

## Effects of Excelis Maxx on grain yield in corn fertilized with a low rate of nitrogen from UAN (2nd Year)

Trial ID: 55-J (PA) - Pennsylvania State University

**HYBRID:** Pioneer 1498HR

**DESIGN:** Replicated plots, 5 per treatment

**RESEARCHER(S):** Data compiled and submitted by Pennsylvania State University. Write up of results by Jordan Martin, CCA and 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 at a low rate of nitrogen (90 lb/ac) and with no pop-up or side-dress application.**

### 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.

It is well known that the effectiveness of nitrogen stabilizers depends upon the rate of applied nitrogen. At high rates of nitrogen, there appears to be little advantage to N-stabilizers. However, at low to moderate rates of nitrogen, they appear to be useful.

### MATERIALS AND METHODS

Excelis Maxx was applied at 25 oz/ton of liquid UAN and compared to competing stabilizers, including: Agrotain Plus at 3 qts/ton, NZONE at 2 qts/ton, N-Ergize at 2 qts/ton, Nutrisphere-N at 2 qt/ton and untreated fertilizer (Control). **In order to determine differences in stabilizer effectiveness at low rates of nitrogen, 90 lb/ac nitrogen was applied without any additional fertilizer either as a starter or side-dress.**

### KEY FINDINGS

**+5.4 bu/ac**  
**Excelis Maxx vs.**  
**Untreated Control**

## DETAILED RESULTS

Corn grown with **Excelis Maxx treated UAN** showed the highest average yield of all treatments at **158.2 bu/ac**. This was **5.4 bu/ac** higher than the untreated Control plots, resulting in the **highest returns per acre (see Table 1)**. Volatility loss was not a limiting factor in this study since untreated urea performed better than some of the other stabilizers (see Table 1). Excelis Maxx's formulation includes other technology (Rhizovit biostimulant) that substantially enhances nutrient availability, root growth, and uptake. **This innovation is likely the reason for the higher yields since no other stabilizer has this technology.**

**Table 1: Treatments, Grain Yield and Gross Revenue (2<sup>nd</sup> Year)**

Treatment	Grain Yield (bu/ac)	Yield Difference vs. Control (bu/ac)	Gross Revenue/ac @ \$3.50/bu
<b>Excelis Maxx</b>	<b>158.2</b>	<b>+5.4</b>	<b>\$553.70</b>
NZONE Maxx	156.1	+3.3	\$546.35
Agrotain Plus	155.7	+2.9	\$544.95
N-Ergize	147.1	-6.0	\$514.85
Nutrisphere-N	146.5	-5.7	\$512.75
Untreated Control	152.8	-	\$534.80