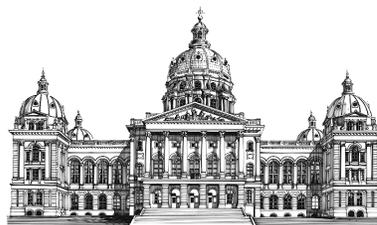

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Integrated Farm and Livestock Management Demonstration Program

ISSUE

This *Issue Review* provides an overview of the Integrated Farm and Livestock Management Demonstration Program.

AFFECTED AGENCIES

Department of Agriculture and Land Stewardship

CODE AUTHORITY

Chapter 466, Code of Iowa

BACKGROUND

The federal Clean Water Act requires each state to establish water quality standards every two years and submit a list of waterbodies that do not meet the standards. Waterbodies that do not meet standards are considered to be impaired and the list is referred to as the Section 303(d) list. The list is prepared by the Department of Natural Resources and submitted to the federal Environmental Protection Agency (EPA) for review and approval.

In 1998, the State of Iowa submitted a list with 54 waterbodies. The EPA approved the 54 and included an additional 247 waterbodies considered as seriously polluted or unhealthy. After a public comment period, the EPA reviewed all data and comments submitted, and issued a final Section 303(d) list that included 159 waterbodies.

The FY 2000 General Assembly passed SF 2371 (Water Quality Initiatives Act) that implemented specific programs to address Iowa's water quality issues. The Integrated Farm and Livestock Management Demonstration Program was one of the programs that identified the Department of Agriculture and Land Stewardship as the administrator.

The intent of the Integrated Farm and Livestock Management and Demonstration Program was to implement a Statewide, voluntary program that demonstrates emerging farm practices that protect the State's water resources and provide other environmental benefits. Program projects focus on livestock production and crop techniques that reduce manure application, nitrogen levels, and tillage. Area farmers are invited to attend educational seminars that

discuss the results of the projects. The Program is in cooperation with community colleges, Iowa State University, and other agribusiness groups.

CURRENT SITUATION

The FY 2000 General Assembly passed SF 2453 (FY 2001 Infrastructure Appropriations Act) that provided \$850,000 from the Environment First Fund for the Integrated Farm and Livestock Management Demonstration Program. Four focus group meetings were held in Marion, Denison, Webster City, and Creston to determine the type of programs that would interest producers. Farm operators and other groups interested in participating in the Program submitted a Request for Proposal (RFP) detailing the type of project that would be conducted, previous research to support the project, and the expected cost.

The Division of Soil Conservation reviewed ten proposals and approved six projects for FY 2001. Prior to the contracts being signed, the 2001 General Assembly passed SF 267 (FY 2001 Deappropriations Act), which deappropriated \$550,000 from the Environment First Fund. The Integrated Farm and Livestock Demonstration Program was an Environment First Program that was deappropriated by \$500,000. Projects funded with the remaining \$350,000 included:

Project Description	Project Cost	Date Initiated
Focus Groups	\$ 2,000	August 18, 2000
Nitrogen Demonstration Network	102,000	March 27, 2001
Manure Delivery Model	38,150	March 27, 2001
Manure and Nitrogen	96,756	March 27, 2001
Corn and Nitrogen	90,000	March 27, 2001
Strip Tillage	16,000	April 11, 2001
Field Day Site Development – Miscellaneous	5,094	April 11, 2001
Total	\$ 350,000	

The following is a brief summary of the funded projects:

Nitrogen Demonstration Network

The Iowa Soybean Association established 101 on-farm demonstration sites in 33 counties where producers applied two different nitrogen rates on alternating strips within a field. Crop yield comparisons were made for the respective applied rates.

Manure Delivery Model

Iowa State University Extension, in conjunction with the Northeast Iowa Agricultural Association, selected 12 producers to demonstrate precision farming. The field sites applied manure from cattle, hogs, or sheep, for crop production and will be evaluated for nitrogen utilization and losses. Crop yields and economic profits or losses will also be analyzed.

Manure and Nitrogen

Iowa State University Extension established 15 demonstration farms in eight counties to develop custom manure application rates. The project compares manure-applied crop yields to fertilizer-applied crop yields.

