



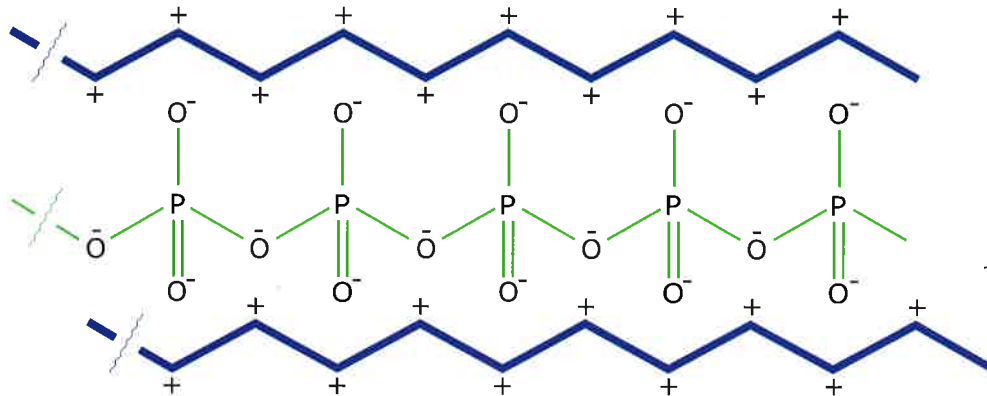
**The Phosphate Advantage**



# The Phosphate Advantage

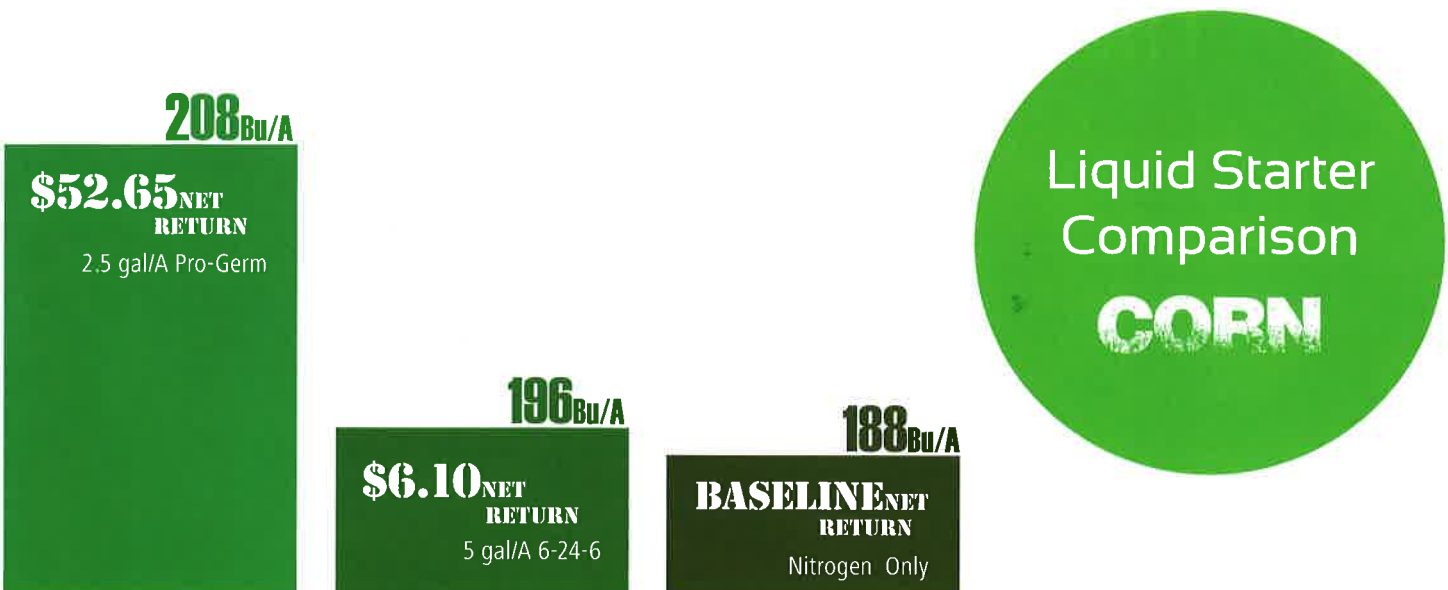
Phosphorus (P) is considered a primary crop nutrient, along with nitrogen and potassium. Phosphorus is involved in photosynthesis, respiration, energy storage and transfer and many other processes in the plant. Phosphorus improves the quality of fruit, vegetable, and grain crops, and is vital to seed formation. Phosphorus uptake is a continuous process during the active growth period of plants. Phosphorus is absorbed by plants throughout the growing season, with much of the plant's phosphorus need occurring during periods of fast vegetative growth and fruit production. Since phosphorus is needed at all stages of plant growth it is imperative that the nutrient be in a plant available form throughout the growing season.

