



Manure Management Education Needs Determination and Response in Minnesota



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Introduction

In year 2000, Minnesota adopted new feedlot rules that upgraded manure management requirements, including:

- > Nutrient Management Plans for all feedlots larger than 300 animal units (AU) by 2006
- > Soil tests for fields where manure is to be applied, and nutrient analyses of the manure
- > Adherence to University of Minnesota (UM) nitrogen rate recommendations for all land where manure is applied
- > Restrictions on phosphorus application rates
- > Records of all manure applications
- > Protection of environmentally sensitive areas where manure is applied

Livestock producers needed to know what the new requirements were, and how to implement the associated practices. A UM and inter-agency team began planning immediate education programs for information dissemination, and developed a longer term approach for producer information needs assessment and delivery.

Education Program Objectives

- > Inform livestock producers and agricultural professionals about registration, permit, and manure management requirements of new state feedlot rules.
- > Determine longer term information needs directly from producers.
- > Deliver a suite of information and tools necessary to meet the water quality objectives of the rules.
- > Present a unified message from Extension and state and federal agencies about appropriate practices for land application of manure and crop nutrient management planning.

Partnerships and Funding

Program guidance was provided by a committee of representatives of UM Extension, the MN Pollution Control Agency (MPCA), USDA-NRCS, and the MN Department of Agriculture.

Education materials and regional staff trainings were developed and delivered by teams of UM Extension, MPCA, and NRCS staff.

Local partners included County Feedlot Officers, Soil and Water Conservation District staff, local Extension staff, and staff of livestock producer organizations.

Core funding was provided through a Section 319 EPA grant.

Immediate Response

1. The interagency team prepared and assembled publications (photo at right) and PowerPoint presentations.
2. A "train-the-trainer" approach was employed in regional meetings to prepare local partners to host county level information meetings, using the information resources assembled and developed by the team.

The first year of information meetings focused on:

- > Feedlot registration
- > Permits
- > Land application of manure, general requirements

The focus of the second year was manure management and land application. Three topics that affect all size operations were selected for emphasis:

- > Rates of application
- > Management of environmentally sensitive areas
- > Record keeping

Participation

First Year

- > 338 county and regional staff were trained at six regional meetings.
- > Over 4,000 livestock producers and others attended information meetings in 60 counties.

Second Year

- > 222 county and regional staff were trained at nine regional meetings.
- > Approximately 1150 livestock producers attended sessions in 43 counties.

Education Materials



Pocket Record Book



Determination of Education and Information Needs

Farmer focus groups were held after completion of the second year of producer information meetings described at left, with the objectives of determining:

1. Adoption of recommended manure management practices over time.
2. Preferred methods of education.

Methods: A pair of focus group discussions was conducted in each of four counties across the state. Each pair was composed of one group of farmers that had attended the information meetings, and one that had not. A questionnaire was administered, followed by a facilitated discussion of selected questions from the questionnaire. Focus groups were organized and conducted by John Vickery, contract consultant.

Key Findings*

- > Suitable forms for field-by-field record keeping are needed.
- > More private sector agricultural professionals are needed to provide manure/nutrient management plans.
- > Many farmers either don't use or seldom use the World Wide Web to get information. They prefer publications and workshops.
- > Preferred topics for workshops and field days include: soil P levels and manure application rates in field selection; managing sensitive areas; and manure application technology.

*Complete methods and results of the focus group study are available at <http://wrc.coafes.umn.edu/outreach/focus-groups.htm>. The study has been accepted for publication in the Journal of Extension.

Response to Findings

Record Keeping Forms

Pocket-size field record books (bottom center photo) and office-size record sheets for manure applications were designed and distributed through county feedlot offices in 2004.

Agricultural Professional Training

> In 2004, UM Extension and agency partners began providing annual training for agency staff and agricultural professionals on nutrient/manure management and planning.

> The UM is participating with the Great Lakes Regional Water Quality Program team to develop training for Technical Service Providers.

Nutrient Management Planning for Farmers

To assist the producer in understanding nutrient and manure management practices and planning, 60 small-group workshops have been held since 2003, reaching about 600 producers. Each producer writes a two-field nutrient management plan for his or her farm during the session. Follow-up surveys indicate that most participants complete the plan for the whole farm, or hire a professional to do it.

On-Farm Trials and Field Days

Beginning in fall 2004, on-farm manure-rate replicated field trials are being installed on eight farms in each of two years. Field days will demonstrate application equipment and feature farmer and specialist presentations on manure management.

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