



Manitoba Association of
Watersheds

Nitrogen Management

Prairie Watersheds Climate Program (PWCP)

Nitrogen Management

What is it? What options do I have through the PWCP?

Nitrogen Management as a Beneficial Management Practice (BMP) is designed to reduce nitrogen emissions, improve soil health, enhance crop yield, and reduce pollution and greenhouse gas (GHG) emissions from nitrogen fertilizer. With funding support from Agriculture and Agri-Food Canada (AAFC), the PWCP may provide funding to farmers and ranchers for the adoption and on-farm implementation of nitrogen management BMPs that are recommended by a professional agronomist, agrologists or certified crop advisor. Eligible activities include:

- Polymer-coated urea and nitrification/urease dual inhibitors. These products protect against nitrogen volatilization, denitrification, and leaching, and help fertilizers become gradually incorporated into the crops. Nitrogen losses through surface runoff are also reduced.
- Split fertilizer application with a reduced rate in each application to improve the crop use efficiency and reduce nitrogen losses from a single application of fertilizer.
- Planning, technical assessments or engineered designs.
- Soil testing and soil mapping to determine specific nitrogen requirements in the soil according to crop types and needs.
- Use of soil organic amendments and synthetic fertilizer substitutes (manure, compost, digestates) to improve nitrogen balance in the soil and crop nitrogen intake.
- Increasing legumes in rotation to fix nitrogen and reduce fertilizer use in the subsequent crops. Legumes also improve soil composition with their extensive root systems.
- Fertilizer/seeder application equipment upgrades that allow for banding, side-dressing or the injection of fertilizer.



Why should I implement nitrogen management in my crops?

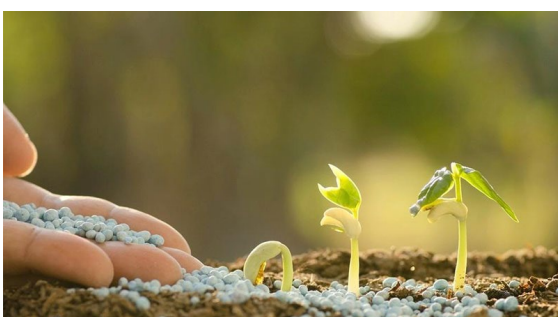
It has been proved that nitrogen management as a BMP is one of the best solutions farmers and ranchers can use to reduce nitrogen emissions to the atmosphere. Nitrogen emissions, like many other greenhouse gases have caused multiple changes in our climate. On the Canadian prairies, we have been experiencing unstable multi-annual climate conditions with severe consequences. In the agricultural sector, farmers struggle year to year with droughts and floods, that may cause a significant economic impact. Just in 2021, a drought caused multi-million dollar losses in agricultural production in the prairies whereas in 2022, intensive precipitation events in the spring caused significant delays in land preparation, fertilization, seeding, and many other practices.

The adoption of sustainable agricultural practices and BMPs such as nitrogen management can assist both farmers and the environment. Effective nitrogen management can help reduce the adverse effects of climate change, while also improving soil organic matter, soil composition and structure, water infiltration, and crop yield.

How Can I apply to PWCP?

PWCP is managed by the Manitoba Association of Watersheds (MAW). Delivery agents in Manitoba and Saskatchewan are available to assist farmers in the region with PWCP applications and documentation required for this program. In Manitoba, contact your local watershed district; in Saskatchewan, contact the Saskatchewan Association of Watersheds for further information about BMPs, funds, eligibility, and conditions. Full details are available at

www.manitobawatersheds.org/prairie-watershed-climate-program.



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