

NEW NUTRIENT MANAGEMENT PLANNING EDUCATION MATERIALS

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Project Effort and Objectives

Consistent use of nutrient management planning has been identified by USDA/NRCS as lacking on many farms in the USA (Conservation Effects Assessment Project (CEAP), Assessment of the Effects of Conservation Practices on Cultivated Cropland in the Upper Mississippi River Basin). It has also been shown that all resource concerns are rarely achieved with a single conservation practice. Site specific nutrient management planning to minimize nutrient loss and conservation practices to control soil erosion, surface runoff, and nutrient loss from fields should be implemented as a combination of efforts. When combined, these practices have the capacity to reduce agricultural non-point source pollution and to enhance economically sustainable crop production. However, increased nutrient management practice implementation requires increased producer awareness and well informed crop advisers.

A team of cooperating organizations and agencies that consists of The Fertilizer Institute (TFI), United States Department of Agriculture Natural Resources Conservation Service (USDA/NRCS), International Plant Nutrition Institute (IPNI), and Iowa State University (ISU) are working together to bring expertise and coordinated outreach in an effort to help producers increase implementation of site-specific nutrient management. The primary goal of this effort is to increase awareness of site-specific nutrient management and concurrent benefits to crop production, environmental quality, and economic return. With such understanding, the number of production acres implementing site specific nutrient management planning will increase as will the effective and efficient use of nutrients for crop production.

The specific objectives of the effort are to: 1) develop an education program that will provide producers and service providers (NRCS employees, Certified Crop Advisers (CCAs), Third Party Service Providers (TSPs), and retail fertilizer personnel) with enhanced knowledge about site specific nutrient management planning and environmental impacts; 2) develop a set of educational materials to support nutrient management education programs; and 3) develop educational materials specifically designed for service providers to support producer education programs.

An essential component of the effort is to provide an overview document that outlines the components of soil fertility and nutrient best management. Topics include the 4R nutrient stewardship; soil fertility and plant nutrition overview; nutrient management, including nitrogen, phosphorus, potassium, sulfur, calcium and magnesium, micronutrients; soil pH and liming; soil sampling; and integrated economic and environmental nutrient management.

The approach of the effort at addressing specific nutrient management practices together with water quality impacts is unique. Working together as a cooperating group, the hope is that developed education materials and training curricula using this novel approach will serve as a multiplier of efforts and enhance the variety of groups and number of individuals reached to ultimately increase the number of production acres implementing site specific nutrient management planning. The end result will be a benefit to water and air quality as well as production sustainability.

Project Education Materials

Education materials developed for the project include ten chapters, with associated PowerPoint presentations and scripts covering most relevant aspects of site-specific soil fertility and nutrient management. Initial materials are currently available on the Iowa State University, Agronomy Extension Soil Fertility Web site (<http://www.agronext.iastate.edu/soilfertility/homepage.html>). They are located under the Nutrient Topic, “Site Specific 4R Nutrient Management Planning” (<http://www.agronext.iastate.edu/soilfertility/nutrienttopics/sitespecific4r.html>). Authors of the materials are John Sawyer, Antonio Mallarino, and Agustin Pagani (Iowa State University). They were developed in cooperation with Lara Moody, The Fertilizer Institute (TFI), John Davis, Natural Resources Conservation Service (USDA-NRCS), and Steve Phillips, International Plant Nutrition Institute (IPNI).

All final project materials will eventually be available on ISU, NRCS, and TFI web sites.