2012 Prairie View A&M University Combined Research and Extension Plan of Work

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Date Accepted: 06/09/2011

I. Plan Overview

1. Brief Summary about Plan Of Work

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This Plan represents the combined programs of the Cooperative Extension Program (CEP) and the Cooperative Agricultural Research Center (CARC).

The mission of the Cooperative Extension Program at Prairie View A&M University is to deliver research-based information and informal educational opportunities focused on identified issues and needs to Texans of diverse ethnic and socioeconomic backgrounds, giving primary emphasis to individuals with limited resources.

The mission of CARC is to conduct relevant, quality, focused, basic and applied research in the areas of agriculture, food, nutrition and human sciences. Also, the vision of the CARC is to be a premier research agency providing scientific solutions to problems facing our dynamic society.

In order to address the national priority areas, counties performed needs assessments through their advisory committees. Collaboration with CEP, CARC and other departments working in partnership with staff in Family & Consumer Sciences, Agriculture & Natural Resources, Community & Economic Development, and 4-H & Youth Development to address and solve specific problems within the State of Texas also was done to address the priority areas.

According to the U.S. Census Bureau report, the population of the 24 counties served by the Cooperative Extension Program totals approximately 14,493,190.

This Plan of Work includes stakeholders' input, merit/program review, planned programs, multistate, multicounty, and research and extension activities.

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	68.0	0.0	54.5
2013	0.0	68.0	0.0	56.0
2014	0.0	68.0	0.0	56.0
2015	0.0	68.0	0.0	57.4
2016	0.0	0.0	0.0	57.4

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

- ☑ 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

Extension programs initiated in the state of Texas are funded in whole or part from Smith Lever or Section 1444 and 14445 funds requiring a merit review process. The review panel is comprised of Cooperative Extension Program administrative leaders, Dean of the College of Agriculture, Cooperative Agricultural Research Center director, scientists, faculty, and Texas AgriLife middle managers. Particular focus to the plan is to determine if appropriate strategies are designated to reach the limited resource clientele mandated by the United States Department of Agriculture. The plans are reviewed based on needs assessment, planned programs, outcomes and evaluation. This combined leadership team is responsible for the oversight and management of all programs planned and implemented by Extension staff members.

All proposed research projects that are funded under either Evans-Allen, Experiment Station (Hatch), or otherwise, undergo a merit review process. Each proposal submitted for support is routed through an internal review committee for review and if deemed necessary, each proposal is routed through the University Committee on Research. The Research Director selects a set of individuals to serve as members of an internal review panel in consultation with the University's Vice President for Research. At minimum, three individuals review and evaluate each proposed project prior to approval for external submittal and/or internal fund allocation. Scientific peer review is incorporated in that all project reports including Current Research Information System must show evidence of external review. Written comments should be included with final proposals for campus routing. Routing proposals through quality control check points (Research Director, Dean of the College and Vice President for Research) are designed to ensure that proposals meet RFP guidelines as well as meet scientific merit qualifications. All proposals are quality checked by our on campus Office of Sponsored Programs.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

The planned programs resulted from the program development process. These programs were developed based on the critical issues and problems that were identified as priority and needing to be addressed. Each program addresses issues and problems that ranked high among stakeholders in the program development process. The Leadership Advisory Board in each county, which is composed of program committees and task forces, directs county staff in

developing annual performance plans. These plans support state and national program priority goals.

The designated research programmatic focus areas target research issues that have been identified through strategic planning, including the stakeholder input process. Project activities will engage a continuous review/feedback process of evaluation with periodic updates.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

The planned programs of the Cooperative Extension Program at Prairie View A&M University are to reach under-served populations, and results will be based on the needs of these populations. Evidence will show the significant populations, and results will be based on the needs of these populations. In addressing the needs, clientele will show desired changes and improvements in their quality of life. Clientele will show positive changes in behavior and attitude, adopt recommended practice, increase household and farm incomes, improve living conditions and improve health status. Additionally, clientele will enhance their neighborhoods, communities and overall situation through impact indicators included within the planned programs.

The overall goal of the CARC is to support the mission of the University which is to serve a diverse ethnic and socioeconomic population, with special emphasis on the underserved. While the University's service area extends throughout Texas, the nation and the world, its primary target area is the Texas Gulf Coast Region, with primary emphasis on the Houston Northwest Corridor, an area that is heavily populated by individuals of diverse ethnic and socioeconomic backgrounds. Also, the CARC works closely with the CEP in programmatic planning/outreach activities.

3. How will the planned programs describe the expected outcomes and impacts?

For each planned program, assumptions are made and indicators of results are developed. These indicators include both outputs and outcomes geared toward county staff goals and expectations. The program leaders and content specialists will meet with respective staff members to thoroughly discuss each planned program.

