

Station 1: Project Overview

4R Nutrient Stewardship Self-guided Tour

Title: Cross-Canada Agronomic and Environmental Benefit of Advanced 4R Nitrogen Management of Corn

Funding Program

Canadian Agriculture Partnership AgriScience Program – Corn Science Cluster of the [Canadian Field Crop Research Alliance](#) (CFCRA)

Land

The project in Manitoba is done on farmer fields. This year we thank Myron and Jill Krahn.

Principal Investigator and Collaborators

- ✦ PI: Dr. Mario Tenuta (4R Senior Industrial Research Chair, University of Manitoba)
- ✦ Dr. Craig Drury (AAFC – Harrow), Dr. Joann Whalen (McGill University), Dr. David Hooker (University of Guelph), Gaetan Parent (AAFC – Quebec), Curtis Cavers (AAFC – Portage la Prairie)
- ✦ Dr. Don Flaten (Professor of Soil Fertility, University of Manitoba)
- ✦ John Heard (MAFRI)

Synopsis

This project meets an important need to increase the use efficiency of nitrogen fertilizers in grain corn. The project also aims to meet National objectives of reducing greenhouse gas emissions and nitrogen losses from agriculture and enhancing knowledge transfer to farmers and industry. The project advances on previous work done by our team and others on corn across Canada on agronomic and environmental benefit of 4R nitrogen management practices.

Specific Objectives

The project started in 2018 and continues to 2021. This is our third field season. Field studies are being conducted in MB, ON and QC:

- ✦ The site you are at now and sites managed by David Hooker and Joann Whalen ask
 - ✦ "Does advanced 4R N management change the most economical rate of nitrogen and improve grower return on investment?" and
 - ✦ "Does advanced 4R N management reduce N losses to the environment?"
- ✦ In Ontario Craig Drury is examining a benefit of single vs double side-dressing of UAN in combination with depth placement and inhibitors with UAN
- ✦ Gaetan Parent and Curtis Cavers are using canopy sensing to examine the Nitrogen Index as a tool for growers to set in-season rates

For more information - [CLICK HERE](#).

