# **Fluid Facts**



## WHY FLUIDS ?

Top 10 lists are ever popular in our culture today – so what are the top 10 advantages of fluid fertilizers? Ask a handful of farmers and dealers and you likely will come up with a handful of different answers. There are so many, and the advantages so varied, that it is not possible to come up with a single top 10 list that everyone can agree to! Some advantages benefit everyone. For others their appeal depends on the specific situation involved. Typical benefits noted include things such as: a wide variety of fertilizer placements, homogeneous blends, best adapted for split applications, high nutrient use efficiency, handling conveniences, provides environmental benefits, required for fertigation, best suited for variable rate application, and many other benefits that give fluids a distinct economic appeal. While it is not possible to name the definitive top 10 benefits of fluids that apply in all situations, these top five advantages of fluid fertilizers should broadly fit most everyone. Let's start with number five!

**#5 Logistics.** There is no doubt that fluid fertilizers excel in providing efficient logistics, which allows for the necessary timeliness of crop production practices required for efficient crop production.

**#4 ..... Right Rate.** Average application rates within a field are only one aspect of the 'right' rate. Application uniformity across the application swath and across the field (or portion of field) is equally important.

Fluid fertilizers are homogeneous, with each drop having the same composition as the next drop. On the other hand, once blended, solid fertilizers immediately begin the process of unblending, segregating and becoming increasingly non-uniform during each step of the application process.

An often overlooked aspect in achieving the 'right' rate is the concept of achieving continuous crop nutrient bands in preplant and starter band applications. The probability of roots contacting a band and proliferating in the band will be higher if the fertilizer is deposited in a continuous, unbroken nutrient band as opposed to intermittent bands resulting from dry fertilizer granules.

## Fluid Top 5 Advantages

**#3** ..... Flexibility. Because fluid fertilizers have unparalleled versatility and adaptability as compared to other fertilizer, flexibility is often the first thing that comes to mind when discussing the advantages of fluid fertilizers.

Fluids are versatile and fit all crop nutrient placements, application methods, and nutrient timings – a characteristic not shared with any other class of fertilizer products.

**#2** ..... Agronomics. Fluid fertilizers, in conjunction with the previously discussed benefits associated them, have a long documented research history of providing high nutrient use efficiency (NUE), high yields, and improved environmental stewardship.

**#1 ..... Value**. The benefit of fluid fertilizers is high value – the overall benefit relative to costs. And the totality of the benefits associated with fluid fertilizers far outstrips any difference in the purchase price of specific crop nutrients.

#### High Value Provides For Prosperity – Low Cost Does Not!

### **Author Credit**

Dr. Dale Leikam is President of the Fluid Fertilizer Foundation in Manhattan, KS.

Full paper is available from the Spring 2014 Fluid Journal http://www.fluidjournalonline.com

> FLUID FERTILIZER FOUNDATION <u>fluidfertilizer@fff.kscoxmail.com</u> fluidfertilizer.com