



Crystal Green®
by OSTARA

Fall-Applied Crystal Green® Avoids Phosphate Loss

Protect Your Fertilizer Investment with the Most Efficient Phosphate Fertilizer on the Market

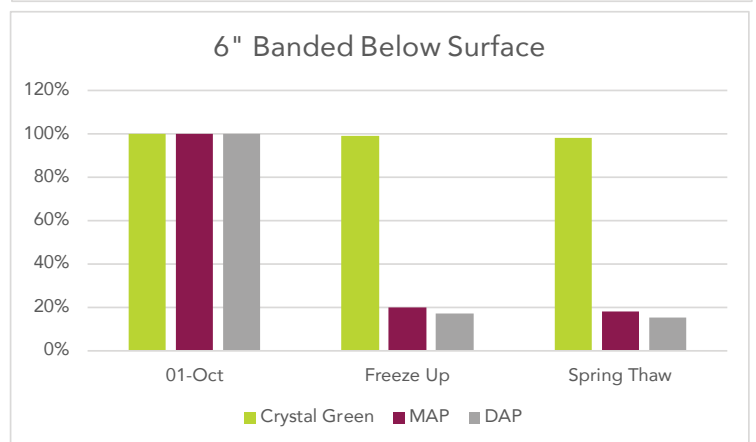
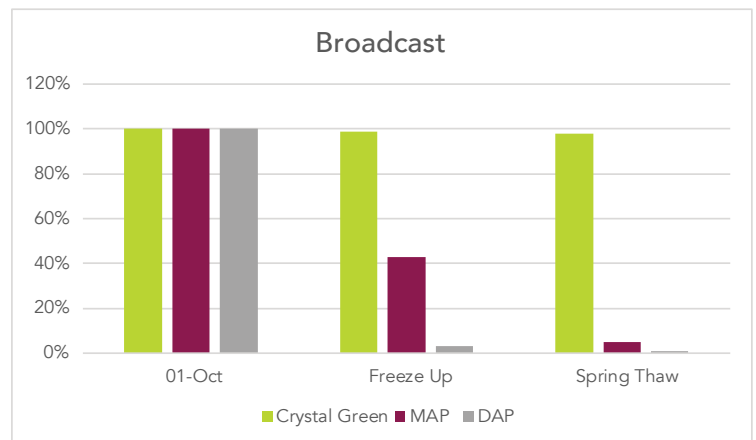
Typically, farmers apply phosphate fertilizers in the fall to reduce spring workload, minimize compaction and with a belief that their fertilizer will be available in the spring. However, up to 80% of fall-applied conventional water-soluble phosphate fertilizer can be lost to soil tie-up, runoff and leaching.

Crystal Green (5-28-0 with 10% Mg) is only sparingly water soluble and not subject to losses seen from fall applications of conventional water-soluble phosphate fertilizers. Crystal Green is 100% organic acid soluble, and over 90% plant available, and will only release critical nutrients when naturally activated by root exudates, not from rainfall, irrigation or snow melt. Nutrients from Crystal Green will remain plant available throughout the season and whenever crops need them. Due to its unique organic acid solubility, Crystal Green avoids typical conventional phosphate losses from fall applications ensuring the phosphate you applied in the fall is available when you need it in the spring.

Putting Crystal Green to the Test

North Dakota State University conducted a granular phosphate fertilizer degradation trial in 2017-2018 to compare how much fall-applied Crystal Green, MAP and DAP would be recovered and available the following spring. Nylon bags containing known amounts of Crystal Green, MAP and DAP were left on the soil surface to simulate a broadcast application or buried at six inches in September 2017. Nylon bags were recovered, dried and weighed at freeze-up (October 31) and spring thaw (April 23).

This research shows across the trial, 94%-98% of Crystal Green is recoverable and in the same condition the following spring and has not reacted in the soil solution. Only 1-15% of DAP was recovered and 5-18% of MAP was recovered the following spring. Recovered and unrecovered MAP and DAP will continue to react in the soil environment throughout the growing season. Over 80% of the fall-applied MAP and DAP can tie-up with antagonistic cations (Ca, Fe and Al) in the soil, rendering it unavailable to the plant. Soluble phosphate in the soil environment can also be lost to runoff and leaching.



Crystal Green is the only granular phosphate fertilizer on the market that remains over 90% available through winter and during the growing season.

