

SIDE-DRESS APPLICATIONS**Nitrogen Loss Facts**

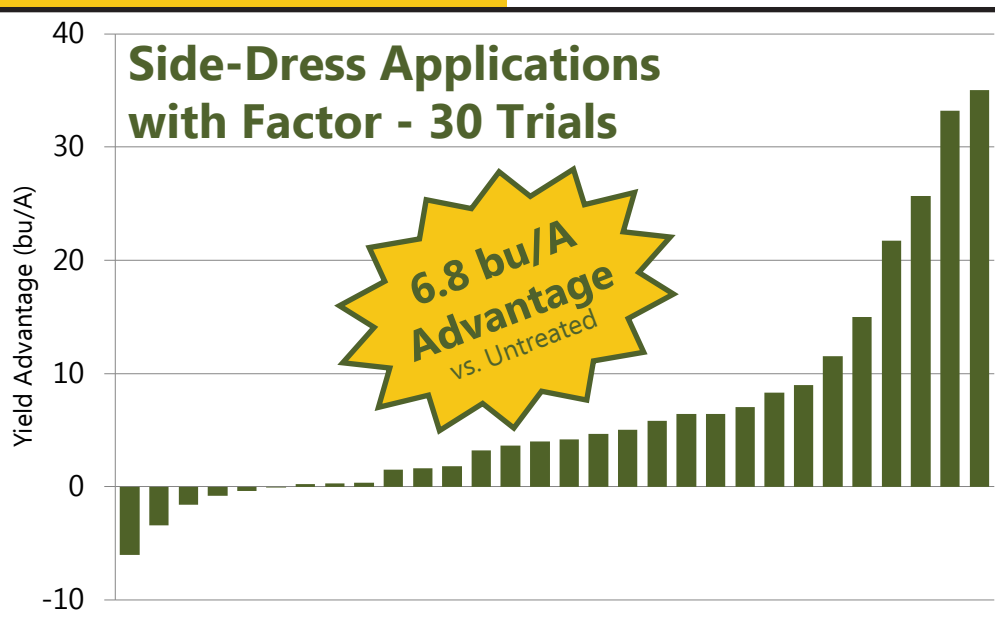
- Nitrogen volatility loss begins within a few hours of application
- Nitrogen applied after May 1 will have the greatest volatility losses
- Soils with pH exceeding 7.0 & soil temperature above 50° F are more susceptible to volatility losses
- Need at least ½" of rainfall or irrigation to minimize volatilization
- Low soil organic matter and high sand content are more prone to nitrogen losses

Protect Your Nitrogen Investment

- Protects side-dress applications against volatility for up to 14 days (prior to rainfall or irrigation)
- Inhibits urease enzyme, minimizing ammonia losses
- Unique solvent system, no offensive odor and safer to handle - excellent compatibility with UAN and Urea fertilizers
- Increases yield potential and return on investment

Benefits of Side-Dress Applications

- Provides nitrogen at a critical stage in crop growth and development
- Helps crop get closer to its genetic yield potential
- Efficient, economical and environmentally sound method of applying needed nitrogen
- Ensures nitrogen is placed where it can easily be accessed by the plant for uptake

**Side-Dress Use Rate****3.25 qts/Ton of Urea****3.25 pts/Ton of UAN**

Conditions That Favor Nitrogen Losses

- Nitrogen volatility loss begins within a few hours of application
- Nitrogen applied after May 1 will have the greatest volatility losses
- No-till, high residue, pasture, or hay ground are at most risk for loss
- Soil pH exceeding 7.0 & soil temperature above 50° F
- Need >1/2" of rainfall to incorporate UAN or urea to minimize volatilization

Nitrogen volatilization losses can be a significant factor when applying urea or UAN.

During the cool, moist conditions in the spring, ammonia volatilization can lead to a large nitrogen loss. As with other crops, applying **FACTOR**[®] urease inhibitor to urea and liquid nitrogen (UAN) can protect your nitrogen investment in corn.



