

# Animal Systems

Animal Systems

## V(A). Planned Program (Summary)

### 1. Name of the Planned Program

Animal Systems

## 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%
302	Nutrient Utilization in Animals				10%
303	Genetic Improvement of Animals				10%
304	Animal Genome				20%
305	Animal Physiological Processes				10%
307	Animal Management Systems				20%
308	Improved Animal Products (Before Harvest)				10%
313	Internal Parasites in Animals				10%
<b>Total</b>					<b>100%</b>

## V(C). Planned Program (Inputs)

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	0.0	0.0	0.0	20.8
<b>Actual</b>	0.0	0.0	0.0	20.5

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
	0	0	542739
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	692334
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**

Applied and basic scientific research goals are as follows:

1. Determine the efficiency of farm animal production systems through a combination of best management practices:
  - a. Establish usefulness of various forage based production systems and establish farm profit margins for the Texas Gulf Coast region.
    - . Increase livestock productivity on small acreage using forage based nutrient systems for livestock production, including improved Bermuda-grasses for hay and pastures, and co-grazing studies.
  2. Develop methods that will improve reproductive efficiency of farm animals and improved conditions for growth and well-being of animals:
    - a. Define endocrine and paracrine mechanisms which regulate uterine receptivity and support conceptus growth, endometrial attachment and placentation.
      - . Identify the proteins carrying the carbohydrate recognition molecules on the endometrium that promote stable cell-cell interactions and facilitate placentation.
    - c. Investigate factors involved in sperm attachment within the female reproductive tract and their relationship to fertility levels.
    - d. Utilize functional genomic approaches to understand the physiological mechanisms that influence reproduction, growth and efficiency of food producing animals.
    - e. Identify molecular markers for desirable traits, including disease and stress resistance.

**2. Brief description of the target audience**

While the University's service area extend throughout Texas and the world, the University's target service area includes the Texas Gulf Coast Region. This includes the surrounding counties and includes the rapidly growing residential and commercial area known as the Northwest Houston Corridor as noted in the original Texas Plan. Therefore, problems associated with agricultural production systems, including those that exist at urban-agricultural interfaces and impact stakeholders will be addressed.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	500	250	35	300
2007	300	250	100	200

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007:	0

**Patents listed**

None.

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	10	10

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

Increase in peer reviewed publications. Increase in competitive grants received by Faculty and Staff in the Animal Systems Group. Increase in graduate student enrollment and matriculation in the Animal Science Program. We anticipate a 5% increase over the previous 5 year base line in each of these categories.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	3

**V(G). State Defined Outcomes**

<b>O No.</b>	<b>Outcome Name</b>
1	Improved reproduction efficiency and improved conditions for optimal growth and well-being of farm animals. Availability of resources (demonstration/test plots, hay and pastures, co-grazing site, etc.) for use by research scientists, graduate students and Extension personnel for research and teaching purposes. Availability of and demonstrations using latest technology for research, demonstrations and teaching purposes for herd/farm record systems, animal identification, etc. applicable to small landowners and other producers. A greater public understanding of the principles of animal behavior, animal responses to their environment, and the biology of reproduction and growth. Increased farm income and profitability by understanding production economics, profit margins and clarifying marketing channels and timing .profitability. A more competitive livestock industry in Texas.

**Outcome #1**

**1. Outcome Measures**

*Not reporting on this Outcome for this Annual Report*

**2. Associated Institution Types**

**3a. Outcome Type:**

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
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**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**V(H). Planned Program (External Factors)**

**External factors which affected outcomes**

Natural Disasters (drought, weather extremes, etc.)

Economy

Appropriations changes

Public Policy changes

Competing Public priorities

Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

Changes in competing priorities combined with decline in human capital. Additional constraints include physical facilities and laboratory equipment.

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

**1. Evaluation Studies Planned**

During (during program)

Other (Program Evaluation)

**Evaluation Results**

Activities engage the continuous evaluation and feedback from participants and stakeholders. Additional input is received through extension personnel who maintain ongoing contact throughout the state with producers and/or interest groups.

**Key Items of Evaluation**

The animal system focus group are currently working on a number of relevant animal reproductive issues. However, resource constraints, primarily human capital, have limited the outcome at this point. Projections, however, for the future include the addition of new staff that will enhance the human capital capacity of the group. This will increase the ability of the group to accelerate the process of achieving results desired.