

Nitrogen Stabilizer Study

CORN

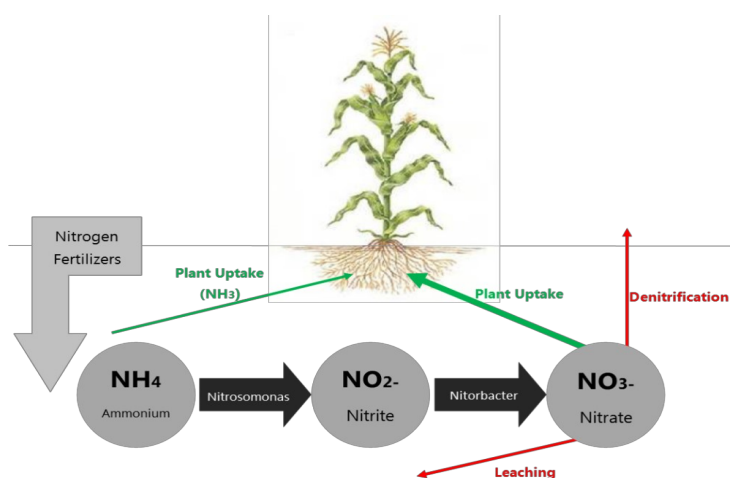
PURPOSE:

To evaluate and understand the performance and ROI of various forms of Nitrogen Stabilizers in UAN 28%. Products applied at V5 with a standard coulter applicator.

V5 Treatment	Final Stand Count	Percent Moisture	Test Weight	BU. / A.	BU. / A. Difference	ROI
Control: 16 gal. UAN 28%	33,667	21.3	55.2	185.5	--	--
UAN + 16 oz. Humika	34,333	20.8	55.1	192.9	+ 7.4	+ \$21.31
UAN + 1 qt. Liquid Growules	33,333	21.0	54.3	191.2	+ 5.7	+ \$20.00
UAN + 6 oz. Cetain™	34,333	21.1	55.6	190.1	+ 4.6	+ \$12.51
UAN + 1.5 gal. Thio Sulfate	32,333	21.2	54.6	190.4	+ 4.9	+ \$10.51
UAN + 6 oz. Instinct II	33,333	21.2	55.5	189.1	+ 3.6	+ \$4.90
UAN + 2 qt. Flame	33,667	21.3	54.6	186.9	+ 1.4	+ \$0.40

Corn \$3.86/Bu. - Instinct II \$72.00/gal. - Flame \$10.00/gal.

Thio Sulfate \$5.60 /gal. - Liquid Growules \$6.00/gal. - Cetain™ \$112.00/gal. - Humika \$58.00/gal. (individual results may vary.)



OBSERVATION:

This was our largest study in the 2017 Research. There are multiple forms of Nitrogen Stabilizers available, with different modes of stabilizing. In this study, we observed 3 different modes of stabilizers: Bactericides, Sulfur, Carbon. Carbon stabilizers showed a higher ROI due to a yield gain, but mainly lower input cost. Carbon works in creating a catalyst between leachable forms of N and the soil, also creating an energy source for important species of bacteria needed to convert nitrogen fertilizers to plant available forms. Flame, Humika™, Liquid Growules, and Cetain™ are all products in the carbon category. Instinct II is the bactericide in the study, which showed a positive ROI. It works by slowing the nitrosomonas and nitrobacter's ability to convert nitrogen fertilizers to plant available nitrates. Thio Sulfate is the source of sulfur used to study the sulfurs effectiveness on controlling pH around the liquid nitrogen. Lowering the pH slows the conversion process, allowing N to stay attached to the soil longer.

