

## News Column

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### **In-furrow fertilizer for wheat**

Wheat is considered a highly responsive crop to band-applied fertilizers, particularly phosphorus (P). Application of P as starter fertilizer can be an effective method for part or all the P needs. Wheat plants typically show a significant increase in fall tillers and better root development with the use of starter fertilizer (P and N). Winterkill can also be reduced with the use of starter fertilizers, particularly in low P testing soils.

Phosphorus fertilizer application can be done through the drill with the seed. In-furrow fertilizer can be applied, depending on the soil test and recommended application rate, either in addition to or instead of, any pre-plant P applications. The use of dry fertilizer sources with air seeders is a very popular and practical option. However, other P sources (including liquid) are agronomically equivalent and decisions should be based on cost and adaptability for each operation.

When applying fertilizer with the seed, rates should be limited to avoid potential toxicity to the seedlings. Most fertilizer sources contain salts which can be toxic to seedlings. However, phosphorus (P) fertilizer contains little if any salt, conversely Nitrogen (N) & Potassium (K<sub>2</sub>O) fertilizers contain salts. When placing fertilizer in direct contact with wheat seed, producers should use the guidelines listed below.

### **Suggested maximum rates of fertilizer in pounds (lbs.) per acre Nitrogen N + Potassium K<sub>2</sub>O to apply directly with the wheat seed (No urea containing fertilizers).**

15-inch row spacing, medium-to-fine soil textures, 16 lbs. on course textures or dry soils 11 lbs.

10-inch row spacing, medium-to-fine soil textures 24 lbs. on course textures or dry soils 17 lbs.

6-8-inch row spacing, medium-to-fine soil textures 30 lbs. on course textures or dry soils 21 lbs.

Air seeders that place the starter fertilizer and seed in a 1- to 2-inch band, rather than a narrow seed slot, provide some margin of safety because the concentration of the fertilizer and seed is lower in these diffuse bands. In this scenario, adding a little extra N fertilizer to the starter is less likely to injure the seed - but it is still a risk.

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