



Eastern District Innovative Grant Program

Fiscal Year 2007/2008 Application Form

Completed application form should not exceed (3) pages, using a minimum font size of 11 point, retain form formatting, and no less than 1-inch margins. Submit completed application electronically to karen.smiley@ces.uwex.edu, and fax signature page (if electronic signature not available), by **noon on Friday, April 18, 2008**.

Project must be completed by December 31, 2008, unless prior approval received for extended timeline.

1. **Project Title: Assessing Soil Quality of CRP and Grassland**
2. **Funding Requested: \$2685**
3. **Project Lead/Grant Applicant (Name & County): Nick Schneider, Winnebago County Agriculture Agent**
 - a) **Project Collaborator(s): Pete Peters – USDA Farm Service Agency Local Office**
 - b) **Fox Valley Grazing Network**
4. **Signature: _____**
Grant Applicant/Lead

5. **Project Description**

a) **Situation Statement**

The Conservation Reserve Program (CRP) was established by the United States Department of Agriculture in the late 1980's. Some of the goals of CRP were to protect water quality of wetlands, diminish soil erosion, and enhance wildlife habitat. By landowners enrolling in CRP for 10 to 15 year contracts, the more environmentally sensitive cropland was "set aside" from production. Not only did CRP enrollment protect soil quality, commodity market prices were propped up by diminishing the amount of grain flowing into the marketplace. During the late 1980's through mid-2000's commodity stocks were great enough that the extra land enrolled in CRP was not needed for production.

Starting in 2007 running through 2009, a large portion of CRP contracts will expire. With the strong commodity prices related to agriculture based energy sources, many landowners are considering returning former CRP land to production agriculture. In these cases, the USDA has invested 10, 15, or even 20 years worth of payments into building the quality of this soil. A USDA websites indicated there currently is 530,000 acres enrolled in CRP in Wisconsin. Enrollment has been strong in Winnebago County with just less than 9,000 acres. The four counties surrounding Lake Winnebago have a total of 32,000 acres enrolled in CRP.

In addition to assessing soil quality on CRP land, research should be expanded to assess the soil quality of grassland pastures. Project staff has experience with similar research from work in another portion of the state. The data generated from this program was used in Nutrient Management Team Curriculum and in numerous

presentations. Fox River Graziers expressed interest in bring similar research to the eastern portion of the state. The UW Soil Science department currently is conducting research on phosphorus stratification under different tillage systems in corn. While these other projects are not a direct in-kind match to this project proposal, the research and education performed by this proposal is fills gaps not covered by these other previous projects.

Collaborators

The USDA Farm Service Agency office in Winnebago County has committed to being a local partner in this project. Their role will be to assist with identifying prospective locations of CRP fields. Fox River Graziers will serve a similar role by assisting with identifying prospective grassland locations.

This project establishes new research. UW Soil Scientist Richard Wolkowski and Laura Ward-Good indicated little research has been performed in Wisconsin assessing the quality of soil in CRP and grassland. This project will also open up to a new audience because many CRP enrollees have not been involved with production agriculture for numerous years.

b) Project Objectives/Expected Outcomes (include plan for sharing results with colleagues)

Project Objectives:

In order to **(1) transition CRP into production with the least loss of soil quality** or even **(2) dissuade landowners from shifting CRP and grassland to commodity crops**, research needs to be performed in order to understand the soil quality of this land. Grasslands are often touted as a means to sequester carbon which has the potential to diminish atmospheric CO₂. Soil quality is significantly improved when carbon is held in the soil as organic matter. This study will be designed to measure changes in soil quality and in fertility of grassland and CRP.

This proposed project supports the Winnebago County Agriculture Agent's program titled "Protecting Soil and Water Quality". An objective within this program area is "Farmers will implement practices that preserve soil quality, such as no-till and cover crops." By collecting stratified soil samples and analyzing for organic matter, pH, potassium, and phosphorus, we will **(3) better understand the risks associated with returning CRP to production or removing fields from grassland**. Soil analysis results will be compared to county averages maintained by the UW Soil and Forage Analysis Laboratory. Additionally, the results will be compared to soil samples collected prior to establishment of CRP or grassland, if the landowner maintained such records.

Expected Outcomes:

An expected outcome is for Extension staff to be able **(1) make research based recommendations to landowners when their CRP contracts expire**.

Recommendations may include tillage practices that will least damage soil structure or contribute to less loss of organic matter. Sampling in a stratified depth manner will also enable targeting recommendations for fertilizer placement. Another anticipated outcome is **(2) landowners may learn the soil quality changed in a manner that makes returning to production undesirable**. If this project funding is approved, data collection will be complete by early fall and an education session will be hosted to **(3) teach CRP landowners and graziers of results and recommendations**. A research white paper will also be generated for distribution to colleagues. Regional and state

wide education agronomy, conservation, or grazing events are other possible outlets for these results.

c) Project Timeline (include planned responses/activities)

Spring 2008: Identify landowners willing to participate. In early summer, soil sampling will commence.

Summer 2008: Soil analysis results should be complete and data analysis will be performed.

Fall 2008: When CRP contracts expire, education sessions disclosing the results and recommendations will be hosted. The research summary also will be completed at this time.

Winter 2008/2009: Project staff will seek opportunities to present at appropriate state-wide conferences.

d) Evaluation Plan

Gather feedback from landowners and farmers participating in this research and from landowners and farmers with similar land use patterns. Collect this information through written surveying at the end of the fall results and recommendations class. Document changes in decisions made with land currently held in CRP and grassland. Measurable practices include re-enrollment in to CRP, adoption of reduced tillage or more aggressive tillage depending on study results, and implementation of nutrient management.

6. Detailed budget breakdown (specifying the amount and purpose of funds requested from District Resource Management funds, and clarifying the source and amounts from other funds):

Soil Sampling: 800 acre goal: Sample in stratified manner.

2 samples per 5 acres @ \$7 per sample: Total samples processed = 320. Cost for laboratory procedures = \$2,240

Statistix 9 software: \$395

Soil probe: \$50

Total: **\$2685**

In-Kind: Mileage to locations: 600 miles * \$0.505 = \$303

Mailing: \$75

7. If you have received Resource Management funds for a similar/related project, in the past, include the following information:

No funds received in the past.