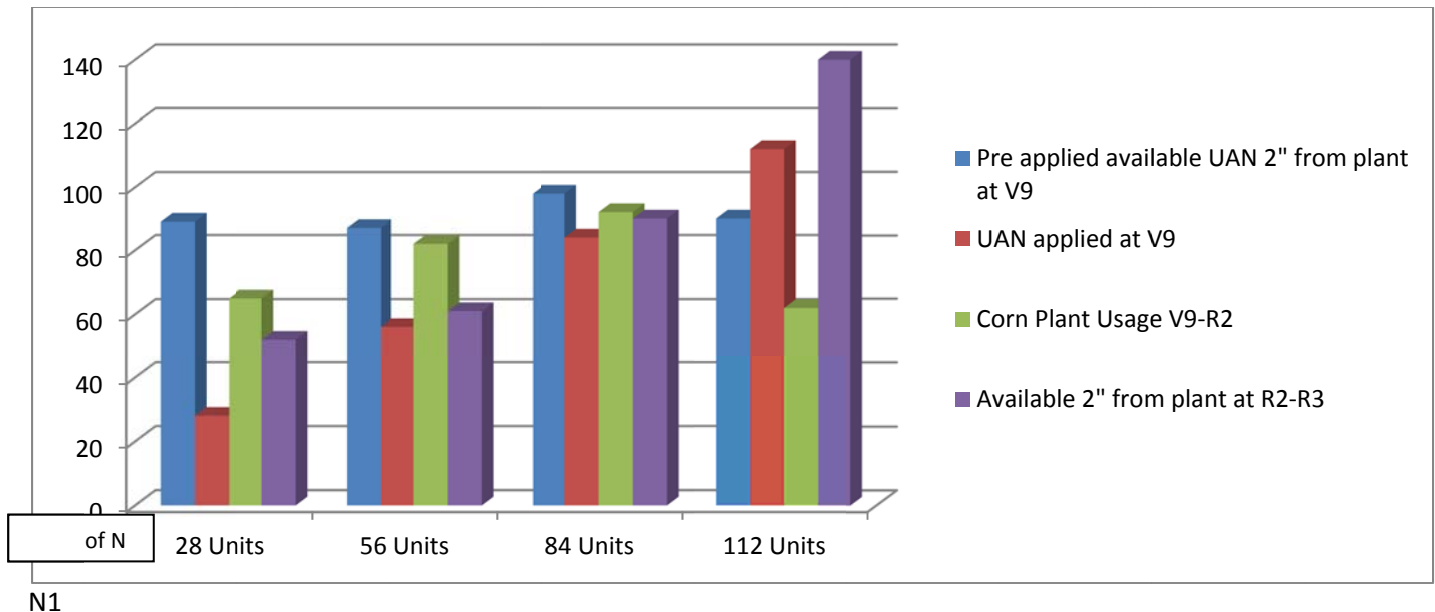


Y Drop™ Liquid Fertilization Tool “Right Place”

2012 Complimentary UAN Nitrogen Side-dress Research



A commonly asked question is if UAN is surface applied with Y Drop™ will the Nitrogen de-nitrify or will it be available for the plant?

Purpose of study: Evaluate the “Right Place” of complimentary side-dress UAN applied with Y Drop™ at the “Right Time”, 2”- 3” along side of the corn plant

Research evaluates the availability of the surface applied UAN with Y Drop™ as a complimentary application to a traditional nitrogen program on a particular year

