

NERP Training Program

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RandomCross Consulting



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Why a Training Program?

- Sign-off by Accredited Professional Advisor
 - Create an accreditation process
 - Ensure advisors are competent
- NERP Document is a Regulatory Text
 - Present NERP in learning mode
 - Supplement NERP document

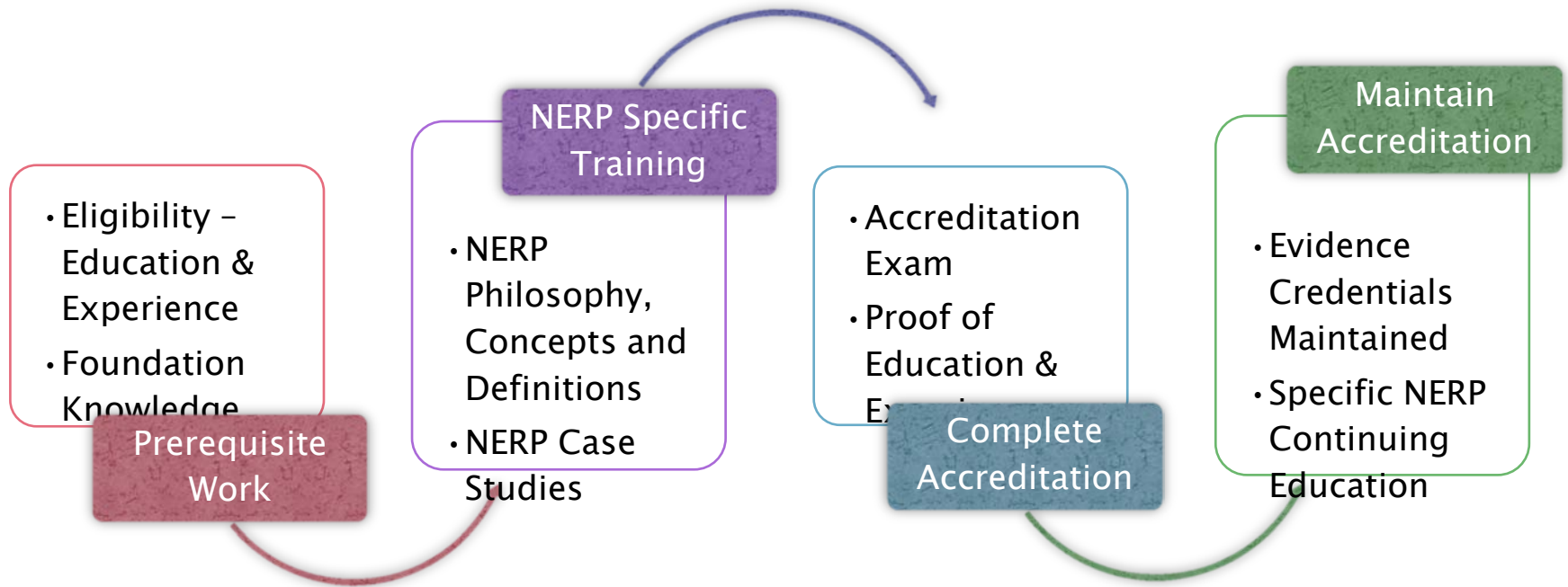


Target Audience

- Agricultural Professionals seeking certification as an Accredited Professional Advisor (APA).
- Project Developers
- Agricultural Producers
- Verifiers
- Government
- Students / Teachers



Accreditation Process APA





**CONGRATULATIONS,
YOU PASSED!**



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APAs will Self-Attest and Provide Documentation

I solemnly swear,
I meet the criteria
for an APA
And
I have the documents
on file to prove it
And
The Project Developer
Agrees



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Who Can Be an APA¹

- PAg, TAg, CCA, PEng
- Agriculture or Environment Education
- Experience in Agronomy
- Minimum 6 yrs Combined Education & Experience

¹ Following the NERP Protocol



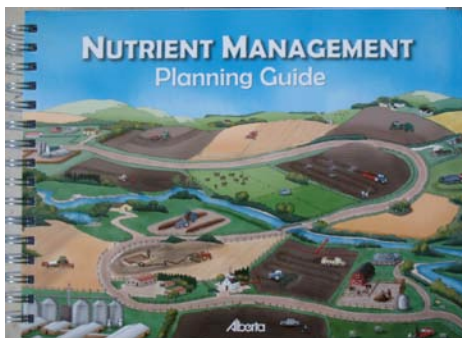
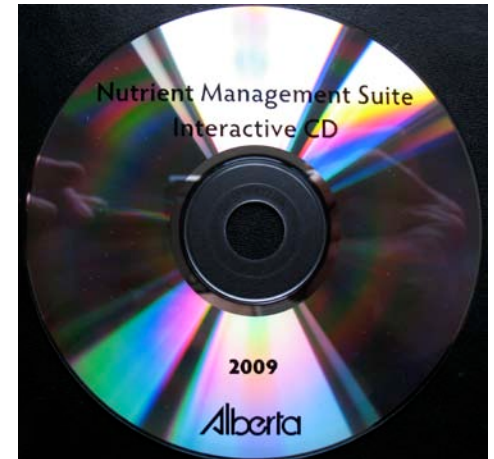
Who Would Make a Good APA

