

# PureGrade Liquid Plant Food

## 6-24-6 Best in University Trials

Corn research at Kansas State University shows that using 6-24-6 as an in-furrow starter outperforms other liquid starters and fertilizer placement methods. Reasons for the superior performance were:

- **Low salt index**
- **Fertilizer close to the seed**
- **Added potassium**

The results of this project suggest that 6-24-6 makes an excellent row-placed liquid starter fertilizer for corn.

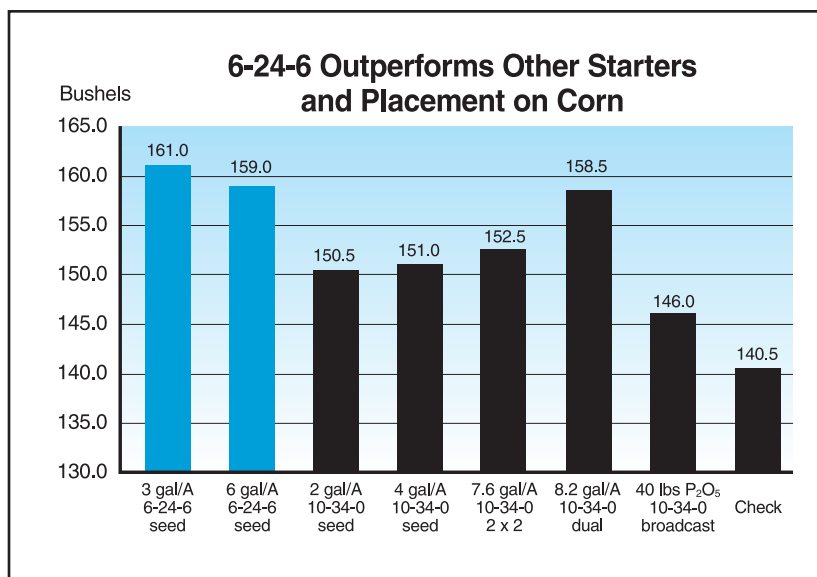
### Low salt index

6-24-6 is manufactured without chloride to keep salt indexes low. This characteristic distinguishes it from other types of NPK solutions. Additionally, it contains potassium, which gives it an advantage over 10-34-0 and similar products that don't contain K. Using a low-salt starter, like 6-24-6, allows the liquid to be placed more safely in the row.

### The closer the better

The study shows that the closer we place P-containing starter fertilizer to the young seedlings the better we generally do with small amounts. The 3 and 6-gallon treatments of 6-24-6 in the seed furrow outperformed all other treatments.

Many growers use 10-34-0 in the seed furrow as a low cost starter fertilizer program. In this experiment 10-34-0 improved the yield compared to the check, but didn't perform as well as the 6-24-6 treatments. Two gallons of 10-34-0 has roughly the same N and P as 3 gallons of 6-24-6. The N and P in 4 gallons of 10-34-0 roughly equal the N and P in 6 gallons of 6-24-6. The 6-24-6 yielded 10 bushel/acre more than the 10-34-0 treatments and about 20 bushels better than the check!



**Figure 1.** 6-24-6 placed in the seed furrow outperforms other common starter fertilizer programs. Two year average. Bray P<sub>1</sub> was 12 ppm. Data from Kansas Fertilizer Research 2000, Report of Progress 868, Kansas State University at Rossville irrigated site west of Topeka.

### Potassium boosts yields

The addition of potassium to a row placed starter fertilizer is an important consideration. We see yield advantages to having K in the starter even on high testing K soils. Only the potassium phosphate form of potassium should be used in the row for maximum seed safety. 6-24-6 is made with potassium phosphate and has a salt index of only 11.5. 10-34-0 has a salt index of 20.0 and has no K.

### Final thoughts

Many growers who are attempting high yields on low P testing soil may want to combine the 6-24-6 seed placed fertilizer with dual placed P from 10-34-0 for full season feeding. This method provides early season growth response from the starter plus mid-season feeding from the deeper dual placed band.

Additionally, this study should convince anyone that broadcast P should only be used as a last choice. Note that 3 gallons of 6-24-6 containing about 8 lbs. of P<sub>2</sub>O<sub>5</sub> and placed into the seed furrow was far more effective in raising corn yield than 40 lbs. of P<sub>2</sub>O<sub>5</sub> broadcasted on the surface.