

2010 Prairie View A&M University Research Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

The Cooperative Agricultural Research Center (CARC) is the organizational unit responsible for coordinating agricultural research within the College of Agriculture and Human Sciences at Prairie View A&M University. The CARC, originally established as an agricultural experimental substation in 1947, coordinates research activities in three major areas: 1) Animal Systems; 2) Food Systems; and 3) Plant and Environmental Systems. The Animal Systems research group focuses on improving the scientific understanding of the physiological mechanisms affecting reproduction, growth and performance of farm animals - primarily grazing ruminants (cattle and goats). The reproductive biology group is studying molecular mechanisms responsible for pregnancy recognition and formation of the placenta in the ruminants. The poultry research group is studying effects of selenium on egg production and quality of laying hens fed cottonseed meal and the effects of Sel-Plex on neutralizing natural feed toxins in broiler rations along with synergistic effects of organic selenium and zinc on the aging process of old hens. The swine research group is studying effects of feeding oil based rations on genetically obese and lean pigs with project work focused on obesity through lipid protein expression in lean and obese animals with an overall goal to identify proteins that have significant roles in the development and maintenance of obesity. The Food Systems research group focuses efforts on issues of regional and national importance of enhancing food safety and quality and the related impacts on the quality of life. Critical issues facing the underserved populations - locally, nationally and globally involving the incidences of food borne illnesses and related diseases. The goals of this group are to: 1) increase the body of knowledge in the understanding of how to ensure that food products are safe; and 2) to increase the body of knowledge in the areas of quality and safety of meat, milk, and value-added products. Currently, work involves the following activities: 1) enhancing the quality of food and food products; 2) examining strategies for mitigating the transmission of natural food-borne pathogens; 3) examining methods for the reduction of natural and introduced toxicants in foods and feed; 4) examining nutrient quality enhancement of food and food products; 5) examining mechanisms involved in nutrient utilization and diseases; 6) evaluating strategies for minimizing the transfer of microbial pathogens during food handling; and 7) evaluating strategies for translating nutrition knowledge into better food selection. The Plant and Environmental Systems research group works on a number of projects that are very important to the regional environment of the Texas Gulf Coast Prairie. Findings and results from the projects have provided a positive impact to the biological and agricultural sciences community by adding to the knowledge base within the environmental monitoring, soil biology and ecology, redox chemistry, and seasonally wet and wetland soils arena. The plant biology group is studying optimized fat and cellulosic biomass accumulation in peanut through biotechnology and nucleotide-dependent reprogramming of mRNAs encoding acetyl coenzyme a carboxylase and lipoxxygenase in relation to the fat contents of peanut. Also, impacts of biomass sorghum feedstock production on carbon sequestration and greenhouse gas emissions in the south central region. Additionally, the group is focused on DNA biomarkers for detecting nutritional conditions of agricultural soils that have the potential to reduce excessive runoff of nutrients used during crop growth. Grafting of chitosan and chitosan derivatives on single walled carbon nanotubes is directed toward agronomic and bioenvironmental applications.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	53.0
Actual	0.0	0.0	0.0	47.9

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External University Panel
- External Non-University Panel
- Combined External and Internal University Panel
- Combined External and Internal University External Non-University Panel
- Expert Peer Review
- Other

2. Brief Explanation

We engage a number of Merit/Peer Review processes. The Center, in conjunction with the Office of Sponsored Programs (OSP) and the Office of the Vice-President for Research (VPR) are taking additional steps in ensuring the merit process is effective. The VPR re-established the University Committee on Research that provides valuable insights as well as providing external reviews for project proposals.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals
- Survey of selected individuals from the general public

- Other

Brief explanation.

Frequent contact with stakeholders, directly and indirectly, through a variety of means to invite their participation in a number of college activities. The college, which consists of the Academic Department (Agriculture, Nutrition and Human Ecology), the Cooperative Extension Program (CEP), and the Cooperative Agricultural Research Center (CARC), serve as the tripartite entity for the agricultural program at the University. Many of the activities of the College of Agriculture and Human Sciences (CAHS) are integrated in nature that leverages the number of contacts with Stakeholders.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys
- Other (commodity organizations)

Brief explanation.

The CAHS maintains an external advisory committee that provides input and evaluation of programs targeted for excellence. The advisory committee assists with evaluating ongoing programs in the College, including academics, research, and extension. Additionally, the College engages in a number of activities which include participation in listening sessions, sponsored by the various interest groups which also included the Texas AgriLife Extension, Texas AgriLife Research, as well as a number of NGO's.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals

- Survey specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Survey of selected individuals from the general public
- Other

Brief explanation.

Comments and feedback from various program activities were collected, synthesized and incorporated in program planning. Additionally, evaluations were conducted at all program activities where external audiences were included. Additional input was received through various reviews of the program provided by the USDA and other interest/commodity groups. We also engaged in a number of discussion activities with stakeholders and interest groups such as, Goat Producers, limited resource farmers as well as non-traditional audiences.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities
- Other

Brief explanation.

