

A LOOK INTO NITROGEN INHIBITORS FOR IMPROVED FERTILIZER USE EFFICIENCY

As agronomists and farmers look for a more sustainable practice to manage nutrients on their farms, they find themselves turning towards using fertilizer inhibitors. Using these fertilizer inhibitors helps to improve fertilizer efficiency as well as protect the environment.

What Are Fertilizer Inhibitors?

Inhibitors are additives mixed with fertilizer, commonly used with urea. The goal when using an inhibitor is to slow down the chemical process that happens in the soil to reduce nitrogen loss. The two main types are urease and nitrification inhibitors.

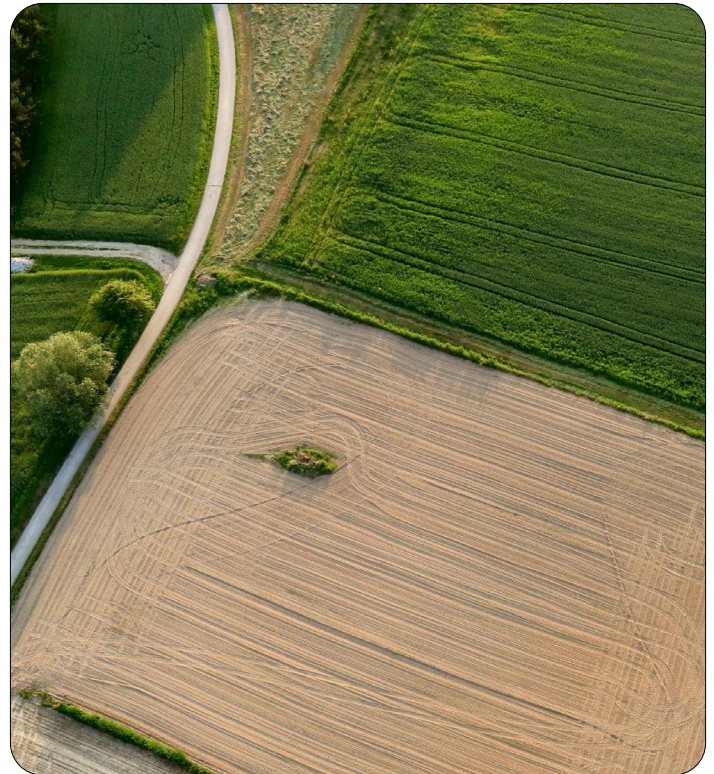
- **Urease Inhibitors** help prevent the rapid breakdown of urea into ammonia. When urea breaks down into ammonia it gasses off into the atmosphere through volatilization. Using a urease inhibitor helps to keep the nitrogen (urea) in the soil longer, especially under dry or even windy weather conditions.
- **Nitrification inhibitors** slow down the change between ammonium to nitrate which in turn slows down and reduces the risk of leaching.

Do Inhibitors Really Make a Difference?

Yes, by using an inhibitor, you are extending the availability of nitrogen to crops, resulting in possible higher yields as well as giving you more flexibility in your fertilizer timing. They may cost



615-acre soil map split into 10 zones - colour-coded from red to green to reveal soil variability at a glance.



a bit more upfront, but they often pay for themselves through yield and the overall quality of the crop as well as a reduction in fertilizer waste.

Inhibitors are no longer “just another product” they are thoroughly researched to help improve fertilizer use efficiency and helping to protect our environment.

The use of dual inhibitors or using a nitrification and a urease inhibitor together is an eligible project through SAW’s SWEAP (Saskatchewan Watersheds Environmental Agriculture Program) Nitrogen Management Beneficial Management Practice program. Using inhibitors must be a new practice for the grower OR used on acres where inhibitors have not been used prior to 2022 and supported by a licensed Professional Agriologist or Certified Crop Advisor.

Funding for SWEAP is provided by Agriculture and Agri-Food Canada through the Agriculture Climate Solutions – On-Farm Climate Action Fund (OFCAF).