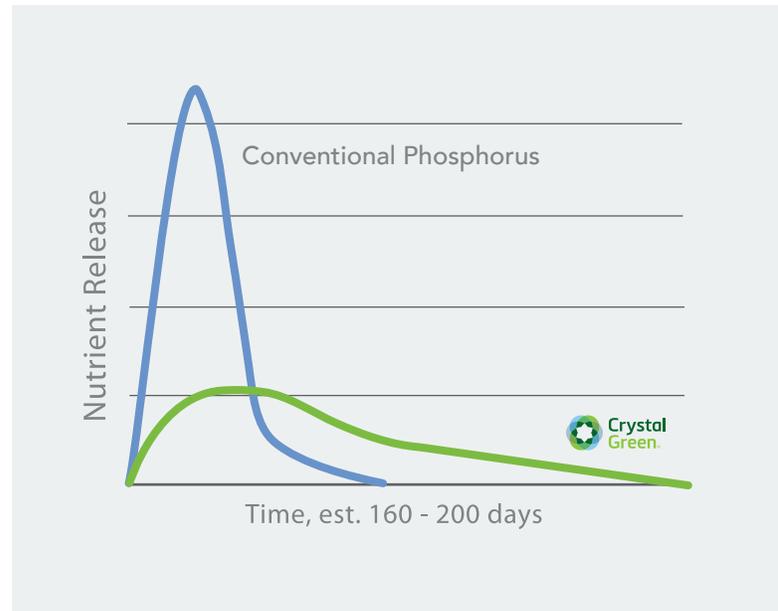
Root-Activated™ Nutrient Technology

Crystal Green is the first high-grade commercial fertilizer with phosphorus, nitrogen and magnesium, to offer an alternative to conventional phosphorus sources. Conventional phosphorus fertilizers dissolve quickly into the soil. Plants, unable to absorb all the nutrients at once, typically leave 75% of fertilizer behind, increasing risks of nutrient runoff.

Crystal Green's unique crystalline composition releases nutrients throughout the growing season. Activated by the organic acids plants release to help their roots absorb nutrients, Crystal Green's Root-Activated™ response supplies growing plants with the food they need on-demand. When nutrient requirements are filled, Crystal Green stops releasing, minimizing excess phosphorus in the soil and significantly reducing leaching.

Nutrient Release Curve

Crystal Green vs. Conventional Phosphorus



Market-Ready Sizes

Ostara’s controlled crystallization process creates four distinct sizes which are used in the turf, ornamental, horticulture, and agriculture markets. The granule size and shape allows Crystal Green to be used seamlessly in fertilizer blends; fitting into the existing agriculture machinery, as a direct alternative to traditional mined phosphate fertilizers.



Guaranteed Analysis

Total Nitrogen (N)	5%
5% ammoniacal nitrogen	
Available Phosphorus (P ₂ O ₅)	28%
Magnesium (Mg)	10%
Derivation:	
Magnesium ammonium phosphate hexa-hydrate (MgNH ₄ PO ₄ •6H ₂ O)	

Heavy Metal Concentrations (PPM)

Heavy Metal	AAPFCO Limits	CrystalGreen.
Arsenic	364	< 2
Cadmium	280	< 0.4
Lead	1,708	< 0.2
Molybdenum	1,176	< 4
Nickel	7000	< 2
Zinc	11,760	< 2

Features + Benefits

- ✓ Available in market-ready sizes, Size Grade Numbers (SGN): 90, 150, 300, 450
- ✓ Solution to combat non-point source nutrient pollution
- ✓ Ready for sale as a standalone product or in commercial blends
- ✓ Available in 2,000-lb totes or bulk
- ✓ Guaranteed revenue stream for wastewater treatment plants (WWTPs)

Salt Index

	DAP	MAP	TSP	Crystal Green.
Salt Index	29	27	10	7.7



Ostara Nutrient Recovery Technologies, Inc. helps protect precious water resources by changing the way cities around the world manage nutrients in wastewater streams. The company’s Pearl® and WASSTRIP® technologies sustainably transforms phosphorus and nitrogen recovered from municipal and industrial water treatment facilities into a high-value, eco-friendly fertilizer, sold and marketed by Ostara as Crystal Green®. Crystal Green’s unique Root-Activated™ mode-of-action minimizes phosphorus tie-up in the soil, thus enhancing crop yield and performance, and significantly reducing nutrient leaching and runoff. For more information, visit www.ostara.com and www.crystalgreen.com

Crystal Green is an Association of American Plant Food Control Officials (AAPFCO) approved source of slow release nutrients, an eligible source of phosphorus under the USDA Conservation Stewardship Program, and a 4R Nutrient Stewardship Partner.