



TRIPLE KICK NITROGEN + SULPHUR + STABILIZERS

Climate Tech – Crop Nutrition

WHAT IS TRIPLE KICK - MISSION STATEMENT

- Triple Kick is a 38% Nitrogen, 17.5% micronized elemental Sulphur fertilizer with 600ppm of DCD and NBPT all in a single prill
- Triple Kick can be used as a replacement or supplement to any nitrogen and sulphur fertility programs

**TRIPLE
KICK**
NITROGEN
MANAGEMENT



HISTORY OF TRIPLE KICK

RESEARCH

Research began in 2017 into combining Nitrogen stabilizers with elemental Sulphur for coating on urea

EARLY RESULTS

Early results showed significant improvements in Nitrogen stabilization with the synergistic stabilization of DCD/NBPT and elemental sulphur together coated on urea

2020 REPLICIA

2020 replicated trial showed a 4-bushel increase over the leading industry stabilizers





WORLDS FIRST TEST PRODUCTION JUNE 2022 OF A SINGLE PRILL APPLICATION

SPREAD OR BLEND

Ideal for spreading but has also been tested through the drill as part of a blend

USAGE

Can be used for fall spreading, in season top dressing or as a portion of the nitrogen in a blend

SEED SAFETY

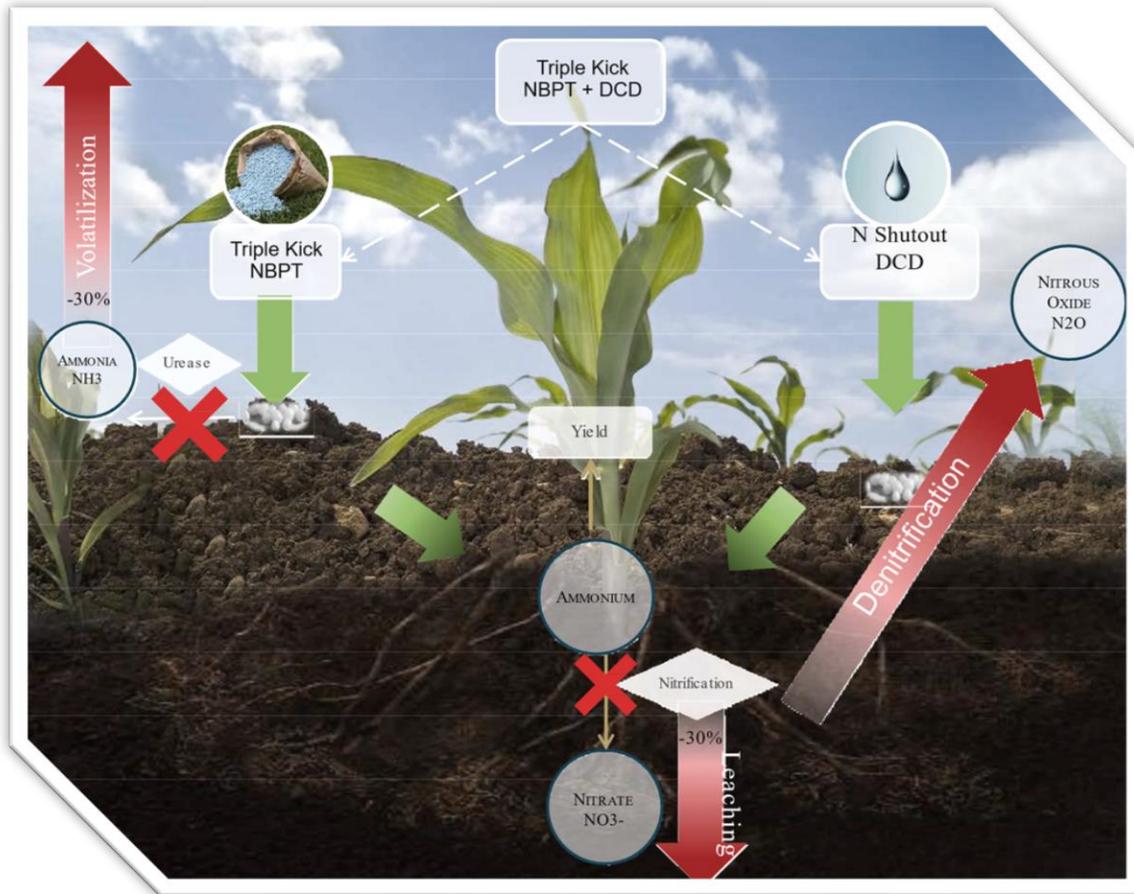
Improved seed safety over regular urea

TECHNICAL DATA

- 38% Nitrogen derived from urea
- 17.5% Elemental Sulphur
- 600ppm of DCD and 600ppm of NBPT Stabilizers
- Bulk density 46-48 lbs/ft³
- SGN of 300+
- UI 70
- Blend able with other fertilizers
- Very small particle of elemental sulphur, sub 20-micron average

