



Photo by B-Wolfgang Hoffman

“A lot of farmers think they’re doing things environmentally, until they go through this kind of assessment. They discover that they might be able to do things differently to increase environmental stewardship without necessarily spending a lot of money and making a lot of changes. This Partnerships project should help farmers assess the environmental well being of their farm as well as their environmental compliance.”

*Joe Miller,  
American Farm Bureau Federation*

# Partnerships for Livestock Environmental Management Assessment Systems

This project develops and evaluates a support system for producers to constructively address priority state and local environmental and health issues while sustaining their livestock enterprises.

## What is a livestock Environmental Management System?

A livestock environmental management system (EMS) supports integrating information on environmental risks into existing farm management decision processes. The EMS framework helps producers evaluate existing facilities and management systems, and then identify opportunities to take voluntary actions that reduce environmental risks, ensure compliance with Federal, State and local requirements, and support farm financial management. There are different ways of designing and instituting EMSs. They won’t be effective if they don’t make sense to farmers. They won’t be credible if they don’t address environmental requirements.

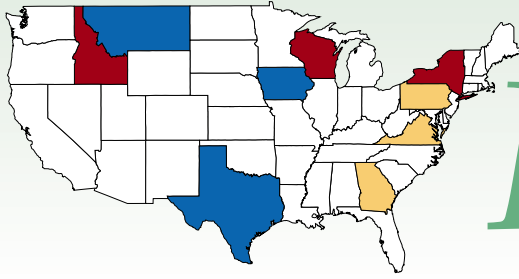
This project focuses on three major groups of livestock commodities: poultry, beef cattle, and dairy cattle. Each of these industries encompasses a diverse array of production systems, each with its distinctive environmental needs and concerns. Our method is to develop model environmental management assessment systems, and then to work with respective producers and industry representatives in tailoring these models for a variety of beef, dairy and poultry production systems. This is an experimental program of inventing, adapting, evaluating and comparing at least 9 different approaches—in three distinctive states for each of the three commodity

groups. We’ll learn about policy needs, about EMS design, and about EMS application on farms.

Several agricultural organizations in the U.S. as well as foreign countries have developed their own environmental risk assessment support systems. Lessons learned from these initiatives, in combination with results from this university/industry Partnerships project, will allow educators, observers and industry leaders to evaluate future roles for livestock EMSs, and factors that influence their success.

This four year project (beginning October 1, 2000):

- develops both comprehensive and user-friendly risk assessment fact sheets and worksheets, including dynamic web-based tools and resources directly accessible to producers;
- invites stakeholder input through roundtable discussion of supportive strategies for reducing detrimental impacts of livestock production on the environment and public health;
- works with producer organizations to develop, pilot test and evaluate environmental management assessment system materials and delivery approaches in nine states (Georgia, Pennsylvania, Virginia, New York, Idaho, Wisconsin, Montana, Iowa, and Texas);
- ends with a review and evaluation of results with stakeholders and policy makers, to identify the future roles and the support needed for agricultural environmental management systems.



# Pilot States

## Poultry



Photo from U.S. Department of Agriculture

"The bottom line for this type of program is it provides producers with the tools to ensure environmental excellence and then be able to demonstrate that environmental excellence. That's the carrot for the producer."

John Starkey,  
U.S. Poultry & Egg Association

### Georgia (Lead State)

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*Partners include: Georgia Cooperative Extension Service, Georgia Poultry Federation, Department of Agriculture, and Farm Bureau*

Pilot testing in Georgia is coordinated with on-going producer training and

certification programs. The Georgia poultry industry has adopted a voluntary Nutrient Management Planning program. A first phase of training producers through extension education programs has been completed. Follow-up training is being conducted county

by county. The third phase will train for operator certification. The project will assess factors affecting producer participation and the effectiveness of voluntary program components. It also will identify areas in need of improvement. Acceptance by both producers and integrators is critical to project success.