- Understands Soils and Landscapes
- Understands Soil N Cycle
- Knows Cropping Practices
- Knows Fertilizer Products
- Understand GHGs and offsets
- Competent in 4R Nutrient Stewardship
- Thoroughly Familiar with NERP
- Legally entitled to sign-off on regulations



NERP Course Material

- On-line course
- First edition will not be fancy
- Make use of existing material
- Modular

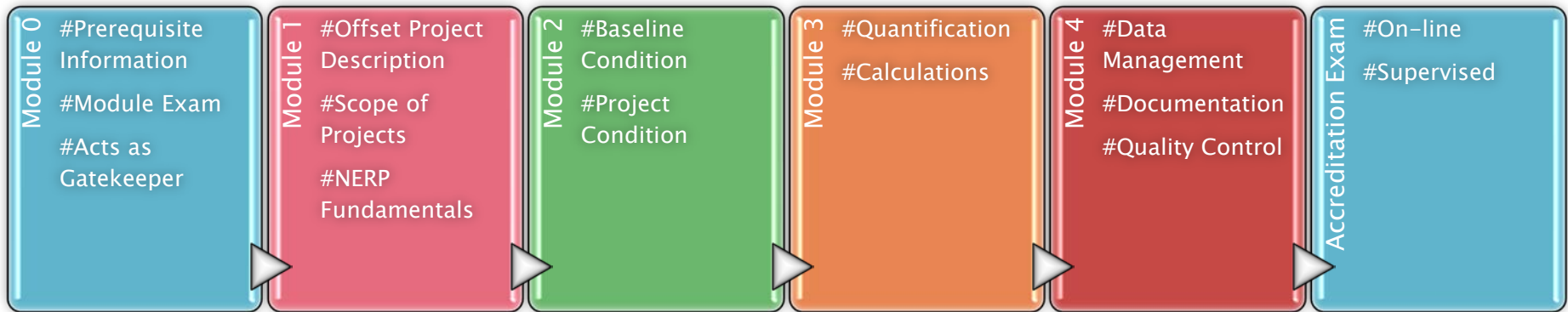


- Course Material Free
- Substantial Exam Fee



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Modular Training



Module 0

Prerequisite Material

- Screen for education and experience
- Probe knowledge base
- Regulatory framework
- 4R Nutrient Stewardship

- Module exam acts as a gatekeeper



Learning Objectives

Understand the 4R Nutrient Stewardship Approach to nutrient management

Key Concepts and Definitions:

Three pillars of sustainability

Best management practices

4R's Source, Rate, Time, Place

Learning Activity

Complete the *Know Your Fertilizer Rights* self study module (Article and Exam) available on the IPNI web site.

[<Link>](#)



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Earn 1 CEU in Nutrient Management

Editor's note: This is the first article in a five-part series from the International Plant Nutrition Institute titled "Know Your Fertilizer Rights," sponsored by The Fertilizer Institute and the Canadian Fertilizer Institute. The series is based on fertilizer best management practices structured around the "4R" nutrient stewardship concept. For more information, visit www.ipni.net.

Know your fertilizer rights

By Tom Bruulsema, International Plant Nutrition Institute, Guelph, ON, Canada; **Jerry Lemunyon**, USDA-NRCS, Fort Worth, TX; and **Bill Herz**, The Fertilizer Institute, Washington, DC

This article describes a new, innovative approach to best management practices (BMPs) for fertilizer known as 4R nutrient stewardship. It ensures that the right source (or product) is applied at the right rate, right time, and right place. This simple concept can help farmers and the public understand how the right management practices for fertilizer contribute to sustainability for agriculture. Getting practices "right" depends on important roles played by many partners including farmers, crop advisers, scientists, policymakers, consumers, and the general public.

Sustainability

The increasing number and importance of issues surrounding the management of crop nutrients makes it



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4R Training

- The 4R Nutrient Stewardship approach is a universal and comprehensive approach to nutrient management.
- NERP is far more narrowly focused, deals with N nutrition and nitrous oxide emissions.
- 4R training programs complement the NERP training.