Input gathered from stakeholders was used when developing new project proposals and/or redirecting ongoing programs of work. Additionally, project proposals were externally reviewed in order to ensure relevancy in addressing stakeholder needs.

Brief Explanation of what you learned from your Stakeholders

Stakeholders provide an honest, realistic view of market conditions from the grassroots level and their eye on the bottom line aids the research community toward relevant applications of science-based concepts. The Agricultural Field Day allows direct feedback from the local and regional producers who deal with market forces on an every day basis, no matter the climatic conditions.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	4606053

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	0	0	0	3314122
Actual Matching	0	0	0	2287357
Actual All Other	0	0	0	0
Total Actual Expended	0	0	0	5601479

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Food Systems
2	Animal Systems
3	Plant and Environmental Systems

Add previously unplanned program

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Food 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
501	New and Improved Food Processing Technologies				10%
502	New and Improved Food Products				10%
503	Quality Maintenance in Storing and Marketing Food Products				10%
701	Nutrient Composition of Food				10%
702	Requirements and Function of Nutrients and Other Food Components				20%
703	Nutrition Education and Behavior				10%
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources				20%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins				10%
	Total				100%

Add knowledge area

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	15.3
Actual	0.0	0.0	0.0	12.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	1821376
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	379372
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

Conduct research activities centered around:

- Developing methods for enhancing the quality of food and food products.
- Examining strategies for mitigating the transmission of natural food borne pathogens.
- Examining methods for the reduction of natural and introduced toxicants (eg. antibiotics in milk and Salmonella) in foods and feed.
- Examining nutrient quality enhancement of food and food products.
- Examining mechanisms involved in nutrient utilization and diseases.
- Evaluating strategies for minimizing the transfer of microbial pathogens during food handling.
- Evaluating strategies for translating nutrition knowledge into better food selection.

2. Brief description of the target audience

The primarily targeted audience are the underserved population living in the surrounding counties and the Northwest Houston Corridor. This population is dominated by Hispanics and African-Americans. Also, this area has been designated by the State of Texas as Prairie View A&M University's

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	275	825	120	330
Actual	350	900	250	450

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

Patent Applications Submitted

Year: 2010
 Plan: 2
 Actual: 1

Patents listed

Mora-Gutierrez, Adela and Gurin, Michael H. Bioactive complex compositions and methods of use thereof. U S Patent # 7780873. 2010.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	10	
Actual	0	2	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- -Peer review publications. -External funding. -Workshops. -Presentations. -Graduate and undergraduate matriculation.

Not reporting on this Output for this Annual Report

Year	Target	Actual
2010	10	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	-Commercialization of methods/technologies for improving the quality, safety and use of food and food products for the reduction of food borne illnesses and other nutritionally related diseases. -Increase in the dissemination and use of research based information into newsletters and incorporation into extension and other programs leading to a reduction in nutrition related and food borne diseases and illnesses resulting from contaminated or unsafe food.

Add Cross-cutting Outcome/Impact Statement or Unintended or Previously Unknown Outcome Measure

Outcome #1

1. Outcome Measures

Not Reporting on this Outcome Measure

-Commercialization of methods/technologies for improving the quality, safety and use of food and food products for the reduction of food borne illnesses and other nutritionally related diseases. - Increase in the dissemination and use of research based information into newsletters and incorporation into extension and other programs leading to a reduction in nutrition related and food borne diseases and illnesses resulting from contaminated or unsafe food.

2. Associated Institution Types

1890 Research

3a. Outcome Type:

- Change in Knowledge Outcome Measure
- Change in Action Outcome Measure
- Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The consuming public.

What has been done

Developed information briefs.

Results

Public awareness.

4. Associated Knowledge Areas

- 501 - New and Improved Food Processing Technologies
- 502 - New and Improved Food Products
- 503 - Quality Maintenance in Storing and Marketing Food Products
- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and

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
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Program Direction)

Brief Explanation

State funding to achieve matching requirement was not met. Competing priorities for use of funds. Refocusing of research priorities to reflect changing needs of stakeholders.

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

(OPTIONAL SECTION)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention
- Other

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

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%
	Total				100%

Add knowledge area

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	20.4
Actual	0.0	0.0	0.0	12.8

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	0	557385
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	1849315
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 and genetic enhancement.

a. Analyze the usefulness of various forage-based production systems and management practices for the Texas Gulf Coast. Maximize livestock productivity on small acreage using forage-based nutrient systems for livestock production.

2. Develop methods to improve reproductive efficiency of farm animals and improved conditions for growth and well-being.

a. Define endocrine and porcine mechanisms that regulate uterine receptivity and support conceptus growth, endometrial attachment and placentation. Identify proteins that carry 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 extends 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

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	550	750	80	330
Actual	450	500	150	300

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

Patent Applications Submitted

Year: 2010
 Plan: 1
 Actual: 0

Patents listed

None.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	14	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Increase in peer reviewed publications. Increase in competitive grants received by Researchers 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.