Most phosphate fertilizers combine, or complex, with other minerals in the soil to create compounds that are not usable to plants. This can happen in as little as 4 to 8 days. Pro-Germinator™ contains both orthophosphate, which is immediately available to the plant, and long-chain polyphosphates that are protected by flavonol chelation technology resulting in season long phosphorus availability.



*The flavonol protects the polyphosphate in Pro-Germinator from fixation loss.*

The combination of ortho- and polyphosphates, along with its flavonol chelation technology allows Pro-Germinator™ to provide more nutritional performance per gallon than conventional fertilizers. That results in having excellent crop nutrition at lower application rates than other phosphate products. When applied at recommended rates, Pro-Germinator™ is cost effective, on a per acre basis. Pro-Germinator™ should be the backbone of all crop fertility programs, potentially providing the greatest return on phosphorus investment.



Source: AgroSpray Research Farm, 2015 field research results. \*Net return is based on yield increase compared to the nitrogen only treatment minus the cost of the fertilizer. Corn price used for this calculation was \$3.50/bu and fertilizer prices were estimated average retail prices. If you have any questions about soil testing and developing a crop nutrition program please contact an AgroLiquid Retail Partner, Sales Account Manager, or Field Agronomy Manager.



## The Phosphate Advantage

An experiment was conducted at the AgroLiquid *North Central Research Station* to determine phosphate availability of Pro-Germinator™ compared to other liquid phosphate fertilizers. Pro-Germinator™, 9-18-9 orthophosphate, and 10-34-0 ammonium polyphosphate were applied at 20 lb P<sub>2</sub>O<sub>5</sub> per acre. Plant usable phosphorus in soil solution was measured at various times throughout the growing season.



*Soil sampling depth was 4" and 20-60 days after planting.*

Average plant usable phosphorus in solution provided by Pro-Germinator™ was considerably higher than what was provided by conventional liquid fertilizers. The data shows that Pro-Germinator™ provides a steady, usable supply of phosphorus well in to the growing season when the crop demand for phosphorus is at its peak.

(Source: AgroLiquid 2015 Research Report)



# Pro-Germinator®

Pro-Germinator® is used primarily for the application of phosphorus, but is partnered with nitrogen, potassium, and micronutrients for maximum performance. Pro-Germinator®, through proprietary manufacturing technology, contains both ortho-phosphate and carbon-protected polymer phosphate to provide readily available and controlled-release phosphorus with minimal danger of tie-up in the soil.

## DIRECTIONS FOR USE

The quality and composition of Pro-Germinator® allows placement directly into the root zone with little risk of tissue damage, giving Pro-Germinator® greater efficacy and more application flexibility.

Pro-Germinator® can be applied:

- with versatile planter placement options
- broadcast or banded over the top of the seed zone
- as a top-dress or side-dress application
- as a foliar treatment
- through fertigation
- with crop protection products

Broadcast application may reduce Pro-Germinator® efficiency.

## Technical Data

Weight Per Gallon @ 68° F	11.20 lbs/ gal
Specific Gravity	1.342
pH @ 68° F	6.02
Freezing Point	10° F

## Composition

### Guaranteed Analysis:

Total Nitrogen	9.00%
1.00% Nitrate Nitrogen	
7.00% Ammoniacal Nitrogen	
1.00% Urea Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )	24.00%
Soluble Potash (K <sub>2</sub> O)	3.00%
Iron (Fe)	0.10%

*Derived from: Ammonium Nitrate, Ammonium Sulfate, Urea, Super Phosphoric Acid, Potassium Polyphosphate, Ferrous Sulfate*

For proper agronomic application rates suitable for your geographical area or the maximum allowable non-nutrient application rates per acre, consult a trained soil specialist at AgroLiquid. Not sold in the state of California.

[www.agroliquid.com/product-information](http://www.agroliquid.com/product-information)

Manufactured By:  
AgroLiquid  
3055 W. M-21 Saint Johns, MI 48879  
Division Of COG Marketers, Ltd.  
800-678-9029

