Eastern District Innovative Grant Program

Calendar Year 2009
Application Form

Completed application form should not exceed (3) pages, using a minimum font size of Arial 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 **April 7, 2009.**

Project must be completed by December 31, 2009, unless prior approval received for extended timeline.

1. **Project Title: Does Corn for Silage respond to Maximum Return to Nitrogen (MRTN) Trials Similarly to Corn for Grain?**

2. **Funding Requested: $ 1,024**

3. **Project Lead/Grant Applicant (Name & County): Bryce Larson Calumet County**
   Project Collaborator(s) (if applicable)
   a) Calumet County UW Extension
   b) UWEX Soil Science Department and on farm trial research staff
   c) UWEX Corn agronomy staff
   d) Agri-Partners cooperative Chilton, WI
   e) Calumet County Forage Council

4. **Signature: _____**
   Grant Applicant/Lead

5. **Project Description**
   a) Situation Statement (Describe how this relates to the UWEX strategic plan and/or your plan of work), and outline the following criteria that relate to your project.

   Situation Statement
   - Calumet County raises 65,000 acres of corn each crop year.
   - Over 25,000 acres of this corn is harvested as silage to feed 25,000 cows and 20,000 dairy heifers each year in our county.
   - Corn silage constitutes as high as 65-70% of the forage portion of our 200,000 cow dairy industry in East-Central Wisconsin.

   i) Fosters teamwork and collaboration with other agencies, campuses, or colleagues

   - The UW Extension Soil Science specialist (Dr. Carrie Laboski) has been conducting on farm Maximum Return to Nitrogen (MRTN) trials on a statewide basis over the last several years. Calumet County conducted our first two MRTN trials last year and will conduct two more MRTN on farm trials this cropping season.
   - As a result of partnering with Dr. Laboski and the UW Soil Science technical research staff (Todd Androski), the soil samples, nitrogen samples and grain

yield tabulations we do not have to fund those costs with this grant application request.

- ❖ The project will also include Agri Partners, a farm supply and marketing cooperative that will do all of the moisture and test weight sampling as well as be the vendor for our dry Urea N fertilizer.
- ❖ Calumet County Forage Council. There will be several of our board of director members including myself performing various tasks during the growing season to maintain the integrity of our plots and assist in the harvest of our plots.

ii) Incorporates the use of other funders

- ❖ The MRTN on farm trials through the UW Extension Soil Science Department will be covering all the needed soil sampling, postage and PSNT testing needed to establish the protocols for the 6 Nitrogen treatments.
- ❖ The UW Extension will also cover all the data evaluation costs and completing all the statistical analysis.
- ❖ The Corn Agronomy Specialists will also determine milk per acre and milk per ton of all the corn silage samples we will have tested and submitted as an in kind cost.
- ❖ Agri Partners will be doing the test weight and moisture analysis so that we can adjust all grain and silage yields to # 2 grade shell corn standards.

- ❖ The Calumet County Forage Council and the cooperating producer will cover all the additional work and time and mileage to establish, maintain and harvest the on farm trial plots as an in kind cost as part of the forage councils commitment to education and research for our producers.

iii) Includes a new program direction that may be replicated

- ❖ The MRTN results are a relatively new measurement for determining how profitable it is for producers to apply nitrogen fertilizer to corn based on the price of corn and the price of nitrogen.
- ❖ If we do see trends from this statistically correct protocol that indicate whole plant yield and quality may not follow the grain yield responses we have seen to date, further research and trials may be justified.

iv) Focuses on reaching new audiences

- ❖ Several dairy cattle producers in the East Central Wisconsin harvest only corn silage and not corn for grain. Many of these producers may not have looked at corn grain responses to nitrogen fertilization rates as not applicable to their production management system.
- ❖ The inclusion of corn silage sampling as part of the (MRTN) research may stimulate more interest from dairy cattle nutrition and others that provide professional services to our dairy producers.

v) Exposes potential employees to UWEX

- ❖ As stated above this project will involve not only professional agronomy persons; but also other service providers such as nutrition, soil and water, veterinary and

financial planning professionals that may become more familiar with the UWEX system and UWEX staff.

b) Project Objectives/Expected Outcomes (include plan for sharing results with colleagues and show how project had a net economic impact on the community)

- ❖ The objectives of this project will be to collect data so that we can determine if corn silage yields and quality does indeed closely follow what has been found in our MRTN trials for corn grain.
- ❖ The Calumet County Forage Council and the Calumet County UWEX staff will collect this data and make presentations at our Calumet County Forage Council annual meeting.
- ❖ Results of the trial will be presented at our Northeast Grain Production Clinics.
- ❖ We will also make this data available to all the forage councils and the Midwest Forage Association for distribution and discussion.
- ❖ Once the data is collected and the analysis and summations are completed the UW Extension Team Forage may decide if this project merits more on farm trials, resources etc.

c) Project Timeline (include planned responses/activities)

- ❖ Soil samples will be taken prior to plot establishment.
- ❖ The corn silage will be hand harvested when appropriate maturity is determined. Corn silage yields will be calculated at that time.
- ❖ The corn silage samples will be sent to UW Marshfield for analysis.
- ❖ Plots will be harvested for grain when mature and yield and quality samples will be taken at that time.
- ❖ The data will be compiled and analyzed by December 31, 2009 and the results of the trial will be available for our winter and spring 2010 educational seminars and programs.

d) Evaluation Plan

- ❖ Bryce Larson will confer with MRTN on trial staff to see if further trials measuring corn silage yields are merited.

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):

a. Thirty six (36) corn silage samples at $14 per sample including postage $504.00
b. Thirty six (36) corn grain moisture and test weight samples at $5.00 per sample $180.00
c. Twenty (20) plastic feed sized bags to collect grain plot samples for yield sampling. (Hand harvest small plots and taking of as ear corn) 20 bags @ $1.00 per bag $20.00
d. Signage and marking equipment and materials to mark the on farm trial plots and mark the treatments and replications. This will include approximately $2.50 per replication for the producer to manage around the 36 replicated plots (included in the $270.00 price)…Thirty six replications at $ 7.50 per replication $270.00
e. Fifty pounds of dry urea fertilizer at $1.00 per pound $50.00

7. **If you have received Resource Management funds, in the past, include the following information for all funded projects (if you have a number of past projects, this can be a separate (4th) page):**
   a) Briefly describe your past experiences with resource management grants – project focus, funding received, project collaborators
   b) How is this project proposal new or different?

   I have not applied for nor have I been granted any resource management funds in the past.