



Biocatalyst
Technology

NITRAIN **EXPRESS**[™]

“Get on Board!”

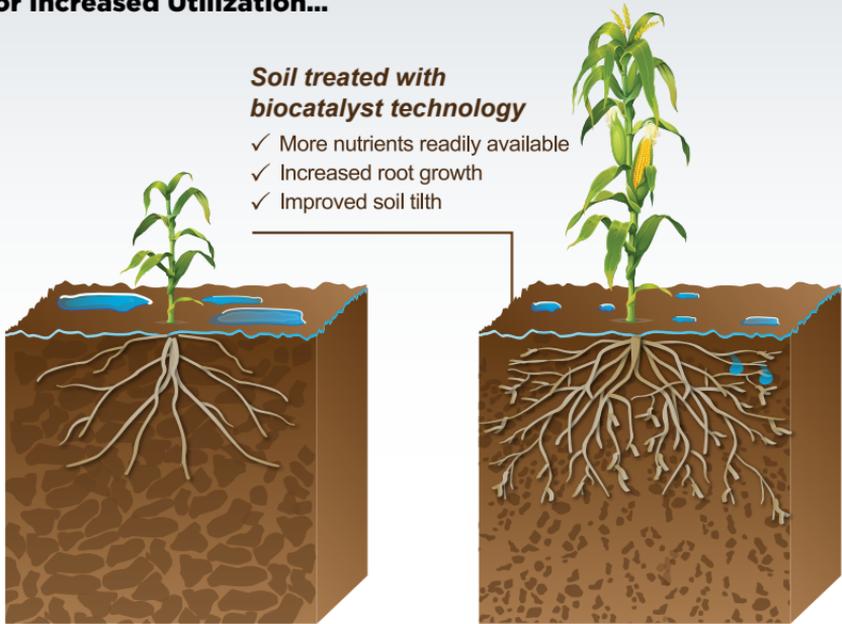
BENEFITS:

- Inhibits N volatilization of UAN and urea fertilizers
- Biocatalyst technology increases the efficiency and utilization of nitrogen and other key nutrients being applied to the soil
- Optimizes yield potential through increased plant performance

Increase Your Nitrogen Use Efficiency

Nitrain Express™ is a Loveland Products formulation of the urease inhibitor NBPT with the addition of a unique fertilizer biocatalyst system similar to Accomplish LM. Nitrain Express works by increasing nitrogen use efficiency through reduction of volatilization and increasing utilization of applied nutrients by the plant.

Biocatalyst Technology Unlocks Nutrients for Increased Utilization...



1 Biocatalyst Applied to Soil

2 Nutrient Mineralization

3 Nutrients "Unlocked"



- **Enhances nutrient use efficiency of existing soil nutrition**
- **Improves nutrient mineralization**
- **Increased water use efficiency through salt mediation**

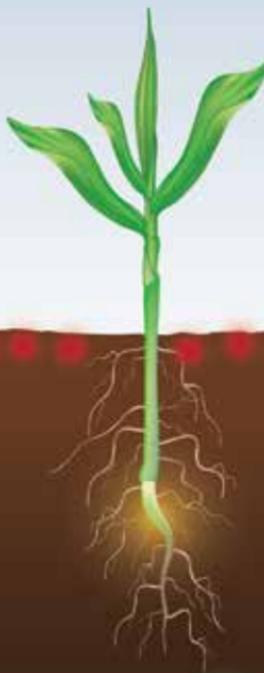
...While NBPT Reduces Nitrogen Volatilization

**Higher Volatilization
of Ammonia (NH₃)**



No Inhibitor

**Enhanced Retention
of Applied N**



**NITRAIN
EXPRESS**

- If urea is hydrolyzed by urease at the soil surface, NH₃ may be lost to air and not available for plant uptake
- Nitrain Express:
 - Stops urea from hydrolyzing at the soil surface
 - Prevents offgassing of NH₃
 - Allows urea to enter soil profile with a rain event or physical incorporation while increasing utilization