HOW TRIPLE KICK WORKS

PRODUCT OVERVIEW




NBPT

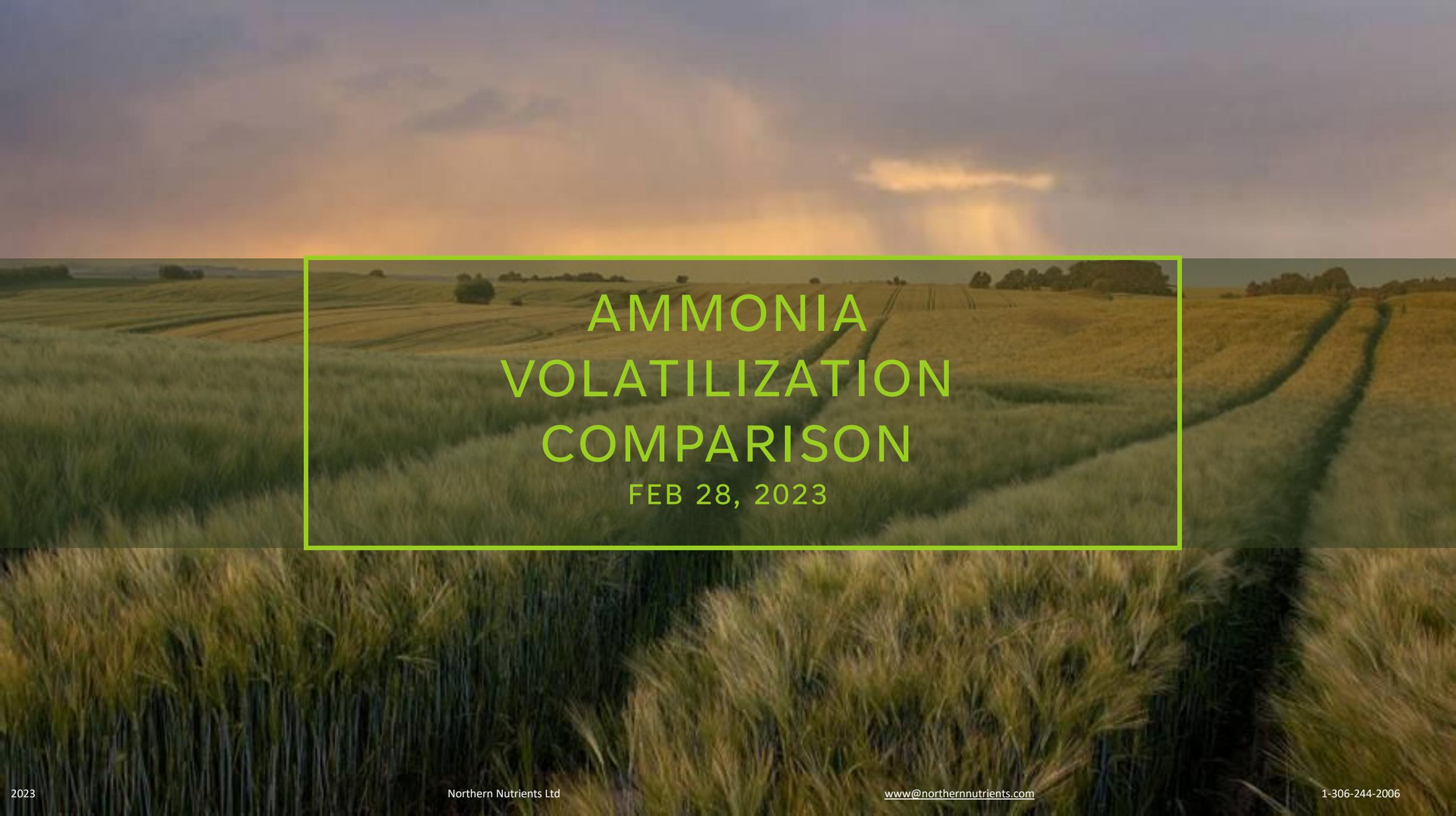
NBPT minimizes urease enzyme activity, which slows the conversion of urea to ammonia gas


DCD

DCD competes with ammonia to occupy the AMO enzyme active site. By blocking the active site, DCD slows the conversion of ammonium to nitrate preventing loss of nitrates