Not reporting on this Output for this Annual Report

Year	Target	Actual
2010	14	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
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 demonstrations using latest technology for research, demonstrations and teaching purposes for herd/farm record systems, animal identification, etc. applicable to small scale 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. A more competitive livestock industry in Texas.

Add Cross-cutting Outcome/Impact Statement or Unintended or Previously Unknown Outcome Measure

Outcome #1

1. Outcome Measures

Not Reporting on this Outcome Measure

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 demonstrations using latest technology for research, demonstrations and teaching purposes for herd/farm record systems, animal identification, etc. applicable to small scale 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. A more competitive livestock industry in Texas.

2. Associated Institution Types

1890 Research

3a. Outcome Type:

- Change in Knowledge Outcome Measure
- Change in Action Outcome Measure
- Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The producers of farm animals.

What has been done

Genetic enhancement and parasite control.

Results

Genetic improvement and reduction in the incidences of parasite outbreaks.

4. Associated Knowledge Areas

- 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)
- 313 - Internal Parasites in Animals

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
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other

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)

(OPTIONAL SECTION)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention
- Other

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 is 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.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Plant and Environmental 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
102	Soil, Plant, Water, Nutrient Relationships				10%
103	Management of Saline and Sodic Soils and Salinity				10%
104	Protect Soil from Harmful Effects of Natural Elements				10%
112	Watershed Protection and Management				10%
131	Alternative Uses of Land				10%
132	Weather and Climate				10%
133	Pollution Prevention and Mitigation				10%
201	Plant Genome, Genetics, and Genetic Mechanisms				10%
202	Plant Genetic Resources				10%
206	Basic Plant Biology				10%
	Total				100%

Add knowledge area

V(C). Planned Program (Inputs)

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

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	17.3
Actual	0.0	0.0	0.0	8.6

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	0	935361
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	58670
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

1. Newsletters.
2. Publications (journals, articles).
3. Abstracts.
4. Presentations (scientific conferences, workshops, seminars).
5. digital media (video, MP3 JPEG, GIFF) of project work.
6. Audio (recordings, radio, TV excerpts).

2. Brief description of the target audience

One-on-one interaction in field and lab project areas will highlight the research efforts. Extension is the end product of the integrated work within the research, teaching, and extension model.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	120	300	40	250
Actual	150	250	100	200

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

Patent Applications Submitted

Year: 2010
 Plan: 1
 Actual: 2

Patents listed

Cuero, Raul. Versatile antimicrobial agent TAMUS-2316. US Serial No. 12/288,818. 2009.
 Cuero, Raul. A UV Blocker molecule. US Serial No. 61/143,995. 2009.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	0	10	
Actual	0	6	6

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Increase peer-review publications, presentations, abstracts, and competitive grants. Increase graduate student enrollment and matriculation in the program. We anticipate a 5% increase over the previous 5 year base line in each of these categories.

Not reporting on this Output for this Annual Report

Year	Target	Actual
2010	10	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	-Research results highly valued by stakeholders -Increased recognition of the program - Increased interest in the program by students wishing to matriculate in the program - Enhanced attraction of external funding

Add Cross-cutting Outcome/Impact Statement or Unintended or Previously Unknown Outcome Measure

Outcome #1

1. Outcome Measures

Not Reporting on this Outcome Measure

-Research results highly valued by stakeholders -Increased recognition of the program -Increased interest in the program by students wishing to matriculate in the program -Enhanced attraction of external funding

2. Associated Institution Types

1890 Research

3a. Outcome Type:

- Change in Knowledge Outcome Measure
- Change in Action Outcome Measure
- Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Environmental interest groups including the USDA, the Texas Department of Agriculture and Texas Parks & Wildlife.

What has been done

Wetlands delinations, new techniques of biocontrol and new systems of bioremediations.

Results

Better understanding of ecosystem interactions.

4. Associated Knowledge Areas

- 102 - Soil, Plant, Water, Nutrient Relationships
- 103 - Management of Saline and Sodic Soils and Salinity
- 104 - Protect Soil from Harmful Effects of Natural Elements
- 112 - Watershed Protection and Management
- 131 - Alternative Uses of Land
- 132 - Weather and Climate
- 133 - Pollution Prevention and Mitigation

- 201 - Plant Genome, Genetics, and Genetic Mechanisms
- 202 - Plant Genetic Resources
- 206 - Basic Plant Biology

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
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other

Brief Explanation

Changing climatic factors combined with changing demographics leading to increasing competing uses of the land. The emerging rural urban interface increases the need for relevant outcomes. However, competing needs for internal resources hampers the ability to address all competing needs in a timely manner. More effective planning and enhanced resource capacity will ensure better results in future activities.

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

(OPTIONAL SECTION)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention
- Other

Evaluation Results

Evaluation results indicate program relevancy.

Key Items of Evaluation

The plant and environmental systems focus group is currently working on a number of relevant plant and environmental quality 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.