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Sustainability

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CONTINUING EDUCATION

Self-Study Course

Earn 1 CEU in **Nutrient Management** by reading this article and completing the quiz at the end. CCA's may earn 20 CEUs per two-year cycle as board-approved self-study articles. Fill out the attached questionnaire and mail it with a \$20 check (or provide credit card information) to the American Society of Agronomy. Or, you can complete the quiz online at www.certifiedcropadviser.org (\$15 charge).

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The four fertilizer rights: Selecting the right source

By Robert Mikkelson, International Plant Nutrition Institute, Marcel, CA; **Greg Schwab,** University of Kentucky, Lexington; and **Gyles Randall,** University of Minnesota, Waseca

The Four Fertilizer Rights (4R) concept was developed to connect the ideas of selecting the right source, right rate, right time, and right place for nutrient stewardship. The first article in this series (see March-April 2009 *Crops & Soils*, page 13) discussed the use of these "rights" for getting the best value from applied

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Know your fertilizer rights: right place

By T.S. Sharrell, U.S. Northeastal Director, International Plant Nutrition Institute, West Lafayette, IN; **G.P. Laland,** Scientist, Production Systems Agency, Indian Head Research Farm, Indian Head, SK, Canada; and **F.J. Yin,** Professor of Agronomy, Department of Agronomy, Purdue University, West Lafayette, IN

The 4R nutrient stewardship concept defines the right source, rate, time, and place for fertilizer application as those producing the economic, social, and environmental outcomes desired by all stakeholders in the plant ecosystem. This concept was introduced by Bruhaema et al. (2009) in an earlier article in *Crops & Soils* magazine. Following that article, subsequent authors discussed concepts of using the right source (Mikkelson et al., 2009), the right rate (Phillips et al., 2009), and the right time (Stewart et al., 2009). This article concludes

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The four fertilizer rights: timing

By W.M. Stewart, International Plant Nutrition Institute, Norcross, GA; **J.E. Sawyer,** Iowa State University, Ames, IA; and **M.M. Alley,** Virginia Tech, Blacksburg, VA

Effective and appropriate nutrient management for any crop can be described and summarized using the four rights (4R) nutrient stewardship framework: the right source, rate, time, and place. The principles within 4R nutrient stewardship are not new; in

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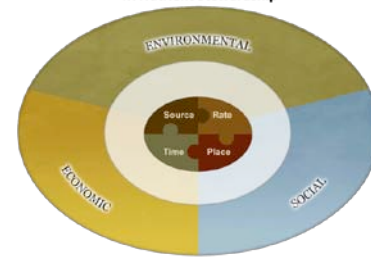
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Selecting the right fertilizer rate: A component of 4R nutrient stewardship

By S.B. Phillips, International Plant Nutrition Institute, Owens Cross Roads, AL; **J.J. Camberato,** Purdue University, West Lafayette, IN; and **D. Leikan,** Fluid Fertilizer Foundation, Manhattan, KS

The 4R nutrient stewardship concept defines the right source, rate, time, and place for fertilizer application as those best suited to achieve the economic, social, and environmental goals desired by all stakeholders to crop production systems. While this

4R Nutrient Stewardship



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NERP Specific Modules

- Covers all the NERP specific definitions and terminology
- Deals with the nitty-gritty of the protocol.
 - How to develop the baseline condition.
 - How to do the project calculations.
 - How to keep records.
- Will provide a series of case studies of increasing complexity.



Learning Objectives

Achieve competence in performing baseline calculations

Key Concepts and Definitions:

Ecodistrict

Crop Event

Direct Emissions

Indirect Emissions

Learning Activity

Your client is Carbonaro Farms. Develop a baseline using the following info.....



Accreditation Exam

- On-line Multiple Choice
- Supervised
- Substantial exam fee
- Timeout period for failures
- Not a challenge exam
- Must complete training to qualify for exam
- Bar will be set high on pass/fail



Challenges

- Further refinements of protocol
 - Soil temp for fall application
- NERP tool development
 - Convert GPS to LLD to Ecodistrict
- Access to materials and information
 - Copyright
 - Maintaining Links



Verifiers (Auditors) are professional skeptics. They are paid to find things that are wrong and they will always earn their wages.



Time Lines

- On-line program available early 2011
- Beta version December 2010
- Seminar version later this fall
 - Cover material in small group
 - Try out material, get feedback
 - Will include exam so chance to turn out some APAs
- NERP & 4R Ready Checklist – Oct 2010
 - What to do to include 2011 Crop Year
 - Create Awareness of 4R Nutrient Stewardship





Frequently Asked Questions www.interactivestandards.com

Thank You



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