



CREATING A VIRTUAL LEARNING NETWORK

For Early Career
Educators Working on
Nutrient Management

A systems approach to nutrient management: A holistic, integrated approach to addressing nutrient management at the farm, field, and watershed scale.

This professional development program and virtual learning community might be for you if you are a new Extension Educator working in the North Central Region in the field of nutrient management. It will allow you to be a part of a virtual cohort with your peers, experienced Educators and researchers in the region working on improving nutrient management using a systems approach. Your participation would offer you opportunities to interact professionally, discuss ideas

you have for tackling nutrient management (from needs assessment to monitoring), and learn about current research with a network of researchers and experienced Educators. If you are a researcher or seasoned Extension professional this is an opportunity for you to get feedback on your research, test out new ideas, and mentor new Educators.

Introduction:

Local land-grant university Extension Educators play a critical role as local change agents in the promotion of new approaches to farm management. Nutrient management that enhances farm productivity and profitability without impacting water quality is a continually evolving field, requiring Extension Educators to work closely with researchers and private industry to provide state-of-the-art, science-based information and recommendations to farmers. Many Extension Educators around the North Central region will be retiring within the next five years. They will take a wealth of institutional knowledge with them. Training the next generation of Extension Educators in state-of-the-art approaches to nutrient management is critical.

Project background:

A needs assessment and professional development program plan were developed in 2015 by a team of eight early Extension Educators, state specialists, faculty, and Extension administrators in the North Central Region. This team was led by Extension staff with The Ohio State University in their School of Environment and supported by an Environmental Resources Center (ERC) Evaluation Specialist with the University of Wisconsin-Extension.

How we determined your needs:

We asked experts what early career Extension educators need to know about a systems approach to nutrient management; we proceeded to ask early career educators about these same topics and then we compared responses. Based on these results, we generated a program plan.

What experts said early career educators need to know:

- How to manage nutrients across multiple spatial (e.g., field, farm, watershed) and time scales, considering both short and long term consequences.
- Understand the upstream/downstream effects of various nutrient management decisions and the range of nutrient inputs, cycles, and entry points in a watershed.
- Current approaches for reducing nutrient losses using a systems approach (e.g., nutrient use efficiency and related metrics for measuring farm sustainability) that promote economic and environmental benefits.
- Awareness of the full costs of nutrient management decisions such as the actual cost of Best Management Practices (BMPs) including and understanding of their limitations, cost vs. benefits, effectiveness, and suitability.
- Familiarity with research, Extension Education programs, and related efforts being implemented in the North Central Region that incorporate a systems approach to nutrient management.
- Knowledge of multi-scale systems of practices/BMPs that can address nutrient runoff and incorporate watershed structures such as wetlands.
- Familiarity with research findings on nutrient decision making and their implications including creating effective messages that engage farmers and address barriers to adoption.

What early career educators want a better understanding of:

- What other educators are working on in terms of nutrient management (e.g., those conducting programs primarily for non-agricultural audiences were interested in what their colleagues conducting programs with agricultural audiences were working on)
- Specific practices (e.g., strip till) and nutrient regulations in their area
- How and why farmers make the nutrient management decisions that they do (more important for educators with natural resource audiences)
- Nutrient benefit and uptake of various plant species

What makes a virtual learning network unique and how can I get involved?

This approach focuses on generating ideas for professional development and research jointly. These learning network calls foster cross-learning between early educators, researchers, administrators, all working on trying to address nutrient management from a systems approach.

We offer early career educators a way to interact with an inter-disciplinary team in a web conference. Our objectives are:

1. To increase their understanding of a systems approach to nutrient management, including nutrient cycles, causes of nutrient losses, and strategies for addressing these losses at the farm, field, and watershed scale.
2. Increase their understanding of the scale of the nutrient management problem in the region and provide effective strategies to address it that incorporate a systems approach.

HOW CAN YOU PARTICIPATE:

The first virtual network meeting will be held in Summer of 2016.

Contact the project coordinator Anne Baird, baird.41@osu.edu or by phone: 614-292-8603 to receive the schedule of virtual meetings and log on information.

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