V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Livestock and Meat Quality, Safety, and Productivity

☑ 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	10%		10%	
302	Nutrient Utilization in Animals	25%		25%	
303	Genetic Improvement of Animals	5%		5%	
306	Environmental Stress in Animals	5%		5%	
307	Animal Management Systems	20%		20%	
308	Improved Animal Products (Before Harvest)	20%		20%	
313	Internal Parasites in Animals	5%		5%	
315	Animal Welfare/Well-Being and Protection	10%		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
Plan	45.0	0.0	20.0	0.0
Actual Paid Professional	30.8	0.0	28.5	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**
396899	0	1063258	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
396899	0	2609909	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
3396076	0	3718745	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Research as well as group and individual education is ongoing across the 7 key subject matter/commodity areas. Methods of education include public meetings, individual support, printed and video/DVD materials and web-based materials. Collaboration with breed associations, commodity groups and corporations was used to target research and educational needs of a diverse livestock industry across the state, involving both youth and adults.

2. Brief description of the target audience

The target audience is composed of beef cattle, horse, dairy, sheep, goat and swine producers/owners/users, commodity group leadership, associations and registries, and youth enrolled in 4-H and FFA livestock projects.

3. How was eXtension used?

The Texas AgriLife EDEN disaster management website is linked to the National EDEN website and the eXtension network. Animal Science faculty continues to update and develop educational materials dealing with management of livestock during and following catastrophic events such as wildfires, drought and floods.

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	48287	547658	7658	0

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

Patent Applications Submitted

Year:	2012
Actual:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	10	419	429

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2012	1617

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2012	130

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of livestock owners/producers that adopt or plan to adopt best management practices to improve quality and profitability.
2	% of livestock owners/producers/commodity group representatives that report increased knowledge of best management practices to improve quality and profitability.
3	% of livestock owners/producers that report a savings in money or increased profit by best management practices adopted.

Outcome #1

1. Outcome Measures

% of livestock owners/producers that adopt or plan to adopt best management 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	82

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Best management practices to ensure quality, profitability, productivity and optimal utility help clientele make changes to improve livestock, management, resources and time to increase income and improve profit opportunities

What has been done
Programs conducted include TAMU Beef Cattle Short Course, Texas Beef Quality Producer, Beef and Pork 101, Beef 706, Grassfed Beef Conference, Rebuilding Texas Herds, Pasture Management Workshops, Bull Selection, Low-Stress Livestock Handling, Stockmanship schools, Southwest Dairy Conference, Livestock management during and following wildfires and drought. Youth programs included the 39th Annual Summer Horsemanship Schools, Lamb/Goat Camps and Judging camps for Beef Cattle, Horses, and Sheep. In addition to specialist driven programs listed above Animal Science Extension faculty support producer education through delivery of educational programs at 306 county programs

Results
From measures including beef/dairy cattle, sheep/goats, horses and meats, 68% to 100% reported adoption of at least one best management practice. 65% to 97% expected to increase income or profitability by adoption of best management practices. 64% to 81% of respondents indicated they would implement changes to their livestock and resource management practices as they rebuild their livestock inventories. 62% to 94% reported elimination of non-productive practices. 69% implemented financial plans, 72% hay analysis, 80% reported use of cost/lb of nutrient strategies for alternative feedstuffs and 91% use body condition scoring as a management tool.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

Outcome #2

1. Outcome Measures

% of livestock owners/producers/commodity group representatives that report increased knowledge of best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	87

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Increased knowledge prompts adoption of best management practices to ensure quality, profitability, productivity and utility of livestock, management, resources and time. Knowledge of best management prompts time savings, increased confidence in management decisions and problem solving for producer and youth involved in the livestock industry.

What has been done
Programs conducted include TAMU Beef Cattle Short Course, Texas Beef Quality Producer, Beef and Pork 101, Beef 706, Grassfed Beef Conference, Rebuilding Texas Herds, Retail Beef Boot Camps, Pasture Management Workshops, Bull Selection, Low-Stress Livestock Handling, Stockmanship schools, Southwest Dairy Conference, Livestock management during drought. Youth programs included the 39th Annual Summer Horsemanship Schools, Lamb/Goat Camps

and Judging camps for Beef Cattle, Horses, and Sheep. In addition to specialist driven programs listed above Animal Science Extension faculty support producer education through delivery of educational programs at 360 county programs

Results
72% to 100% reported improved decision making ability. 69% to 100% reported increased confidence in management ability. 93% indicated knowledge gains of 52% to 87% for livestock management during drought and following wildfires, cattle handling, food safety control, environmental management, financial management during drought, livestock evaluation and general livestock and ranch management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

Outcome #3

1. Outcome Measures

% of livestock owners/producers that report a savings in money or increased profit by best management practices adopted.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	62

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Animal management systems must go beyond striving to improve quality of life, quality of production and increased knowledge to achieve a level of sustainability. For production systems to be sustainable they must be profitable. To improve profitability income needs to increase and costs need to be lowered or controlled. An additional push was made through programming to encourage producers to look at enterprise diversification and adding stocking rate flexibility into their production systems.

What has been done
Economic benefit was measured from responses from participants in the TAM Beef Cattle Shortcourse, Small Landowner Conferences, Beef Quality Assurance programs, Rebuilding Texas Herds, Southwest Beef Symposium, Beef 706, Reproductive Management, Cattle Handling and Dairy Programs.

Results
51% to 100% of the participants in these programs indicated they would benefit economically through adoption of management practices outlined in these programs. Participants in the small landowner programs indicated an expected increase in income of $10.60 per head. Participants in Quality Assurance programs indicated increased income from $20 to $90 per head. Of the Beef 706 participants 78% indicated they would benefit economically by an estimated $20.50. Reproductive management practices on beef and dairy operations indicated returns of $35 to $75 per head. Economic impact across the livestock sector is projected to be between and $1.5 and $20 million from adoption of management practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

V(H). Planned Program (External Factors)

External factors which affected outcomes
- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Livestock ownership, production and use in Texas has been influenced by natural disasters 2011 was the driest year on record and the second hottest year on record. 2012 saw only regional and periodic relief to the devastation of the 2011 production year. Recovery in 2012 was limited to non-existent across most of Texas. Weather related challenges continue to alter program delivery and adoption of some management practices. Routine management of livestock has been influenced and significant need exists for education in emergency and alternative management plans. Production costs and incentives for livestock production, management, and use are influenced by economic changes. Higher fuel prices, agriculture valuation, feed costs and health care costs are all factors. Public policy changes and government regulations challenge educators to provide up-to-date, neutral information that helps livestock participants make decisions. Population shifts and use of available land for productive and meaningful livestock production bring opportunities and challenges to livestock owners/producers/users and the associations/corporations/groups that make up this diverse industry.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Outcome measures include pre-post knowledge assessment, adoption of best management practices and elimination of non-beneficial practices, and change in confidence/competence. Changes in time and money spent/saved/invested for livestock production were measured in selected areas.

Key Items of Evaluation

No additional findings to report.