

High Fertilizer Prices: Don't Expect Them To Go Away Soon

Advantage fluids: read on as to why.

There is one safe assumption we can make in this business: fertilizer prices are high and that is not a short-term problem. In the long term, soil fertility levels will still have to be maintained in order to increase yields. Thus, owing to prices, fertilizer placement will become even more critical. Agricultural producers need to capitalize on the benefits of fluid placement with an understanding of the values of soil fertilizer/soil volume ratio, its impacts on nutrient availability and eventually yields. We can't afford to let yields slip and pin our hopes on an increase in crop prices.

In the short term, we're probably going to be closer to acute levels in

crop fertilization. Finding the easiest and most efficient way to apply fertilizer will no longer be an option. Variable rate application will become more of the rule rather than the exception. Fertilizing every crop may become more commonplace.

Bottom line: increasing yields is our best hope for it is the only way growers have of minimizing per unit production costs. And this is where those involved in fluid fertilizer technology have a distinct edge. What follows may read as a primer course in some ways, but it never hurts to go over again what may hazily drop to the back parts of our minds – especially at a time when we can't afford to let that happen!

Easy to apply

Fluid fertilizer is easy to band in any configuration. It can be applied at different depths in the same application. It is still the best way to apply the correct ratio of nitrogen (N) and phosphate (P) to grow corn (and other crop) roots.

Fluid banding results in a continuous "tube" of nutrients, while dry materials result in a discontinuous distribution of individual particles. The farther apart the individual particles, the less chance a root has to find it. The effects of dry fertilizer spacing (MAP) are shown in Figure 1.

Fluids also lend themselves to 1) variable-rate application, 2) continuous bands (Figure 2) with very small separation if any among drops, 3) the correct NP ratios for starters, 4) different application depths with less power requirements, and 5) to ready adoption of RTK auto-steer systems. The fluid fertilizer band also minimizes fixation and maximizes availability as shown in Figure 3.

We have also learned from studies that the best way to place fertilizer in the 4- to 8-inch layer of soil is to physically place it there. And this is where fluids shine. The power requirement to place a fluid 4 to 8 inches below the soil is 10 to 20 hp less than it is to place the same amounts of nutrients as a dry fertilizer that deep!

Versatility

Another very distinct advantage of fluids is that they can be easily mixed with pesticides and micronutrients and are adaptable to foliar applications, all lending to efficiency and good economics.

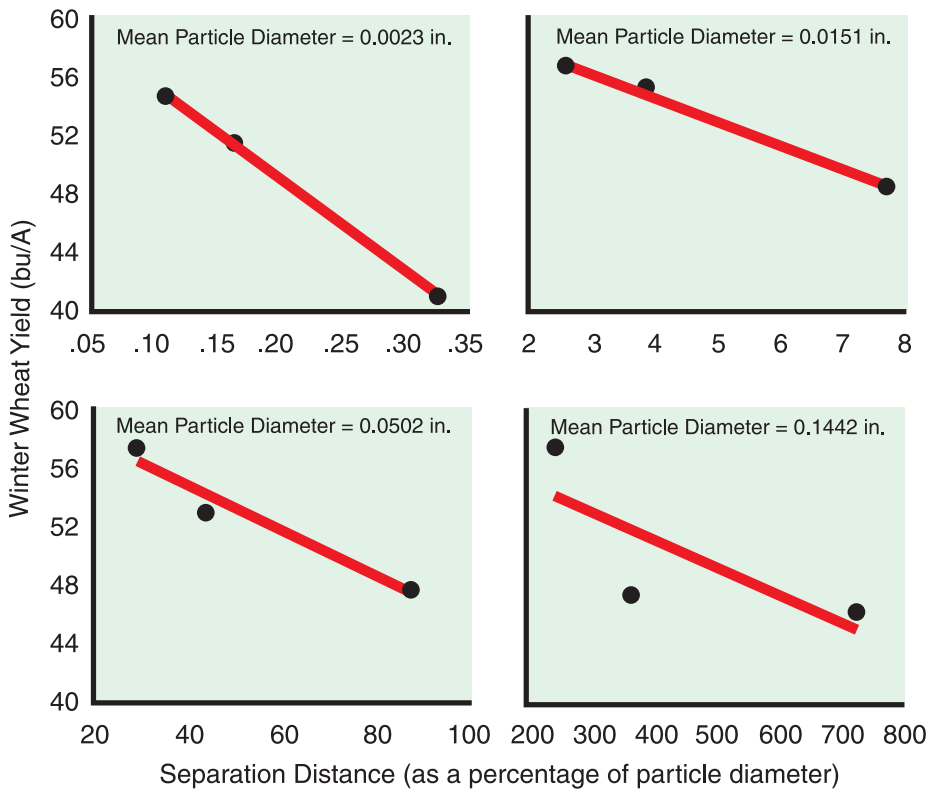


Figure 1. Yield effects of dry fertilizer particle spacing (MAP).