Benefits

Agronomic Efficiency

- ✓ Protected N, protects yields
- ✓ Greater production per unit of nutrient input
- ✓ Positively influences yield and profitability

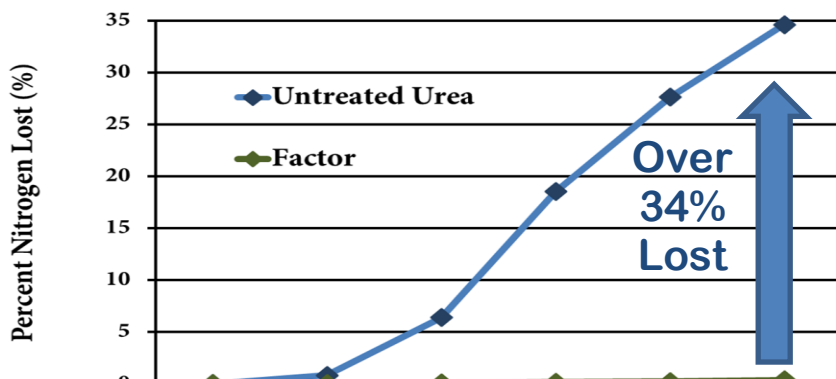
Operational Efficiency

- ✓ Flexibility for both UAN or Urea (start earlier with less risk)
- ✓ Larger window for fertilizer applications

Environmental Efficiency

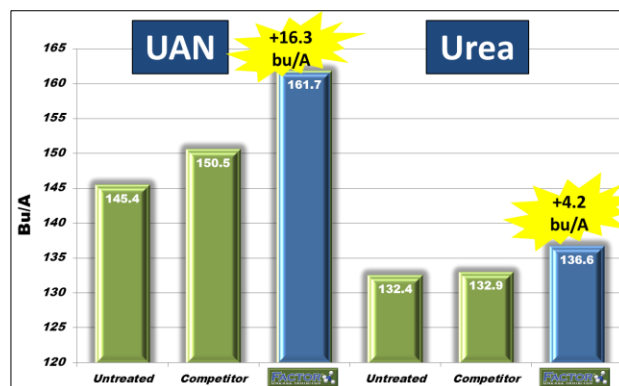
- ✓ Reduced nutrient loss through volatilization
- ✓ Integrating best management practices into your business

University -- Lab Urea Volatilization Study



Untreated Urea	0	0.79	6.37	18.51	27.6	34.6
Factor	0	0.038	0.07	0.14	0.21	0.34

See the Bushel Advantage with FACTOR



Source: 3rd Party Contract Research





Easy Blending

FACTOR is a urease inhibitor that reduces nitrogen volatilization loss when added to urea and UAN solutions.

Blending FACTOR with Urea

Adding FACTOR to urea is a fast, simple process that retailers can easily do with existing equipment.

- 1) Measure out and pour the recommended amount of FACTOR into the inductor tank in preparation for coating urea.

USE RATE: 3.25 Qts per ton

- 2) The following blending equipment can be used to effectively coat urea prills with FACTOR:

- drag blender
- stationary cubs
- vertical blender
- volumetric blender
- rotating cubs
- tower blender
- horizontal/cement type blender



- 3) FACTOR is metered out of the inductor tank through spray nozzle(s) onto the urea prills in the blender.

Be sure to use a coarse spray ensuring that the spray does not form a mist. The unique non-hazardous liquid formulation of FACTOR helps ensure uniform and rapid coating throughout the fertilizer blend.

- 4) FACTOR should be blended with the urea before introducing other fertilizer materials. If phosphorus and potash, or other fertilizer materials are required, then they should be added and blended into the FACTOR-treated urea.



- 5) Tumble the urea allowing adequate time for uniform coverage. FACTOR-blended urea will be uniformly green color, indicating complete and uniform coverage. Under normal conditions, a blend time of just a few minutes will ensure good coverage. MP-79 (a drying agent) may be added to adjust for drying consistency.
- 6) FACTOR urease inhibitor impregnated urea should not be stored more than two weeks prior to application.

FACTOR with UAN Solutions

FACTOR can be added directly to your tank mix fertilizer solution. FACTOR is compatible with other nitrogen additives and pesticides, but jar testing is recommended.

- 1) Fill spray tank half full of UAN solution.
- 2) With agitators on, add the appropriate amount of FACTOR for the desired concentration.
- 3) Allow agitation to continue while adding remainder of UAN until thoroughly mixed into a complete solution with FACTOR.



		28% UAN (10.66 lbs/gal)	32% UAN (11.06 lbs/gal)
Factor Needed	Per 100 gal of UAN	27.72 oz of Factor	28.56 oz of Factor
	Per 100# of Nitrogen	9.29 oz of Factor	8.1 oz of Factor

USE RATE: 3.25 Pts per ton

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FACTOR is a trademark of Midtech R&D, Inc. Patent pending