

# PROTECT YOUR NITROGEN INVESTMENT

AGROTAIN®

Nitrogen loss through ammonia volatilization can be a serious problem impacting yield potential and return on investment. AGROTAIN® nitrogen stabilizer is proven to control loss from ammonia volatilization, ensuring that your nitrogen investment remains readily available for plant uptake.

## NITROGEN LOSS IS REAL

Research studies prove that nitrogen loss due to ammonia volatilization can be significant (up to 40%) when urea or UAN is not adequately incorporated.

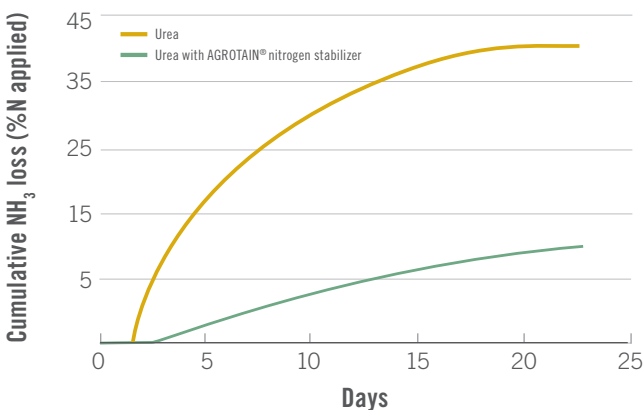
“Adequate incorporation” means more than 0.5 inches of rain or irrigation or mechanical incorporation into the soil of more than 2 inches deep.

Volatilization takes place when the urease enzymes break the urea molecule into ammonia gas – which can be lost to the air. This occurs in both warm and cold temperatures.

## NITROGEN LOSS DUE TO AMMONIA VOLATILIZATION

With untreated urea, up to 40% of nitrogen was lost due to ammonia volatilization.

With AGROTAIN treated urea, cumulative loss due to ammonia volatilization was under 10%.



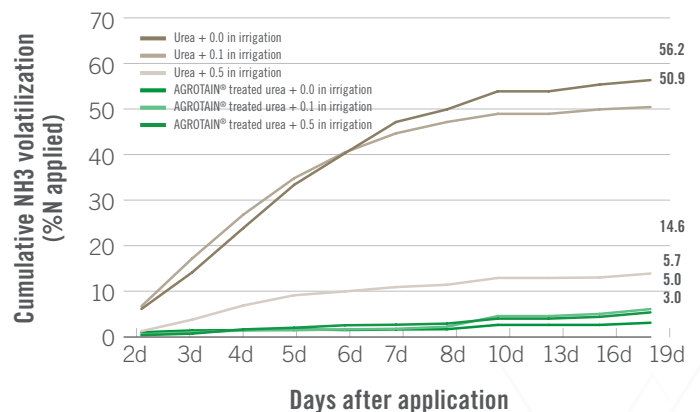
Sources: Franzen et al., 2010; Kelly, 2009; Holcomb et al., 2010; and Holt, 2008.

Neither the research institution nor the individual researcher endorse or recommend any product or service.

## EFFECT OF IRRIGATION ON AMMONIA VOLATILIZATION

With untreated urea, 0.5 inches of irrigation was required to reduce loss due to ammonia volatilization from approximately 50% to 15%.

With AGROTAIN treated urea, cumulative loss due to ammonia volatilization was less than 6% even after 19 days of measurement regardless of how the irrigation/rainfall was applied.



Field study  
Average study temperature: 45° F  
Nitrogen rate of 100 lbs N/acre

AGROTAIN applied at label rate  
Source: Horneck, 2010.  
Oregon State University.

The underlying data was provided by Oregon State University under a Research Trial Financial Support Agreement with Koch Agronomic Services, LLC and neither Oregon State University, nor the individual researchers referenced, endorse or recommend any product or service.

# PROTECT YOUR NITROGEN, PROTECT YOUR YIELDS

When there isn't enough nitrogen available for plants during their major growth period, it means lost yield potential. AGROTAIN<sup>®</sup> nitrogen stabilizer is proven to optimize yields in situations where nitrogen loss is a limiting factor.



**AVERAGE CORN YIELD  
BENEFIT WITH AGROTAIN<sup>®</sup>  
+20 BU/ACRE**



**AVERAGE WHEAT YIELD  
BENEFIT WITH AGROTAIN<sup>®</sup>  
+4 BU/ACRE**



**AVERAGE RICE YIELD  
BENEFIT WITH AGROTAIN<sup>®</sup>  
+510 LBS/ACRE**

## FORMULATIONS

AGROTAIN stabilizer comes in a variety of formulations to meet the needs of your specific operation.

### AGROTAIN<sup>®</sup> ADVANCED 1.0

An innovative, patented liquid formulation with optimized cold-weather handling properties and quicker drying time when applied to urea. The proprietary formulation allows for a reduced application rate, minimizing the potential for buildup and allowing retailers to treat faster and store less product.

<b>UREA</b>	2 qts. per ton
<b>UAN (28-32%)</b>	1 qt. per ton

### AGROTAIN<sup>®</sup> DRI-MAXX

This highly concentrated, patented dry formulation of AGROTAIN stabilizer offers improved handling characteristics and better flowability. This product adheres to the urea granules without adding additional moisture to the blend, resulting in minimal buildup.

<b>UREA</b>	2.5 lbs. per ton
<b>UAN (28-32%)</b>	1.25 lbs. per ton

### AGROTAIN<sup>®</sup> ULTRA

AGROTAIN ULTRA stabilizer is a liquid formulation urease inhibitor that protects against ammonia volatilization. It can be blended with urea or UAN.

<b>UREA</b>	3 qts. per ton
<b>UAN (28-32%)</b>	1.5 qts. per ton

## TESTIMONIAL:

“AGROTAIN ADVANCED 1.0 is easy to use and it provides excellent coverage on urea. The product dries on urea incredibly fast, especially compared to other competitive products we have used that can make the urea wet and difficult to handle. Because AGROTAIN ADVANCED 1.0 dries so quickly, we don't see buildup on our blender, belts or in our air machines, even in humid weather.”

### NICK CASTRO

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