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*Other partners include: Pennsylvania's State Cooperative Extension, Conservation Districts, Farm Bureau, PA Farm-A-Syst, and PennAg Poultry Council*

Pennsylvania has a significant and species diverse poultry industry spread across the state. This producer environmental assessment program

can highlight agriculture's environmental stewards and enhance the state's environmental status. Partners will identify ten cooperating producers from each of the broiler, turkey, and layer industries to test the ability of the assessment tools to serve different poultry enterprises. The evaluation process includes interviews and surveys to determine the assessment tools' strengths, weaknesses, and effectiveness in supporting voluntary actions to reduce environmental risks.

### Virginia

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Virginia ranks 4th in the nation in turkey production, 8th in broilers, and 27th in eggs. Nearly all of Virginia's poultry industry is located in the Chesapeake Bay watershed. A producer environmental assessment program will promote stewardship of this sensitive resource. Project partners are cooperating to develop, promote, deliver, and evaluate an assessment instrument for all elements of Virginia's poultry industry. The project builds on an educational program mandated by state legislation that requires permits for all poultry operations with 10,000+ birds (about 80% of the industry).

# Dairy

## New York (Lead State)

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New York's project will build on the existing Agricultural Environmental Management (AEM) program. The AEM process coordinates a voluntary program to assist New York producers in developing Comprehensive Nutrient Management Plans that will sustain their farms. PRO-DAIRY, a Cornell Cooperative Extension team, with its partners is using this material in the ongoing effort to update and improve existing environmental management system assessment tools. Input from individual producers, discussion groups, and organized producer groups will improve the tools and the process.

## Wisconsin

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*Consumer Protection, and of Natural Resources, the USDA Natural Resources Conservation Service, and the University of Wisconsin Cooperative Extension Service, Nutrient and Pest Management Program, and Farm\*A\*Syst*

Wisconsin's pilot project will evaluate the effectiveness of a dairy environmental management system in supporting voluntary actions that reduce environmental risks and improve compliance with existing regulations. The project will collaborate with the state-wide Wisconsin Agricultural Stewardship Initiative and its Discovery and Pioneer Farms on which intensive environmental monitoring is being established.

## Idaho

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*Partners include: Idaho State Department of Agriculture, Idaho's Soil Conservation Districts, the Idaho Dairymen's Association, Farm Bureau, and Cattlemen's Association, the University of Idaho, and offices of USDA/NRCS, and EPA*

The Idaho Pilot builds on its prototype web-based Idaho OnePlan, which helps farmers develop individualized conservation plans utilizing a GIS interface. The Idaho Dairymen's Association (IDA) is collaborating to

"The environmental assessment process is an excellent tool for producers to identify and address potential areas of risk on their operations. Our nation's dairy producers aim to be good environmental stewards. By assessing their own environmental practices, producers can meet voluntary stewardship goals and take steps to simplify compliance with applicable environmental regulations. In addition, it's fair to say that as producers address their environmental concerns they may find payoff in other areas that may impact the bottom line."

*Carissa Itle,  
National Milk Producers Federation*

develop, test, and evaluate the assessment tools with its members. IDA has taken the lead in bringing every dairy into compliance with the Clean Water Act through Nutrient Management Plans. With environmental challenges posed by a rural-to-urban population shift, IDA will use the new EMS tools for odor and facility siting to continue its pro-active environmental stewardship.



Photo from U.W. -Madison Farm\*A\*Syst

# Beef

## Montana (Lead State)

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Pilot testing the Beef environmental assessment tools in Montana focuses on thirty ranches that have winter feeding areas, riparian areas and confinement facilities. At educational meetings, participating producers will share their responses to the assessment tools, and consider how this program will progress beyond the fourth year of the project. The Montana pilot project will provide the national program technical expertise for beef herd management issues.

## Texas

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*Partners include: County Extension Agents in East, North and Northwest Texas; owners of small feedlots and grazing operations; Texas Cattle Feeders Association; Texas Farm Bureau.*

The Texas Pilot seeks to enhance manure value and marketability, and consequently reduce manure accumulation in intensive beef production areas. It builds on water-quality projects that successfully promoted

(a) removal of large manure stockpiles from cattle feedyards; (b) grazing management techniques to protect riparian areas and reduce erosion; (c) composting to add value to manure; (d) frequent manure harvesting from feedyard surfaces to reduce dust, odor and the ash content of manure (increasing its fertilizer potency); and (e) nutrient planning for land application systems.