SULPHUR & CARBON

Sulphur & carbon through negative ions help hold the positively charged nitrate molecule to the soil to improve nitrogen's stability and keep the nutrient in the soil and available to the plants longer



AMMONIA VOLATILIZATION COMPARISON

FEB 28, 2023



INDUSTRY LEADING NITROGEN STABILIZERS VS. TRIPLE KICK

COMPARING INDUSTRY LEADING NITROGEN STABILIZER CONTAINING FERTILIZERS AVAILABLE IN THE MARKET WITH NORTHERN NUTRIENTS TRIPLE KICK:

The 4 tested fertilizers are

- Triple Kick
- Industry-leading DCD/NBPT inside the prill fertilizer
- Coated fertilizer with competitor stabilizer
- Uncoated Urea



FEB 28 READINGS



Product C



Product B



Triple Kick



Uncoated Urea

SAMPLE	27-Feb	28-Feb	01-Mar	03-Mar	06-Mar	07-Mar	08-Mar	09-Mar	21-Mar	28-Mar	06-Apr	10-Apr		
Triple Kick 1	no reading	no reading	No Reading	No Reading	50ppm	50 ppm	50 ppm	50 ppm	100 ppm	140ppm	400ppm	500pm		
Triple Kick 2	no reading	no reading	No Reading	No Reading	50ppm	50 ppm	50 ppm	~60ppm	100 ppm	250ppm	500ppm	more than 500 ppm		
Product B	50ppm	200ppm	500ppm	more than 500 ppm										
Product B	50ppm	100-200ppm	350 ppm	500ppm	more than 500 ppm									
Product C	50ppm	100ppm	200 ppm	400ppm	more than 500 ppm									
Product C	50-100ppm	300ppm	more than 500ppm	more than 500ppm	more than 500 ppm									
UNCOATED UREA 1	100ppm	300ppm	more than 500ppm	more than 500ppm	more than 500 ppm									
UNCOATED UREA 2	100ppm	400ppm	more than 500ppm	more than 500ppm	more than 500 ppm									

FEB 27 – MAR 21 OBSERVATION TABLE



EARLY OBSERVATIONS

Triple Kick is significantly more effective (90%+) at reducing ammonia emissions (volatilization) than industry-leading competitor products

*Lab study to date, to be duplicated in field/university test summer of 2023 with the University of Saskatchewan

BENEFITS COMPARED TO COATED UREA BLENDED WITH SULPHUR



Longer lasting & Improved stabilization of Nitrogen due to the unique composition



Better plant uptake of Nitrogen & Sulphur by having both nutrients in a single prills



Ability to get Nitrogen and Sulphur applied in a single prill without blending products together



BENEFITS COMPARED TO COATED UREA BLENDED WITH SULPHUR



Eligible for government rebates unlike single use Nitrogen Stabilizers



Elemental Sulphur portion of Triple kick less prone to leaching than Ammonium sulphate in a fall application



Unique product with limited availability for dealer differentiation



HOW AND WHEN TO USE TRIPLE KICK?

- FALL OR PREPLANT SPREADING AS 100% OF YOUR NITROGEN/SULPHUR NEEDS, OR IN A BLEND WITH STABILIZED UREA TO CUSTOMIZE THE N:S RATION
- IN SEASON TOP DRESSED ALONE OR AS PART OF UREA/TRIPLE KICK OR AMS/TRIPLE KICK BLEND
- AS PART OF A SPRING BLEND THROUGH THE DRILL UP TO 1/3 OF YOUR NITROGEN SOURCE AND 1/3 OF THE BLEND

THE PRAIRIE WATERSHEDS CLIMATE PROGRAM (PWCP)

The Prairie Watersheds Climate Program (PWCP) works with producers to increase the implementation of select Beneficial Management Practices (BMPs) on farms in Saskatchewan and Manitoba to address issues related to climate change in agriculture

- Producers are eligible for a maximum of \$75,000 of OFCAF funding, through all available OFCAF programs, including all eligible activities across all BMPs for the project period to accelerate their adoption and implementation of on-farm beneficial management practices (BMPs) to reduce GHG emissions, support production efficiency, sustainability, and resiliency on their farm operations.
- An activity can only be funded once on the same parcel of land through OFCAF funding.
- As of April 1, 2023, only dual inhibitors, i.e., the use of both Nitrification and Urease Inhibitors together (including the use of pre-blended fertilizers that contain both inhibitors) continue to be eligible for funding. The use of only one type of inhibitor alone is not eligible under current OFCAF programming.

Please note: Applications are not publicly available. Applicants will work directly with their local PWCP coordinator to complete and submit their applications. To find your local PWP coordinator, visit [Sask Watershed Website](https://www.saskwatershed.com)



THANK YOU

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