

V(A). Planned Program (Summary)

Program # 23

1. Name of the Planned Program

Enhancing Agriculture and the Environment (Extension)

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	5%		0%	
123	Management and Sustainability of Forest Resources	5%		0%	
133	Pollution Prevention and Mitigation	5%		0%	
205	Plant Management Systems	10%		0%	
216	Integrated Pest Management Systems	5%		0%	
307	Animal Management Systems	10%		0%	
308	Improved Animal Products (Before Harvest)	10%		0%	
315	Animal Welfare/Well-Being and Protection	10%		0%	
402	Engineering Systems and Equipment	10%		0%	
403	Waste Disposal, Recycling, and Reuse	10%		0%	
601	Economics of Agricultural Production and Farm Management	5%		0%	
602	Business Management, Finance, and Taxation	5%		0%	
603	Market Economics	5%		0%	
721	Insects and Other Pests Affecting Humans	5%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	58.0	0.0	0.0	0.0
Actual	19.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
973652	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
973652	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Develop and deliver curriculum to increase application and utilization of bioenergy applications including waste digesters and cellulosic based technologies by directing energy team to develop and deliver educational programming.

Enhance the adaptation of production techniques through utilization of on-farm research to work directly with producers to evaluate practices to enhance productivity and profitability.

Conduct workshop training sessions for livestock haulers, food animal veterinarians, livestock producers, consultants and integrators.

Prepare and distribute research-based educational materials in the areas of animal welfare and bio-security through worksheets, factsheets, web-based sites, podcasts, and emerging technologies.

2. Brief description of the target audience

Ohio farm families, commercial green-industry companies, consumer horticulture advocates, commodity/farm advocacy groups, federal/state agricultural/environmental agencies, state-wide consumer groups, volunteer groups, community leaders, business leaders, elected and appointed officials, and non-government organizations

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	20000	100000	2000	0
Actual	121478	175000	3949	124101

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2010
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	0	
Actual	0	30	30

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- number of volunteers involved in delivery and implementation of program.

Year	Target	Actual
2010	0	3154

Output #2

Output Measure

- number of multi-state partnerships

Year	Target	Actual
2010	0	215

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of producers that demonstrate an increase in biosecurity knowledge and skills.
2	Number of food animal producers that increase their knowledge of the how to mitigate animal biosecurity hazards and risks on their farm operations and agribusinesses.
3	Increased knowledge of current practices and emerging technologie.
4	Number of youth shows/county fairs that implement animal ID/quality assurance programs.
5	Number of producers (or units represented) adopting energy efficient practices (energy conservation plans, more efficient equipment, etc.)
6	Increase profitability for the food animal sector of the Ohio agricultural industry.

Outcome #1

1. Outcome Measures

Number of producers that demonstrate an increase in biosecurity knowledge and skills.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of food animal producers that increase their knowledge of the how to mitigate animal biosecurity hazards and risks on their farm operations and agribusinesses.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	779

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The average size of dairy farms in Ohio remains <100 cows accounting for approximately 85% of the dairy operation, 46% of the inventory & 35% of the total milk production (USDA-NASS 2008). Milk production is the 3rd economically most important agriculture-related commodity in Ohio (USDA-NASS 2008). However, the economic viability of dairy operations with <100 cows continues to be challenged. Educators play an important role in disseminating research-based knowledge to support the needs of the whole dairy industry.

What has been done

One example is the development of a comprehensive Extension & research program to assist a core of small dairy producers and their veterinarians to identify, implement and accomplish sustainable management goals. On-farm demonstrations were an important component of the learning process.

Results

Dairy producers (69 herds) & their veterinarians (from 5 practices)= 117 participants completed the program in 2010. This program reached an estimated 13,075 dairy cattle over 69 herds. Participants reported that their knowledge increased on a variety of topics including: raising calves; DHI records and how they interpret them; managing the quality of colostrum; calculating pregnancy rates; the estrous cycle; different methods of treatment for Mastitis & when to treat effectively; handling of corn & silage; importance of planning for transition of the farm/business to the next generation; value of management of herd - repro, health & nutrition; transmission of John's disease & methods for testing for it.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management

Outcome #3

1. Outcome Measures

Increased knowledge of current practices and emerging technologies.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	9000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Safe use of pesticides to insure the protection people, the environment, & our food chain is essential. OSU Extension's Pesticide Applicator Training helps assure the safe use of pesticides,

proper disposal of pesticides, and helps prevent misuse & mishandling. Reducing the environmental, economic & social risk associated with managing pests - insect, disease or weed is an constant issue and is the goal of the OSU Extension Integrated Pest Management (IPM) program.

