

Idaho

Partnerships for Livestock Environmental Management Systems

Nationally, Idaho's dairy industry generated more than \$829 million in milk receipts in 1998 and churned out more than \$4.1 billion for Idaho's economy. The state ranked sixth in milk production in the nation, behind California, Wisconsin, New York, Pennsylvania, and Minnesota, and supported a total number of some 302,000 dairy cows, a 50 percent increase in just five years. In addition, behind every 10 dairy cows are 11 replacement heifers, bulls, and dry cows. In 1999, the Idaho legislature approved legislation developed by the Idaho Dairymen's Association, the Idaho State Department of Agriculture, and Idaho Department of Environmental Quality which places regulatory authority over the dairy industry with the ISDA. In order to satisfy the regulatory mandates of this legislation, the web-based OnePlan Comprehensive Nutrient Management Planner was developed, and all 846 Idaho dairies completed a comprehensive nutrient management plan by June 2001. A second web-based planning tool, the OnePlan Conservation Planner, was developed in 2003 to assist producers in meeting their resource management concerns and TMDL requirements. Upon successful implementation of an approved conservation plan, the producer is granted regulatory certainty (A Certificate of Sufficiency) from future regulation for up to ten years.

Objective and scope

The Idaho Livestock Environmental Management System pilot project was designed to give small and mid-size regulated dairy producers an opportunity to learn about, and complete, a condensed EMS in a single day. The Idaho pilot test focused on eleven dairies of 65 to 1000 milk cows in the Fifteen Mile Creek Watershed, which is implementing TMDL requirements (Figure 1). The pilot team introduced producers to EMS as: "a business management system that helps you develop your own strategy for integrating environmental considerations into production decisions." The Idaho EMS team developed a 12-page condensed workbook and a 25-page reference guidebook, tailored for Idaho dairy producers. These materials were pre-tested with 12 Idaho stakeholders, including representatives from the NRCS, Idaho Environmental Protection Agency,

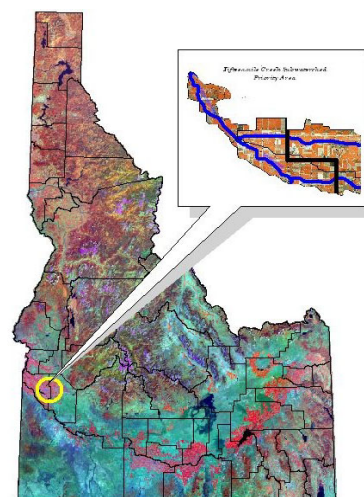
Idaho Department of Environmental Quality, University of Idaho, Idaho State Department of Agriculture, Idaho Cattle Association and Idaho Dairymen's Association.

Figure 1. The Fifteen Mile Creek Watershed includes portions of urban Boise and Meridian, in addition to dairy and row crop farms. The Total Maximum Daily Load (TMDL) implementation plan for the watershed addresses the sources of agricultural sediment, nutrients, and bacteria that impact the Lower Boise River from Fifteen Mile Creek.

Lessons from the Field

I went to school last week. The school of hard knocks. I had 43 dead animals. My uncle had transferred the insecticide from the drum and put it in the wrong sack, and it looked like iodized salt and we fed it. On the way to Idaho Mortality my nose told me what had happened. I understand now the reasons for checks and balances. I thought on a small farm you didn't need them.

-- Idaho dairy producer, 210 milk cows, 100 acres, farming beets and onions, July 2003



Team members met individually with producers at NRCS field offices and introduced them to the concept and process of EMS.

In evaluating the project, the Idaho team relied on the “diffusion of innovation model” to analyze depth interview and evaluation data gathered from stakeholders and dairy producers. The effects of perceived attributes of an innovation (compatibility, relative advantage, trialability, observability, and complexity) on the rate of adoption have been studied as independent variables in more than 2,000 empirical diffusion research studies, a significant number of them agricultural. We identified ten farmer adoption decision factors, including conservation values/stewardship; planning/future orientation; environmental concerns; solutions/practice selection options; practice costs versus productivity benefits; regulatory issues; environmental liability; technical help; information availability; and financial help. These farmer adoption decision factors were then assigned to one of the five diffusion of innovation variables and analyzed within the framework of the adoption model.

Lessons learned

- ✓ An EMS approach has some degree of compatibility with the Idaho producers’ cultural values and past experiences. The concepts of *conservation values* and *stewardship* are not perceived as stand-alone values, however, but as unsought but advantageous outcomes of financially successful farming practices and a value system oriented toward the health and safety of family and farmstead. Producers tended to discuss the term *environmental* as a specific locus: their own ground; “a safe place,” as one producer stated. These producers see the environment as exceedingly local, as homestead and farm.
- ✓ Producers liked the EMS approach as it helped them *identify problems*. A number of producers responded that solutions are available, but the difficulty is identifying the problem. Producers

also stated the EMS approach made them more *aware of environmental issues*.

- ✓ Producers said that the opportunity to revise their EMS plan was a strong advantage, not liking a plan that locked in future behavior.
- ✓ The potential of EMS to improve environmental liability protection drew strong positive statements, and could be the primary specific cause for adoption of an EMS by this group.
- ✓ A number of producers offered the opinion, without prompting, that an EMS held a public relations value.
- ✓ The cost/benefit questions did not resonate with most producers, but there were favorable “suspicions” regarding the future value of EMS. This could be linked to the perceived value of EMS as a problem-solving tool.
- ✓ Regulatory issues prompted little discussion, as Idaho producers are already fully regulated.

In summary, producers approve of the EMS approach for creating environmental awareness and as a problem solving mechanism, although it did not satisfy the need for problem-solving *information*. The EMS approach is seen as particularly advantageous as a public relations tool and as a potential environmental liability protection document. Observable successes of EMSs at the producer level are not available and this factor limits adoption. The agricultural stakeholders we interviewed held similar opinions about EMS as a good planning opportunity. Stakeholders also agreed that an EMS could address agricultural environmental liability concerns.

Future direction

We conclude that a self-directed approach, with self-explanatory materials, does not offer sufficient depth of understanding to demonstrate the advantages of an EMS to small and mid-size producers. Also once a target public is fully regulated, as the dairy operators are in Idaho, there is little incentive for them to take a serious look at a management system that does not offer financial reward. These two conclusions suggest the need for a revised EMS approach for the small and regulated farmer.