Dräger Tube Experiment: Urea Volatilization Demonstration



Immediately Following Application

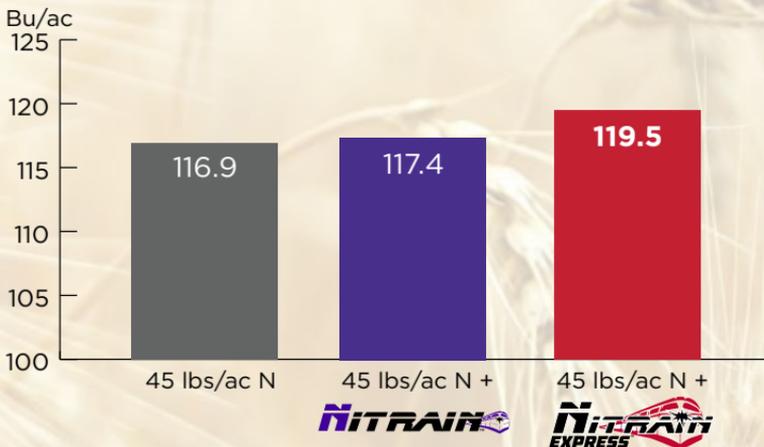
No ammonia loss detected by
Dräger tube



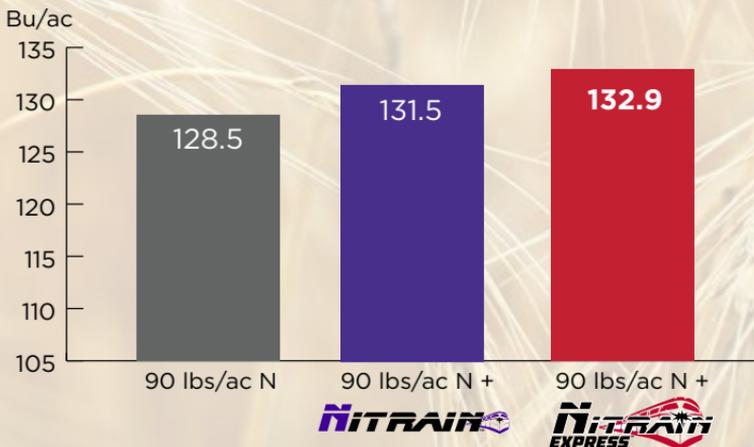
48-Hours After Application

Significantly less N loss with Nitrain Express as demonstrated by lower amount of ammonia detected by Dräger tube

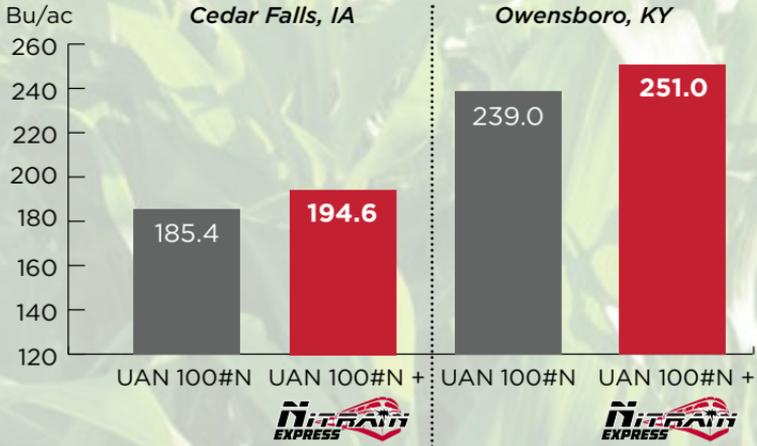
Wheat - Loveland Research Farm, Owensboro, KY (2014-2015)
UAN treated with enhanced NBPT



Wheat - Loveland Research Farm, Owensboro, KY (2014-2015)
UAN treated with enhanced NBPT



Corn – Cedar Falls, IA & Owensboro, KY



To learn more about the technology behind the performance, follow the link or scan the QR code:
<http://www.lovelandproducts.com/product/nitrain-express>



Contact Your Nutrien Ag Solutions Retailer

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