

WHY UAN SOLUTION?

The popularity of urea-ammonium nitrate solution (UAN) in the U.S. has increased steadily and substantially over the past 50 years. While direct applied anhydrous ammonia dominated the overall U.S. nitrogen (N) marketplace through the 1980s, UAN and anhydrous ammonia have each had about the same market share (nutrient basis) in the U.S. over the past decade. While UAN consumption is not as high in other places across the globe as in North America, the global popularity of UAN continues to increase, especially in Europe and the former Soviet Union.

Summary Points

There are many reasons the popularity of UAN has continued its steady increase over the years:

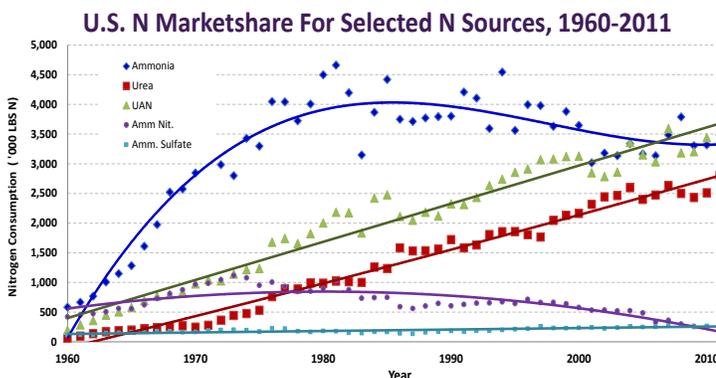
- **Agronomics:** Obvious crop nutrient source for 4R Nutrient Management.
- **Fertilizer Placement & Timing:** Keys to Nutrient Use Efficiency (NUE).
- **Uniformity/Accuracy:** Accurate rate, uniform distribution, no segregation, ease of calibration.
- **Adaptability/Flexibility:** Adaptable to wide range of production systems and flexible to fit limitless application needs.
- **Combining Applications:** With pesticides, field operations & micronutrients, via irrigation, etc.
- **Logistics:** Easier and logistically more efficient to pump, store, transfer and apply.
- **Safety:** Fewer safety concerns/regulations.
- **Numerous additional situation specific benefits.**

Conclusions

Over the years there have been many discussions about what N source is the best. Of course, it does depend on the specific field situation being addressed, but in general, what N source would be favored?

Specialized equipment is required for ammonia application and that equipment is costly and not easily adapted to many desired fertility program options. Also, the fact that ammonia is limited to direct application below the soil surface is a huge limitation relative to other N sources. And while urea is the dominant global N fertilizer, that is a reflection of limited infrastructure and equipment for other N sources that are not yet readily available in many regions of the world. Urea is also subject to potential volatilization loss under certain conditions and equipment for subsurface application is not as affordable or common.

As a result, if we could have only one N source in the marketplace, it is an easy choice: UAN solution. Why? In addition to issues related to safety, storage, handling, and equipment requirements, the main reason UAN is much more a universal N source than other N sources in the marketplace can be summed up in one phrase: *unsurpassed adaptability and flexibility!*



Article Credits

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Full paper is available from the Fluid Journal archives:
<http://www.fluidfertilizer.com/PastArt/2012.html>