What has been done

Private applicator recertification trainings were held in 2010 in 4 major cities in Ohio and residents of all 88 counties were invited to participate in trainings held at the county level as well. The IPM program provided training to approximately 4000 clients at multiple events Y sites on topics such as Agronomic IPM, Consumer/Urban (Master Gardener training), Specialty Crop IPM (Vegetable & Urban Ag.), Conservation Partnerships (IPM incentives), Pest Diagnostics, and Housing IPM (bedbugs).

Results

Pesticide Applicator Training is essential to Ohio for job retention & procurement; to farmers & agribusinesses that must be certified in pesticide use; nearly 5000 private applicators received re-certification training; 10,838 clients participated in pesticide safety & risk management events; 807 farm workers, 7 food & nutrition staff, 85 health care professionals & over 220 master gardeners participated in a pesticide safety & risk management event. 239 new &/or updated IPM education & training materials were delivered to clientele for selected commodities &/or at select sites; 217 IPM clients were satisfied with results when utilizing IPM strategies & systems; 97 IPM strategies & systems were validated for use on selected commodities

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
205	Plant Management Systems
216	Integrated Pest Management Systems
402	Engineering Systems and Equipment
601	Economics of Agricultural Production and Farm Management
721	Insects and Other Pests Affecting Humans

Outcome #4

1. Outcome Measures

Number of youth shows/county fairs that implement animal ID/quality assurance programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	94

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Safe food, better livestock care, prevention of the outbreak of both animal and human diseases, and the encouragement of local food production is key to today's society. One example of this issue is the number animals entering the food supply through the youth livestock program that exceeds 57,000. An educational program for youth that covers Food Animal Quality Assurance is required for all youth enrolled in food animal projects in the state of Ohio.

What has been done

Fair sponsors, typically, the local Agricultural Society, are responsible for the safety of the food animals entering the food supply from their fair's livestock sale. OSU Extension, in partnership with fair sponsors, provides educational programs on Food Animal Quality Assurance in all 88 counties for the 88 county & 7 independent fairs in Ohio + a Beef Quality Assurance Program for youth offered at the Ohio Beef Expo. Youth enrolled in market livestock projects are required to participate.

Results

The Quality Assurance program helps to ensure the safety of the 57,000+ animals entering our food system each year by educating youth on food animal quality assurance. These programs may include, but not limited to topics such as animal welfare, illness & condition treatments, adequate housing, meat cuts, and feeding practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
601	Economics of Agricultural Production and Farm Management

Outcome #5

1. Outcome Measures

Number of producers (or units represented) adopting energy efficient practices (energy conservation plans, more efficient equipment, etc.)

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Increase profitability for the food animal sector of the Ohio agricultural industry.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	25

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Grazing schools help farm managers increase forage production per acre, which helps managers can increase stocking rates yet keep overhead costs down. Reducing input costs, many times, can have huge beneficial effects on a producer's net profit.

What has been done

One example are the Grazing schools coordinated and taught by OSU Extension Educators & Specialists. These schools are designed to teach farm managers how to increase forage production. With an increase in forage production per acre, managers can increase stocking rates yet keep overhead costs down. Reducing input costs, many times, can have huge beneficial effects on a producer's net profit.

Results

25 farmers/producers representing 6269 acres of Ohio farmland in Belmont, Guernsey, Harrison, Monroe, Muskingum, & Noble counties with 1666 head of livestock attended a multi-county workshop in March 2010.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
123	Management and Sustainability of Forest Resources
133	Pollution Prevention and Mitigation
205	Plant Management Systems
216	Integrated Pest Management Systems
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)

Evaluation Results

Key Items of Evaluation