Trends

We're seeing a trend in parts of the Midwest toward more corn and fewer soybeans. Growers are finding fluids are the easiest and best way to apply N-P starter fertilizers in the right ratio. More and more growers are realizing that the less nutrient applied, the more important concentration becomes to minimize fixation and maximize availability –two areas where fluids excel.

A major portion of this material is taken from a recent FFF school presentation by Lance Murrell of Lance Murrell Consulting.

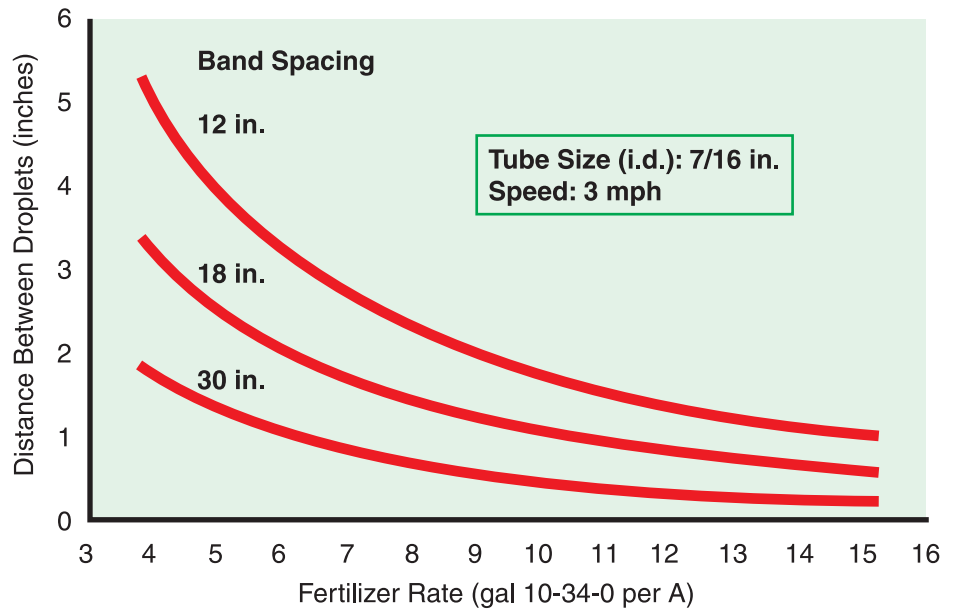


Figure 2. Distance between droplets in continuous fertilizer bands.

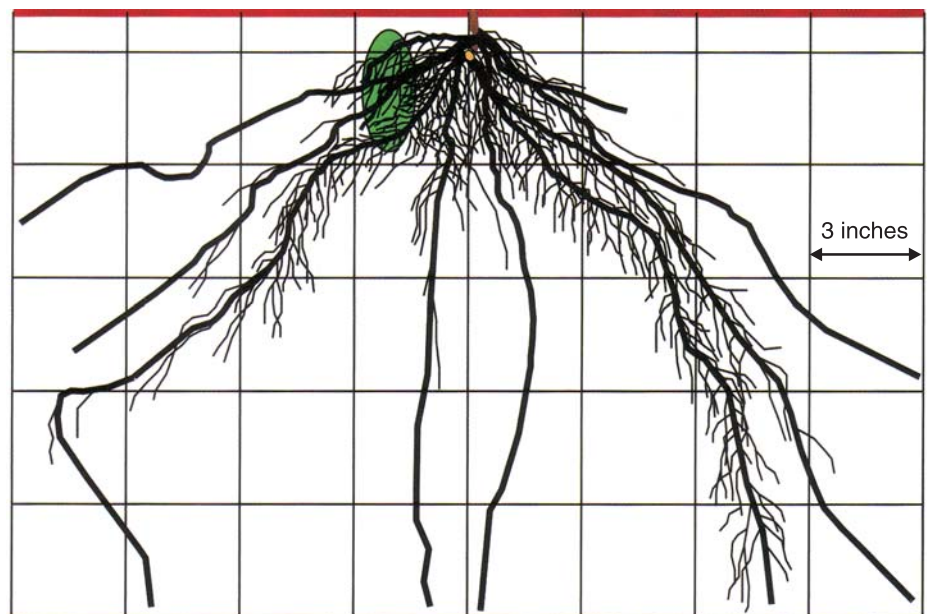


Figure 3. Effects of fluid fertilizer band in minimizing fixation and maximizing availability in corn roots at V5.