

The Fertilizer Institute Conservation Innovation Grant Participant Information Sheet

A three year Conservation Innovation Grant (CIG) funded by the USDA is being implemented by a team of scientists, agricultural specialists, industry experts and environmental market specialists to develop, quantify, and provide monetary returns to crop producers who improve their nutrient use efficiency and reduce nitrogen losses. This team is led by The Fertilizer Institute, (TFI). The Nitrace Program (www.Nitrace.com) was created by team members to aggregate and monetize the environmental benefits of improved nitrogen management practices, based on the 4R nutrient stewardship framework, adopted by participating producers working with the grant team.

The project is evaluating the effectiveness of various mechanisms to reward nutrient management practices that reduce N₂O (Nitrous Oxide) emissions. As part of a public private initiative the NRCS, through the Environmental Quality Incentives Program (EQIP) has funding to help producers implement improved nutrient management practices. Through cooperative data sharing the CIG project team will use available tools to quantify reductions in nitrogen losses and evaluate the feasibility of creating and selling credits into environmental markets.

The project goal is to enroll up to 30,000 acres over the course of the project to test and analyze how improved nutrient management practices may lead to new revenue flows from environmental markets to Midwest crop producers. The results of the project are intended to help both growers and environmental market representatives determine what works well and what challenges exist for emissions trading markets to incentivize reductions in N₂O emissions through improved nitrogen management.

Important Considerations for Participants:

- This is a pilot project examining the process and prospect of quantifying and verifying emission reduction credits for use in emissions trading markets
- The methods being tested require the sharing of specific management data related to nutrient applications including source(s), rate(s), timing, and placement of nitrogen fertilizer
- Multiple years of historical management data are needed to determine a baseline for comparison
- To verify reductions and monetize credits, ongoing data sharing will be needed
- There is no direct cost to participate in the pilot project. Time and data are exchanged for an analysis and potential emission credits
- There may be direct costs for implementing practices installed for EQIP. To qualify for EQIP financial assistance the practices will need to meet NRCS standards and specifications
- **There is no guarantee practice changes will result in quantifiable emission reductions or payment for emission reductions will occur.**
- **Changing fertilizer management practices introduces inherent risk into crop production. This project is focused on examining the impacts of practice changes on N₂O emissions and nitrogen use efficiency. Other performance measures should be given priority when developing a nutrient management plan.**

Financial Assistance and Other Incentives for Participants

- EQIP Financial Assistance is available to help producers cover the cost of adopting nutrient management and other practices that increase nutrient use efficiency and reduce opportunities for losses (these are listed on the attached table)
- EQIP Financial Assistance is available for producers interested in on farm strip trials comparing different nitrogen management practices
- A limited quantity of ESN[®] (Environmentally Smart Nitrogen) polymer coated controlled release fertilizer is available free of charge to participants. If interested contact Theo Gunther at (515)289-2331-ext. 120 or tgunther@tfi.org

How to participate in The Fertilizer Institute's GHG Initiative

In 2011 the NRCS awarded nine conservation innovation grants (CIG's) to projects focused on innovative strategies for improving nutrient use efficiency and reducing greenhouse gas emissions from agriculture. To support these projects, in January 2013 the NRCS announced funding for conservation practices that are consistent with the grant projects to enable greater participation.

Eligibility

EQIP eligible applicants can apply for financial assistance for nutrient management (CPS 590), cover crops (CPS 340) and other supporting practices listed in the attached table. Applicants who agree to cooperatively share field management information for an analysis of N₂O emissions will receive priority consideration. If you would like an analysis but are not interested in EQIP financial assistance, the process for generating the analysis is the same, though there will not be EQIP assistance to facilitate practice implementation.

What information is needed for N₂O analysis?

- **Historic management data.** Basic information about how your farm was managed over the past 5 years (2008-present).
- **Current management data.** This includes field outline, basic annual planting, cropping, fertilizer, tillage and harvesting data for each field being analyzed. Typically, this will include data for the years 2008-2012, though shorter look-back periods or estimates can be used if data is not available.
- **Future management scenarios.** The project team can provide analysis of multiple future management decisions on N₂O. To provide the most useful analysis you will need to determine which practices you would like to consider changing and develop details of that management scenario.

For historic and current management data, if you do not have complete information or did not farm the ground for any year requiring data, we ask you provide data to the best of your knowledge. This analysis is offered to all growers in IA and IL free of charge. You do not need to participate in EQIP or pursue emission crediting to have your fields analyzed.

How will your information be collected and used?

We are flexible in how data is initially reported. You may provide the data to the project team in the format which it is available, whether hard copy or electronic using your own files or a data collection excel workbook file that can be provided by our team. Alternatively, you may enter your own information into the online farm greenhouse gas and carbon accounting tool COMET-FARM. Using the COMET-FARM website (<http://cometfarm.nrel.colostate.edu/>) you will enter your information, export your data using the built in export function, and send the output file to the project team. If you are unable to use the website, you may fill out a form electronically and email it to the TFI Project team (See contact information below).

Upon receipt of your data, the project team will use the methodologies available to generate field-level reports from the DeNitrification-DeComposition (DNDC) computer model, as well as other available methodologies being tested. The model results will help determine if the crop and fertilizer management practices you have identified can generate GHG credits from nitrous oxide (N₂O) emission reductions. The model reports will be compiled and returned to you, but there is no obligation to participate in the N₂O credit program. If you choose to pursue crediting, these reports will serve as the basis for that process.

Why is the information needed?

Models and protocols have been developed to voluntarily estimate and credit on-farm GHG emission reductions, with the ultimate goals of helping producers generate additional revenue while improving farm performance. This project is part of an innovative national effort to test the models and protocols focused on nutrient management. **Questions?** Contact Theo Gunther at: (515)289-2331-ext. 120 or tgunther@tfi.org

Conservation Innovation Grant EQIP Practices, Payment Caps, and Payment Rates

Conservation Practice Standard	Practice Name	FY 13 Practice CAP
590	Nutrient Management	\$24,000.00
329	Residue & Tillage Management, No-Till/Strip-Till	\$36,000.00

Conservation Practice Standard	Practice Name	Practice Scenario Component	Unit	Unit Cost
590	Nutrient Management	Basic NM	Acre	10.01
590	Nutrient Management	Basic NM with Manure	Acre	15.40
590	Nutrient Management	Enhanced NM	Acre	30.66
590	Nutrient Management	Enhanced NM with Manure	Acre	37.82
590	Nutrient Management	Enhanced NM w/tissue testing	Acre	50.01
590	Nutrient Management	Adaptive NM	Each	1,552.25
340	Cover Crop	Legumes	Acre	43.06
340	Cover Crop	Grass or Cereal Grains	Acre	41.53
340	Cover Crop	Winter Kill Species	Acre	36.71
340	Cover Crop	Species Mix	Acre	52.14

Supporting

Conservation Practice Standard	Practice Name	Practice Scenario Component	Unit	Unit Cost
346	Residue and Tillage Management, Ridge Till	Ridge Till	Acre	27.14
329	Residue and Tillage Management, No Till/Strip Till/Direct Seed	No-Till/Strip-Till	Acre	27.03
328	Conservation Crop Rotation	2 years of perennials with strip cropping	Acre	264.96
585	Strip Cropping	Strip Cropping	Acre	2.70