

Iowa

Partnerships for Livestock Environmental Management Systems

Iowa has 12,000 farms with beef feedlots, and while the majority are less than 100 head capacity, there are approximately 200 that are large CAFOs and approximately 1000 that are medium CAFOs. Currently fewer than 35 feedlots have NPDES permits. The state and the industry are working to bring more feedlots into regulatory compliance. Iowa DNR is collaborating with Iowa Cattlemen, Extension and NRCS to develop and permit “innovative technologies” under the alternative performance standards section of the new CAFO regulations. A central element to the effectiveness of these technologies is superior management. An environmental management system (EMS) is a systematic producer-driven *plan, implement, check and improve* method to address and manage high priority environmental aspects of the operation. Iowa’s cooperative initiative to develop and implement a feedlot environmental management compliance assessment aims to meet the needs of both producers and regulatory agencies. The project also pilots a training process, as Iowa has few third parties qualified to assist producers with completing permit applications and adopting effective methods for protecting air and water quality.

Approaches

Working with the Iowa Beef Center, the pilot project developed an assessment tool for non-permitted feedlots (under 1000 head) that was tested for consistency of results by multiple teams of extension staff on a single feedlot. A draft of the assessment tool was also used at 12 field days with beef and dairy cattle producers. The field days focused on management strategies as well as design of open feedlots and manure management structures. The pilot project is in the process of developing an EMS for the Iowa State University Beef Nutrition Farm.

Iowa beef producers were invited by Iowa State University Extension Livestock Field Specialists to attend information and training sessions on EMS. Producers represented feedlots with 200-8000 head capacity. Thirty-eight producers representing 35 operations attended four 2-part workshops in March and April, 2003. Follow up sessions were held on-farm with individuals or in small group meetings.

Speaking of EMS...

“This program has totally changed the way we think about environmental stewardship. Instead of waiting for DNR to force us to make changes after a problem, we work to identify priorities within a budget and proactively begin to address these needs in an orderly fashion – always focusing on the greatest environmental bang for the buck and always making improvements month to month.”

-- Iowa beef producer

The curriculum for the project was built around an EMS Guidebook developed by the University of Nebraska. The first day of the program aimed to introduce producers to the concept and essential components of EMS and to changes in environmental regulations impacting feedlots.

Before the second day of the workshop, producers had completed their environmental policy statements, as well as a complete feedlot assessment in conjunction with a third party (a Project Coordinator and/or Extension Engineer). Producers had also used their policy statement and completed assessment to identify priority issues.

The second day of the workshop began with producers sharing policy statements and assessment findings with other participants. Workshop attendees developed action plans for their operations, with timelines, measurable objectives,

and documentation requirements for each priority identified during the assessment. Producers also established standard operating procedures and emergency action plans with responsibilities assigned according to priorities identified during the assessment. Finally, workshop participants discussed procedures for addressing objectives in their action plans that included changes to the physical plant as well as changes to management practices.

Jim Venner, Project Coordinator, visited all of the farms to discuss and observe one-on-one how the producer had progressed with his or her EMS. Key points of discussion included: planning, documentation, and measuring improvement. Two small group meetings were held on farms to share ideas between farmers on how they were using their EMS to address priority issues in their operation.

Results to date

Participants were surveyed in November, 2003 on their progress and attitude toward their EMS. Ninety percent of the participants responding plan to continue working on their EMS. Two-thirds regularly refer to their policy statement for direction and most have shared it with others inside and outside of their operations. Approximately 75

percent have developed written action plans for priority issues and are following these plans to reach their objective. A large majority of the participants sought professional advice and have made changes to improve their physical plant, management practices, and documentation as it relates to environmental performance of their feedlot because of this program.

Lessons learned

- One-on-one or small group on-farm education is essential. Initial large group meetings were effective in introducing the program, however individual on-site consulting proved to yield greater results regarding the producers' operations.
- Producers will customize printed materials to fit their farm, but need an effective framework to start from. While we do not want to present a "check the box" approach, some form of an EMS template is helpful in getting producers started.
- Documentation tools must be kept as concise and simple as possible. Producers have a limited amount of time to devote to paperwork and are more willing to complete documentation if it can be performed quickly. The EMS cannot be costly in time or resources if it is to be adopted and successful.
- Leverage is helpful. Producers under the more regulatory pressure were most interested and cooperative. These were the ones that could see an immediate pay-off from EMS. Unregulated producers appreciated the program, but not the paper work.
- Producers have a strong stewardship principle and the policy statement helps them quantify and implement these principles and share their views with others.
- Voluntary programs that provide producers with the education and tools to identify and address environmental priorities can affect environmental performance more quickly than mandatory or regulatory programs alone.

EVALUATION RESULTS TO DATE

❖ *Producer response to a survey nine months after initial EMS workshop:*

Continuing with EMS: **19 producers**

Completed policy statement: **91%**

Shared policy statement with others: **60%**

Referred to policy statement in previous 3 months: **73%**

Developed action plan to address a priority: **77%**

Completed one or more priorities: **81%**

❖ *Percentage increase in the number of farms that have or plan to implement the following practices as a result of their EMS:*

Analyze manure for nutrients: **100%**

Change manure application location or rate: **58%**

Built clean water diversions: **120%**

Built solid settling structures: **200%**