

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Animal Enterprises-Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	0%		15%	
302	Nutrient Utilization in Animals	0%		10%	
303	Genetic Improvement of Animals	0%		10%	
304	Animal Genome	0%		5%	
305	Animal Physiological Processes	0%		5%	
307	Animal Management Systems	100%		20%	
308	Improved Animal Products (Before Harvest)	0%		5%	
311	Animal Diseases	0%		10%	
313	Internal Parasites in Animals	0%		5%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%		5%	
601	Economics of Agricultural Production and Farm Management	0%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Actual Paid Professional	23.7	0.0	27.3	0.0
Actual Volunteer	0.0	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
432980	0	898630	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
432980	0	898630	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1524798	0	12933149	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The LSU AgCenter Animal Enterprises program includes livestock and aquaculture production systems. The state's livestock industry includes approximately 800,000 head of livestock on 40,000 farms and 480 broiler producers that produce 900 million pounds of broiler meat. Overall, the total livestock industry was valued at \$2.6 billion dollars in 2011, based on gross farm value and value added indexes. Additionally, the Louisiana aquaculture industry had 192,000 acres in production on 2,300 farms with a total value of \$442 million dollars in 2011. In the previous fiscal year, most of this work was reported under the Global Food Security & Hunger planned program area. While some of the activity in this planned program area still relates to the Global Food Security & Hunger initiative, the AgCenter has chosen to report it in this state-defined planned program area.

Activities include research and extension programs directed towards animal and aquaculture agriculture. Extension outreach uses group and individual methods; mass media; applied research studies; result demonstrations; and field days, which incorporate the latest technological advances and use of social media. Research outputs are measured through scientific presentations at field days, local and national meetings and publications.

This year, the dairy and poultry programs were the livestock work topics evaluated in our four-year base program evaluation cycle. The poultry evaluation focused on environmental-related impacts and thus is included in the Natural Resources & Environment section of this report. The impact report for the dairy evaluation is included in this Animal Enterprises section.

2. Brief description of the target audience

Livestock and poultry producers, crawfish farmers and consumer groups related to enhancing the value of animal commodities.

3. How was eXtension used?

The resources provided through eXtension were used to supplement and enhance learning experiences provided by LSU AgCenter faculty. Animal science state specialists have been involved in the development, implementation, and management of livestock and poultry Community of Practice (CoP). The state poultry specialist is part of a team that developed the small and backyard poultry flock CoP. The resources on recreational pond management have been used substantially and the state aquaculture specialist serves on the Fresh Water Aquaculture CoP and as the coordinator for the recreational pond section.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	52673	435317	20629	0

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

Patent Applications Submitted

Year: 2012

Actual: 1

Patents listed

Ligand/lytic peptide methods of use

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	10	49	59

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Web page visits

Year	Actual
2012	1071083

Output #2

Output Measure

- Web page views

Year	Actual
2012	1344833

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of livestock owners/producers that adopt or plan to adopt recommended practices to improve quality and profitability.
2	Percentage of aquaculture producers that adopt or plan to adopt recommended practices to improve quality and profitability.

Outcome #1

1. Outcome Measures

Percentage of livestock owners/producers that adopt or plan to adopt recommended practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	71

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Milk is produced by approximately 140 producers located in 14 parishes in the state. However, the majority of the dairy cows, dairy farms and milk production occurs in three parishes located in the Southeastern part of the state. There are about 16,000 head of dairy cattle in the state. Total milk production was 221.4 million pounds with an on-farm value of \$47.8 million. The total economic contribution from dairying in Louisiana, including milk sales, animal sales and additional processing was \$130.6 million. Research shows that producers can improve milk production, reproductive efficiency and milk quality by following recommended research-based production practices.

What has been done

The LSU AgCenter provides an ongoing dairy production education program in which county agents, area agents and specialists visit farms to advise dairy producers on specific management problems, provide educational seminars and workshops, host field days, conduct dairy day programs and collaborate with producers to provide demonstrations - to disseminate information on the latest production technologies and techniques. LSU AgCenter dairy team members work with colleagues at Mississippi State University to conduct an annual dairy management conference along with other dairy educational programs for producers in both states. LSU AgCenter team members provide farm press articles, circular letters, newsletters, fact sheets and publications; conduct radio and television interviews; and post information on the Web to reach producers and other dairy related industry personnel.

Results

A survey was conducted to determine adoption of recommended production practices. A total of fifty respondents provided valuable feedback on Extension dairy efforts. Practices adopted by producers were: Post-dipping cows (92%); Dry treat all cows (90%); Pre-dipping cows (88%);

Breed milking cows by artificial insemination at least 1st & 2nd service (83%); use Estrous Synchronization Protocols for cows (68%); Breed replacement heifers by artificial insemination (50%). Adoption of these practices could conservatively result in an increase of milk production revenue by \$400-\$500 per cow.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
304	Animal Genome
305	Animal Physiological Processes
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
313	Internal Parasites in Animals
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Percentage of aquaculture producers that adopt or plan to adopt recommended practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Rising input costs, global competition and increased regulations have strained Louisiana's \$436 million dollar aquaculture industry, impacting over 3,300 producers. Sustained aquaculture

production and its benefits for rural economies will depend upon enhanced profitability, diversification and improved production and marketing efficiencies.

What has been done

Efforts have focused on refining crawfish management strategies, nutritional requirements for alligator and finfish production, technologies necessary for commercially viable marine baitfish culture, and techniques for improving spawning and production practices for various aquatic species. Findings have been extended via extension and refereed publications, individual contacts, Web-based resources, and producer meetings. Research priorities identified by producers are being incorporated into future research based on funding availability.

Results

Adoption of targeted recommended practices is estimated at over 50%. More efficient harvesting and management practices continue to decrease expenses for many of Louisiana's 1,200-plus crawfish farms by up to 20% while further increasing production in this \$196 million industry. Lowering feed costs through improved formulations and digestibility will provide direct benefits for the state's \$39 million alligator industry. Reproductive and other biological data continue to provide recommendations necessary to develop viable coastal baitfish aquaculture. New markets in aquaculture germplasm may eventually allow creation and sale of genetic improvements worldwide. Commercialization of alternative species will allow additional options for the state's producers. The Louisiana aquaculture industry will become more environmentally and economically sustainable as a result of these efforts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

See results section of dairy impact report.

Key Items of Evaluation