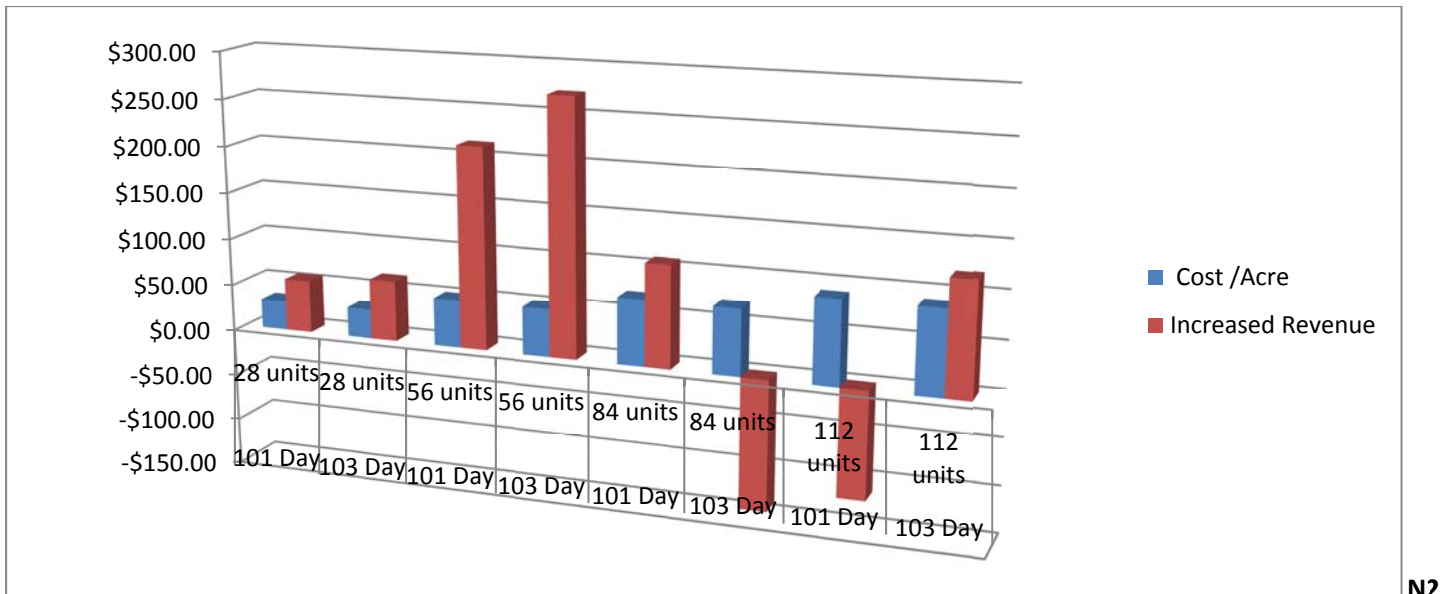
Variables:

- Less than 2.5 “ rain during growing season *All nitrogen data was gathered by soil tests probes from 2”-10” deep and the results analyzed by Midwest Labs in Omaha, NE. * A Stabilizer was used including 2 modes of action with the side-dress UAN *28% UAN was applied with Y Drop™ 2” to 3” from the crop row
- *All soil tests were taken at exactly the same location before and after the side-dress application *Nitrogen usage by the plant is estimated *Application time of UAN was V9 * Studies were generated in North Central Iowa No insecticide was added to the UAN
- * Application rates were Plot 1-28 units, Plot 2- 56 units, Plot 3-84 units and Plot 4-112 units
- **Blue line represents the first soil test 2” from the crop row at V8 before the side-dress application**
- **Green line represents the approximate amount of nitrogen the corn plant utilized during V9-R3**
- **Purple line represents the soil tests at R2 at exactly the same location as the Pre- side-dressed soil test exemplifying the possible units of Nitrogen at R3 available for the corn plant to finish setting dry matter**

Summary: UAN applications with Y Drop™, including a reliable stabilizer demonstrates very little nitrogen loss during an extremely dry season from V8-R2. The nitrogen applied with Y Drop™ appears by the science of soil tests to be available for the corn plants to set dry matter or (Yield More). Technology is reducing de-nitrification of the UAN by using a stabilizer with the UAN. As advised all evaluations of available UAN was the result of proper soil testing and analyzation using Midwest Labs in Omaha, NE. The limiting factor in this study was “Water”. If more water was available during these Plant Vegetative and Reproductive stages the results in Nitrogen usage and Corn Yields may have varied.

Y Drop™ Liquid Fertilization Tool “Right Amount”

2012 Complimentary UAN Nitrogen Side-dress Research



One of the most commonly asked Questions is how much UAN do I apply with Y Drop™ as a compliment to my regular Nitrogen program??

Purpose of study: Evaluate the “Right Amount” of complimentary side-dress UAN applied with Y Drop™ at the “Right Place”, 2”- 3” along side of the corn plant

Research evaluates the net revenue increase or decrease by increasing the volume of UAN with the Y Drop™ tool as a complimentary management program compared to a traditional nitrogen management program on a particular year

Variables:

- Less than 2.5 “ rain during growing season *Corn price valued at \$6.00 / bushel * Stabilizer used
- included 2 modes of action *UAN price valued at 365.00 / ton
- *Application cost is valued at \$12.00 / acre *Application time was V9
- Studies were generated in North Central Iowa * No insecticide was added to the UAN

Summary: UAN applications with Y Drop™ applied on an extremely drought environment displayed the limiting factor “Water”. In Mass Flow it still takes water to move Nitrogen into the plant regardless of the form that the nitrogen is in. Lower volumes of UAN applied at V9 displayed a good response to yield with large increases of revenue over costs. Larger amounts of UAN did not substantially increase yields over the smaller application rates decreasing the net revenue on a 2012 dry season. More available water could have changed the results of this study. 64% of the decrease of revenue portion of the chart displayed involved the higher application rates, and was contributed to the additional cost of the UAN. The previous charts (N1) displayed the Nitrogen still remained in the soil at corn R3. Extreme Dry Weather and Heat obviously affected water availability needed to move the additional nitrogen into the plants.