REDUCING EMISSIONS WITH SUPERU® PREMIUM FERTILIZER

Practicing good land stewardship is more than a goal, it has become an expectation. Maximizing nutrient use efficiency to reduce nitrogen loss is one effective piece to this puzzle.

SUPERU® premium fertilizer is not only an effective dual inhibitor with the power to protect against denitrification, volatilization and leaching — but it can also help reduce nitrous oxide (N_2O) emissions.

MAKING A DIFFERENCE WITH DCD

If you're wondering how SUPERU can create such a positive impact, a major part of the answer is dicyandiamide: a nitrification inhibitor more commonly referred to as DCD.

While this active ingredient is found in many fertilizers and additives marketed for their nitrification inhibition properties, SUPERU, with more than 30 years of research and hundreds of trials, has been proven to reduce ammonia volatilization losses and N_2O emissions.[2]

REDUCING NITROUS OXIDE EMISSIONS WITH SUPERU® PREMIUM FERTILIZER

To be effective, having the right levels of dicyandiamide (DCD), the active ingredient in SUPERU, is essential. Some nitrogen stabilizers with a low rate of DCD may claim the same protection as SUPERU, but the data indicates otherwise.[1]

Across seven third-party studies, SUPERU reduced N_2O emissions by an average of 41%.[2] In addition, third-party research indicates that products with DCD parts per million (ppm) lower than 1,500 showed no statistical difference to untreated urea.[3] SUPERU contains a target DCD load of 8,500 ppm, offering scientifically proven effective levels to inhibit nitrification.

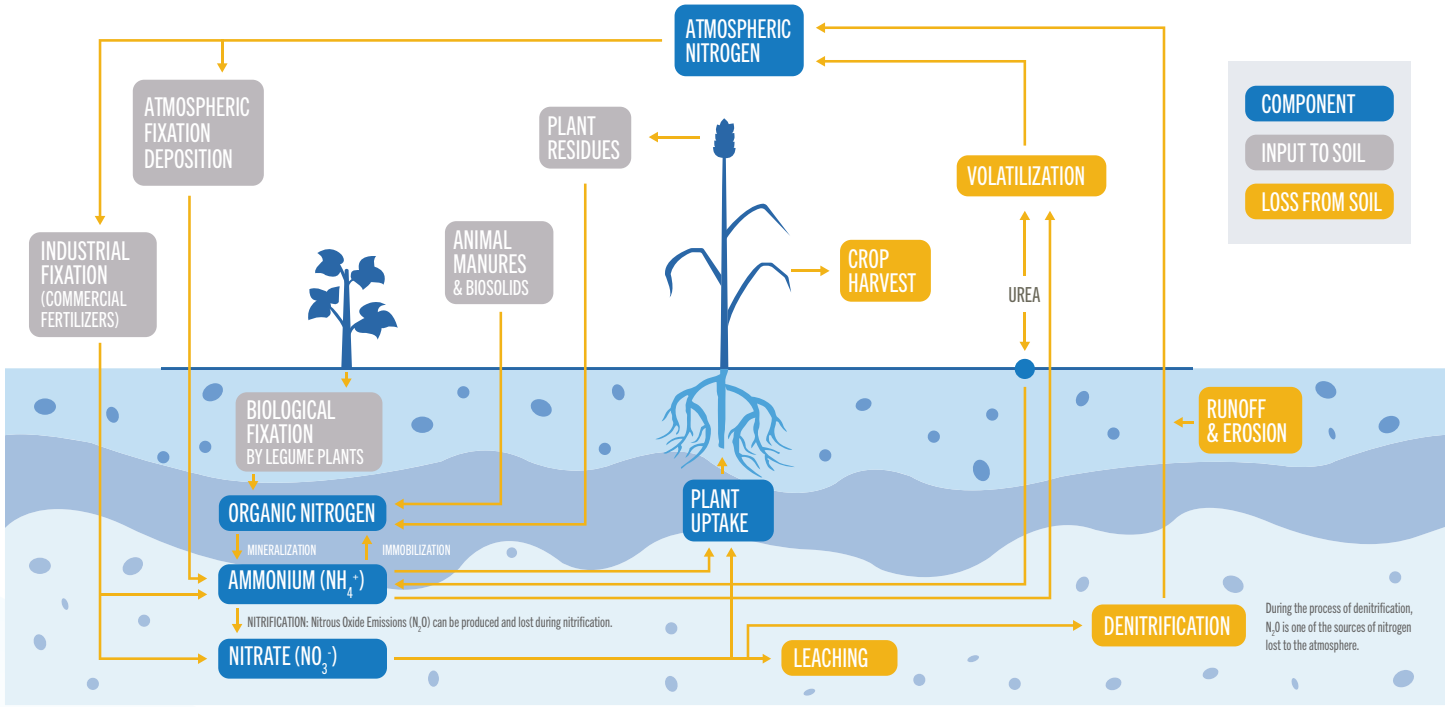
[2]REDUCED NITROUS OXIDE EMISSIONS BY

41%

HOW NITROUS OXIDE IS FORMED

Nitrous oxide (N_2O) formation is not only a result of using synthetic fertilizer, but is also formed when soil organic matter, manure and crop residues go through the nitrogen cycle. It is produced during the nitrification process when ammonium converts to nitrate or the denitrification process when nitrate is converted to nitrogen gas (N_2 and N_2O).

Two of the largest influencing factors of N_2O emissions are soil properties and weather. Because weather can be unpredictable, the amount of emissions produced each year can vary, and growers may look for more sustainable options to utilize on their farms to reduce nitrogen loss and N_2O emissions. An effective way to do this can include the use of enhanced efficiency fertilizers (EEFs), which align with Fertilizer Canada's initiative, the 4R Nutrient Stewardship program.



PROTECT YOUR NITROGEN — REDUCE EMISSIONS

Learn more about how easy-to-use SUPERU can help you reduce emissions while guarding your yield and boosting overall efficiency. Start by visiting **KochAgronomicServices.ca/FindARep** today to contact your local KAS representative.

KOCH AGRONOMIC SERVICES

[1]McCarty and Bremner 1989 and Franzen, 2017 (N Extenders and Additives. [2]EPA EEF Challenge Submission data: 30% reduction - corn (Chatterjee et al, 2016); 34% reduction - corn (Chatterjee et al, 2016); 45% reduction - corn (Yang et al, 2016); 35% reduction - corn (Eagle et al, 2017); 48% reduction - irrigated no-till corn (Halvorson et al, 2010); 53% reduction - semi-arid irrigated corn (Dugan et al, 2017); 43.8% reduction - sandy loam soil (Awale and Chatterjee, 2017). [3]Third-party lab study - Roberts, University of Arkansas 2019 - 2020.