Corn and Nitrogen

Iowa State University Extension established 14 demonstration sites in 12 counties where corn was planted after a soybean crop had been harvested in 2000. The sites did not have manure or fertilizer applied in the fall of 2000 or the spring of 2001. The benefits of the project include evaluating a new soil nitrogen test, demonstrating corn nitrogen requirements, and monitoring relationships between soil nitrogen and carbon under a variety of nitrogen application rates and soil characteristics. The picture to the right is the Field Day held September 13, 2001, near Ft. Dodge that discussed the results of one of the demonstration sites.



Strip Tillage

Iowa State University and Monsanto Company developed two strip tillage demonstration sites in Jasper and Cass counties. Each site demonstrates strip tillage, conventional tillage, and no tillage systems. The sites compare production costs, yields, and profit or loss for each system.

ALTERNATIVES

The Integrated Farm and Livestock Management Program demonstrates the effectiveness and adaptability of emerging agronomy technologies that can be cost-effective for producers, while having the environmental benefits necessary to improve the quality of soil, water, and air. In FY 2001, more than 150 farm operators voluntarily participated in the Program that concentrates on management techniques in livestock and crop production systems in an educational demonstration setting. In the development and administration of this Program, unique partnerships have been established to assist producers with the application of new agronomic techniques. In addition, these partnerships expand the financial and educational resources available to Iowa producers to address environmental concerns. This Program provides the link between scientific research and actual in-field application.

BUDGET IMPACT

The Department of Agriculture and Land Stewardship received \$850,000 from the Environment First Fund for the FY 2002 Program and contracts have been signed for the following projects:

Project Description	Project Cost
Agribusiness Assessment Tool	\$ 29,100
Iowa State University Economics Study	8,570
Iowa State University Sociology Study	66,782
Cover Crop Systems	2,740
Eastern Iowa Tillage/manure Management	8,080
Producer Tillage Demonstrations	76,300
Soil Nitrogen and Carbon Management	88,156
Soil Properties & Integration Data	31,500
Strip Tillage	16,000
Swine Manure Utilization	110,669
Manure Delivery Model	118,550
Iowa Soybean Association Manure & Nitrogen	250,000
Certified Environmental Management Systems	15,130
Field Meetings/ Miscellaneous Expenditures	28,423
Total	\$ 850,000

The following is a brief summary of funded projects:

- Agribusiness Association of Iowa Assessment Tool for use by producers in making management decisions during the planning stages of crop and livestock production.
- Iowa State University Department of Economic Study will analyze 2000 corn and soybean production data to build a baseline database for various demonstration projects.
- Iowa State University Department of Sociology Study will document the changing public perceptions regarding environmental issues.
- Cover Crop Systems in Allamakee County will demonstrate the economic benefits and the soil savings of a cover crop system.
- Eastern Iowa Tillage and Manure Management will have demonstration sites that demonstrate tillage systems and nutrient management alternatives in the watersheds of the region.
- Producer Tillage Demonstrations that demonstrate and compare four tillage methods at six locations in Iowa and the crop yields of each of the practices.
- Soil Nitrogen and Carbon Management that demonstrates a new soil nitrogen test and fertilization needs and monitors the relationship of nitrogen and carbon using various applications rates and types of soil.
- Soil Properties and Interpretation Database updated by Iowa State University, Department of Agronomy, to establish baseline data for soil map units participating in the Integrated Farm and Livestock Management Demonstration Program.

- Strip Tillage completed by Iowa State University, College of Agriculture, and Monsanto Company to demonstrate strip tillage affects on crop production.
- Swine Manure Utilization completed by Iowa State University, Department of Agronomy, to demonstrate the use of manure and to update the information used for the preparation of manure management plans.
- Manure Delivery Model by the Iowa State Extension and the Northeast Iowa Agricultural Association will have demonstration sites that use cattle, hog, or sheep manure in crop production. Crop yields and economic profits or losses will be analyzed.
- The Iowa Soybean Association On-Farm Manure and Nitrogen Demonstrations will include fields with two different nitrogen rates applied across 20 acres in alternating strips. Crop yields will be evaluated to determine if more or less nitrogen fertilizer is required.
- Certified Environmental Management Systems for Agriculture where the Iowa Soybean Association will work with producers to integrate and align environmental objectives with farm practices.

The Department of Agriculture and Land Stewardship has requested \$850,000 for FY 2003 from the Environment First Fund to continue the Integrated Farm and Livestock Management Demonstration Program.

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