

## Two PureGrade Liquid Starters to Choose From:



**GoldStart is a low-salt plant food high in orthophosphates. It can be safely banded in-furrow during planting or foliar applied.**

*Available in these popular grades: 9-18-9, 6-24-6, 5-15-15, 3-18-18, 10-10-10 and custom blends*



**Diamond is a low-salt plant food that is 100% orthophosphate. It can be safely banded in-furrow during planting or foliar applied.**

*Available in these popular grades: 9-18-9, 3-18-18, 5-15-15, 10-10-10 and custom blends.*

### PureGrade Liquid Starters are User Friendly

- More accurate and uniform placement in or near the seed furrow than dry fertilizer.
- Non-corrosive. Saves replacing rusty planter parts.
- Excellent storability.
- Easy to use. Planter kits apply PureGrade accurately into the seed furrow.
- Nutrients are immediately available for plant use regardless of soil temperature.
- Easy to add and apply certain pesticides labeled for in-furrow application.
- Low salt index for maximum seed safety.

Manufactured only by

**Nutra-Flo® Company**

Sioux City, Iowa 51106  
[www.PureGrade.com](http://www.PureGrade.com)

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# Managing Fertilizer Application for Profit with PureGrade Liquid Plant Food

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# Banding Fertilizer Reduces Costs and Increases Yields

Because of rising input costs and environmental concerns many growers are looking for ways to use fertilizer more effectively. This brings up the question of which fertilizer practices to continue and what needs to be done differently to increase yields and profits and still trim fertilizer use.

Growers can increase fertilizer efficiency by banding PureGrade products in or close to the seed furrow. This guarantees maximum availability to the crop.

It is important to use a PureGrade starter fertilizer program under the following conditions:

- **Early planting with cooler soil temperatures.**
- **No-till or any minimum-till system where substantial amounts of crop residue are left on the surface creating a lower soil temperature.**
- **Low P soil tests.**
- **Late planting. Starter helps push crops to mature before frost.**
- **Wet soils.**
- **For more uniform maturity and lower grain moisture levels at harvest.**

PureGrade starter fertilizer plus additional nitrogen is all that is needed to maximize yields and profits for many producers. For those fields that need additional P and K there are ways to save big money without reducing yield.



## Soil Test

Soil testing reduces costs and increases profit by revealing which nutrients are needed and which ones are not. Don't waste money broadcasting phosphorus or other immobile nutrients on high testing fields.

## Banding Phosphorus is More Efficient Than Broadcast

Broadcast phosphorus rates can be reduced by one-third to one-half if the P is banded. Potassium rates can also be reduced. Broadcast P is the least efficient method of application for this non-mobile nutrient. Banding puts nutrients into the root zone and reduces nutrient fixation.

- **Understand "sufficiency" guidelines.** Universities use this method to make P recommendations based on soil tests. It takes into account the amount of nutrients the soil will supply. Nutrients supplied by the soil is fertilizer that does not need to be purchased.
- **Avoid the "nutrient replacement" method.** This method ignores soil test results. It is wasteful and expensive. It underestimates fertilizer needs at low soil test levels and overestimates at high test levels.
- **Reduce broadcast P & K when soil test levels are high.** When fertilizer costs are high, growers can lower their P & K "bank account" without sacrificing yields.
- **Use common sense.** High-testing soils should have zero or near zero recommendations for broadcast fertilizer. Only starter fertilizer needs to be used in these situations.
- **Split nitrogen applications** and apply as close as possible to the time of maximum crop need. Rates can be reduced by 10 to 20% compared to fall application.



**Use a PureGrade starter to help crops overcome the stress of early planting and cold soil temperatures.**

**On low testing soils band apply PureGrade in or near the row and supplement with liquid or dry fertilizers according to soil tests and sufficiency guidelines.**



## PureGrade Liquid Fertilizers

### Low Salt Index

Raw materials used in manufacturing PureGrade products are chosen for their low salt index. These salt index values are made available to customers.

### No Yield Drag in Dry Weather

Higher amounts of nutrients are taken up by corn from liquid "pop-up" starters, including PureGrade, even when fewer pounds of nutrient are applied.

### Advanced Technology

Application technology for in-furrow and 2x2 placement of liquid starter fertilizers is more advanced. Fertilizer placement tubes are available for any type of planter or drill.

### Accurate Application

Liquid fertilizer planter application systems are very accurate. Both electric and ground drive pumps are easily controlled from a controller in the tractor cab without additional equipment. Changing the rate of application of PureGrade is easy and can be done on the go. Liquid systems can apply low rates more precisely. Planters can be easily retrofitted with liquid systems at a reasonable cost.

### High-P Produces Drier Corn

When using PureGrade starters, one to 2% drier grain is possible due to the available phosphorus. Money saved in drying costs can help pay for the PureGrade application. Another way to look at it –harvest can begin 3 or 4 days sooner. That could be just enough time to complete the harvest before snow falls.