

WHEN MORE NITROGEN ISN'T THE ANSWER—STABILIZERS MAKE SENSE.

When it comes to nitrogen application rates, some believe the best solution is to apply more of your nitrogen source to make up for potential losses. But what can make more sense — both financially and operationally — is protecting your nitrogen. One way to do that is with stabilizers proven to keep nitrogen readily available longer for plant uptake and guard against the three forms of losses: volatilization, denitrification and leaching.

A theme found in research is the higher the nitrogen application rate, the higher the loss a grower can experience as a percent of the nitrogen applied. Simply put, applying additional pounds of unprotected nitrogen can translate to additional losses.

MAKING NITROGEN DO MORE

Why not make your nitrogen work smarter *and* harder? Rather than increasing the pounds of unprotected nitrogen, research over multiple studies has shown that treating your nitrogen with a stabilizer can help you apply at optimum rates *and* produce similar yields. As more growers look to optimize their yields, nitrogen stabilizers will play an even more crucial role in their operations.



To achieve optimal yields and be good stewards of the land, the 4R Nutrient Stewardship¹ encourages growers to select the right source of fertilizer, apply it at the right rate, at the right time and in the right place. Thinking about nitrogen management plans through the lens of the 4Rs can help a grower more efficiently spend their nitrogen investment.

INVESTING IN YOUR INVESTMENT

When you add it all up, a smart nitrogen strategy can make a world of difference. That's because protecting your nitrogen with a stabilizer in conjunction with best management practices makes the most sense and possibly more cents.

With proven solutions like ANVOL[®], CENTURO[®] and SUPERU[®] nitrogen stabilizers, growers can achieve more efficient input management without having to increase application rates to combat losses. SUPERU is a ready-to-use stabilizer with the highest concentration of nitrogen available (46%) in a urea-based granule, while CENTURO has become a proven nitrification inhibitor for anhydrous ammonia and UAN by helping growers meet nutrient management, nitrogen efficiency and yield goals. And with ANVOL, you get extended protection with the power of dual active ingredients, which help slow nitrogen loss from volatilization.

To put it more simply: treating your nitrogen with these types of stabilizers allows you to apply at optimal rates, which gives you better chances at increased profitability.



THE NUMBERS DON'T LIE

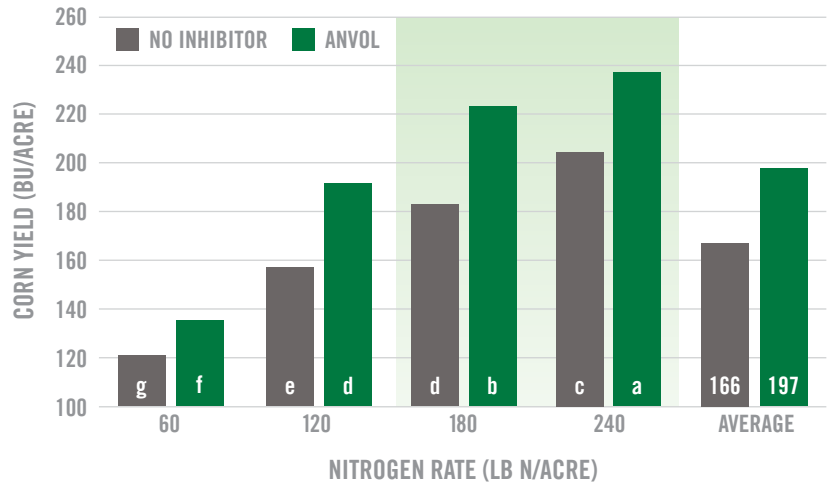
USING A NITROGEN STABILIZER ADDS UP TO BIG RESULTS

Across a three-year study (2016-2018) with locations in Virginia, Kentucky, Illinois and Tennessee²:

Urea treated with ANVOL nitrogen stabilizer resulted in a 31 bu/acre yield advantage over untreated urea.

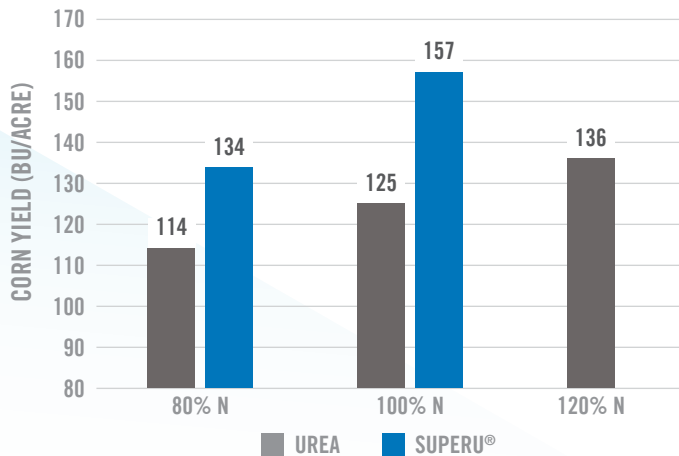
The research illustrates growers can optimize nitrogen rates when a nitrogen stabilizer is used. For example, urea treated with ANVOL at a rate of 180 lbs N/ac outperformed untreated urea at a rate of 240 lbs N/ac by 19 bu/acre. Even with a nitrogen rate reduction, ANVOL still delivered higher yields across these sites.

ANVOL IMPROVED YIELD IN CORN AVERAGE ACROSS 8 SITE YEARS IN 4 TRIAL LOCATIONS²



- Urea treated with ANVOL consistently resulted in higher corn yields starting at 60 lbs N/acre.
- Urea treated with ANVOL resulted in a 31 bu/acre average corn yield advantage over untreated urea.
- Based on sites responsive to nitrogen fertilizer and where losses to volatilization were a significant factor.

UNIVERSITY OF MISSOURI (2017-2018)³



SUPERU outperformed urea at 120% of the recommended rate by an average of 21 bu/acre across a two-year study. And SUPERU fertilizer applied at the recommended rate (100% N) increased corn yield by an average of 32 bu/acre compared to untreated urea at the same nitrogen rate.

REINFORCE YOUR NITROGEN. REDUCE YOUR LOSSES.

To learn more about how a Koch Agronomic Services stabilizer solution can help keep more nitrogen in the ground—and potentially more dollars in your pocket—contact your local sales representative or visit KochAgronomicServices.com.