## Iowa

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Thousands of open beef and dairy feedlot operations in Iowa may need permits under proposed EPA rules. 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.



*Photo from U.W. -Madison Farm\*A\*Syst*

"The members of the National Cattlemen's Beef Association are supportive of the ongoing stewardship that America's ranchers are currently practicing, and are continuing to look at new ideas that encourage sustainability for their families and industry. NCBA has concerns that as rules and regulations are put together, they shouldn't be 'one-size-fits-all.' Each region and livestock species is unique."

*Robert Lee,  
Owner/Operator of Lee Ranch,  
Judith Gap, Montana;  
National Cattlemen's Beef  
Association Chairman of Property  
Rights and Environmental Issues  
Committee.*



Photos from U.W. -Madison Farm\*A\*Syst

## What is an “EMS” and what is its value?

An Environmental Management System adds a conscious evaluation of environmental risks into existing management systems. An EMS seeks to reduce the potential for detrimental environmental impacts in all three phases of a productive enterprise: inputs, production processes, and outputs. International guidelines have been developed for EMSs (ISO 14001<sup>1</sup>). These guidelines provide a logical framework for organizing a program to identify, and voluntarily address, environmental risks in production systems. Managers examine environmental impacts in relation to an enterprise’s stated environmental policy, and devise an appropriate action plan.

### More about Agricultural Environmental Management Systems

An agricultural Environmental Management System helps producers identify, understand and prioritize

environmental risks associated with their farming and processing activities. The assessment process (often conducted with a 3rd-party technical assistance provider) highlights practices that are regulated, and voluntary actions producers can take to reduce or prevent problems. Within the EMS framework, producers develop and document action plans that support continuous improvements in environmental management. An action plan may address system design, farming practices, operating procedures, equipment and facilities.

Farmers stand to benefit from EMS implementation beyond reducing the likelihood or reality of negative impacts on the environment, family health or community well-being. Particularly when it’s utilized in the context of whole-farm planning, an EMS can advance the profit and quality of life goals of farmers and their families<sup>2</sup>. In addition, use of EMSs



can provide opportunities for farmers to find their own creative responses to reducing water or air pollution impact, rather than finding themselves subject to prescribed requirements or techniques. EMSs may also reduce insurance premiums or improve marketing options. Producers implement and monitor changes that make sense to them, improve their production systems, and enhance their financial, social and environmental sustainability.

<sup>1</sup> Learn about the International Organization for Standardization at [www.iso.ch](http://www.iso.ch) or write to the American National Standards Institute, 11 West 42nd Street, 13th floor, US-New York N.Y. 10036. More information about ISO 14001 requirements also is available at our [www.uwex.edu/AgEMS/livestock](http://www.uwex.edu/AgEMS/livestock) website.

<sup>2</sup> A recent study by Martin Whittaker and Matthew J. Kiernan (“Environmental Performance in Industry: Hidden Risks and Value Potential for Strategic Investors” published February 2000 by Innovest Strategic Value Advisors, Inc. at 225 East Beaver Creek Rd. Suite 300, Richmond Hill, Ontario L4B 3P4) analyzed leading global natural resource based companies. Top environmental performers outperformed their industry rivals by 17% on an annual basis. See [www.environmentalcenter.com/articles/article841/article841.htm](http://www.environmentalcenter.com/articles/article841/article841.htm)



## Who is accountable for the overall project?

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*The Nebraska Team is responsible for assessment tool development and evaluation, and linkages with the national "Livestock and Poultry Environmental Stewardship" (LPES) curriculum for producers and their advisors. LPES involves 30 individuals from 15 land grant institutions and the U.S. Department of Agriculture's Agricultural Research Service and Natural Resources Conservation Service. Nebraska's part-time project coordinator is Jill Heemstra, Cooperative Extension Educator for the University of Nebraska.*  
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*Photos on this page from U.S. Department of Agriculture*