



## USDA-CSREES 2005 National Water Quality Conference

### Manure Management Education Needs Determination and Response in Minnesota

*Abstract: Minnesota state feedlot rules, revised in year 2000, required higher standards for manure management for all feedlots. The University of Minnesota and state agencies needed to determine what information was required by feedlot managers and find ways to deliver it. Our objectives were: 1. Select and deliver information needed by producers for immediate implementation. 2. Determine longer term information needs directly from producers. 3. Deliver a suite of information and tools necessary to meet the water quality objectives of the rules. To meet these objectives, a two-year program of regional train-the-trainer and county-level producer meetings was launched to deliver information needed for immediate rules implementation. In the second year, eight producer focus groups were held to determine longer term information needs. A follow-on project began leading producers through preparation of field-specific manure/nutrient management plans for their own farms. The program was designed and delivered by staff of UM Extension, the MN Pollution Control Agency, County Feedlot Officers, Soil and Water Conservation Districts, and the USDA-NRCS. Primary funding was from the EPA-319 program. Requirements in the rules for land application of manure were anchored in nutrient and manure research-based recommendations of the UM, allowing extensive use of existing Extension publications and tools in the education programs. Additional publications were developed as necessary. Over 4,000 producers attended the first-year county sessions and 1,150 the second-year sessions, where specifics of feedlot registration, permitting, and land application were delivered. Concurrently, eight focus groups held in four counties highlighted key barriers to adoption of specific best management practices and identified producer preferences in education programs (see <http://wrc.coafes.umn.edu/outreach/focus-groups.htm>). Field-specific nutrient management plans have subsequently been developed by approximately 600 producers in small-group workshops, with follow-up surveys determining rates of and barriers to plan implementation.*

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