

DESIGN: Randomized Complete Block Design, 4 replicates per treatment

RESEARCHER(S): Data compiled and submitted by Dr. Glen Harris of University of Georgia. Write up of results by Dr. John D. Bailey, Timac Agro USA.

OBJECTIVE

The current study was conducted to determine the effects of Excelis Maxx treated UAN on final grain yield in corn compared to other nitrogen stabilizers.

INTRODUCTION

Excelis Maxx is a fertilizer additive that is more than just a stabilizer. It is designed to protect urea-based fertilizers from various loss pathways. It contains NBPT, DCD, LCN Complex, and other proprietary technology that controls volatility, denitrification and leaching. With the addition of our patented root biostimulant (Rhizovit) and organic acids, Excelis Maxx enhances nutrient availability and stimulates root growth and nutrient uptake.

MATERIALS AND METHODS

Excelis Maxx was applied at 25 oz/ton of liquid UAN and compared to competing stabilizers including Agrotain at 2 qts/ton, Agrotain Plus at 15 lbs/ton, and Nutrisphere at 2 qts/ton. Nitrogen rates were 120 lbs N/ac, except for UAN 200 which received 200 lbs N/ac. Starter fertilizer provided an initial 20 lbs N.

KEY FINDINGS

+60 bu/ac
Excelis Maxx vs.
Untreated Control
at 120 lbs N/ac

DETAILED RESULTS

Corn grown with **Excelis Maxx treated UAN** showed the highest average yield of all treatments receiving 120 lbs N/ac at 196 bu/ac. This was 60 bu/ac higher than the untreated Control plots (Table 1). Excelis Maxx performed better than other stabilizers at the same rate of nitrogen. Volatility loss was a limiting factor in this study, since untreated urea only yielded 136 bu/ac. The stabilizers generally reduced this yield loss and showed higher yields than untreated urea. **Although the highest yields were attained with 200 lbs of N/ac, after accounting for the additional cost of the 80 more units of N, gross revenue was increased when using Excelis Maxx. This suggests an improvement in nitrogen use efficiency.** This increase in efficiency may be attributable to the addition of other proprietary technology in Excelis Maxx (e.g., Rhizovit and organic acids) which are known to improve nutrient availability and uptake.

Table 1. Grain Yield, Gross Revenue, and Net Revenue in corn fertilized with 32% UAN treated with various stabilizers*

Treatment	Grain Yield (bu/ac)	Yield Difference vs. Control (bu/ac)	Gross Revenue vs. Control @ \$3.50/bu (\$/ac)	Net Revenue (Gross – cost of fertilizer)
Excelis Maxx	196	+60	\$686.00	\$644.19
Agrotain	184	+48	\$644.00	\$602.19
Agrotain Plus	185	+49	\$647.50	\$605.69
Nutrisphere-N	190	+54	\$665.00	\$623.19
UAN 200**	202	+66	\$707.00	\$637.31
Untreated Control	136	-	\$476.00	\$434.19

*All fertilizer was applied side-dress @ V6.

**UAN 200 = 200 units of N. All other treatments received 120 units of N.