The three (3) CARC focused programs - Animal Systems, Food Systems, and Plant and Environmental Systems - address issues that have measurable outcomes and impacts. Each program, with subsequent projects, is hypothesis-driven, which means that the results are measurable. Each project is required to demonstrate impact on an ongoing basis.

4. How will the planned programs result in improved program effectiveness and/or

Trainings and conference calls allow program leaders and county staff to discuss expectations and implementation of the planned programs. Program leaders address planned programs to identify sources that the county staff can draw on to assist with conducting some of the activities. The planned programs were not developed with the intent that the 1890 Extension staff will provide all of the educational assistance. Other institutions, agencies and organizations will be involved in the implementation of the planned programs. This approach will increase staff members understanding of the planned programs and will involve outside resources resulting in improved effectiveness and efficiency.

CARC planned programs will result in improved effectiveness for several reasons: 1) all projects are developed by teams with individuals having diverse backgrounds and interests.; 2) the process of continuous feedback/evaluation ensures effectiveness, efficiency and relevancy of the project; and 3) periodic external reviews also adds to the effectiveness of the program.

IV. Stakeholder Input

1. Actions taken to seek stakeholder input that encourages 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.

The Cooperative Extension Program (CEP) uses multiple methods to reach stakeholder groups within the State of Texas. Open forums are used at the county level to solicit input from clientele. Stakeholder input also comes from local clientele, commodity/special interest groups, county committees, and elected officials. Staff members also monitor trend data and emerging issues.

The CARC uses several input processes to obtain stakeholder input for purposes of designing research projects. Processes include: external advisory committees, joint field days, targeted workshops, seminars, short courses, internal committees, as well as ESCOP and USDA NIFA priorities.

2(A). A brief statement of the process that will be 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 (Meetings with stakeholder groups and commodity organizations)

Brief explanation.

The basis for Texas Extension's relevance in the State of Texas is grassroots involvement. Texas Extension engages the local Leadership Advisory Board in validation of

issues in identifying new and emerging issues. These sessions are conducted every other year and are held in conjunction with Texas AgriLife. Information from other stakeholders is obtained in various ways. Regular meetings are held with various commodity and interest groups. These groups provide input into programmatic decisions including development of new efforts, modification of existing efforts, and termination of programs that are no longer relevant. Finally, various subject matter groups employ the use of surveys and other needs assessment processes to gain information specifically about their subject area. Data from these processes are used to develop programs to address issues.

For the CARC, the above listed groups and organizations provide invaluable input into the stakeholder process. Also, the CARC maintains an active contact list and engages stakeholders on a regular and ongoing basis.

2(B). A brief statement of the process that will be 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.

Cooperative Extension Program uses various stakeholder assessment processes. Meetings with stakeholders who give their input are an ongoing part of the process. Also, surveys are conducted in the four areas in which Extension focuses including Agriculture & Natural Resources, Family & Consumer Sciences, Community & Economic Development and 4-H & Youth Development. Individuals who complete these surveys help to provide and determine the educational directions for the state. The CARC maintains close ties with CEP, USDA, and related agency personnel while using ongoing work relations with local interest groups.

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.

Data from the various stakeholder input processes are used to direct programming efforts at the local, district, regional, and state levels. Validation of issues is determined by leadership groups bi-annually. This process determines the future of new program focus or continuation of existing program thrusts. The Leadership Advisory Board (LAB) is involved to ensure that local needs are addressed with relevant educational methods. Other advisory groups also support the validation of county issues process. Local and state staff develop action plans to address issues of importance. Within the CARC, information collected through the stakeholder process is maintained in a database and is reviewed on a continuing basis by discussion groups and/or scientists in developing project activities.

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Global Food Security and Hunger - Nutrition Health & Wellness
2	Global Food Security - Sustainable Agriculture Production Systems
3	Global Food Security - Agri-business Technical Assistance
4	Climate Change - Youth Development
5	Climate Change - Sustaining Families & Economic Vitality
6	Climate Change - Economic Growth and Development
7	Climate Change - Community Development
8	Climate Change - Plants and Their Systems
9	Childhood Obesity - Family Nutrition
10	Food Safety
11	Food Safety/Global Food Security - Animal Systems - Research
12	Nutrition and Childhood Obesity/Food Safety - Research - Food Systems
13	Climate Change/Bioenergy - Plant and Environmental Systems
14	Global Food Security and Hunger - Economics, Markets and Policy
15	Global Food Security and Hunger - Animals and Their Systems

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger - Nutrition Health & Wellness

2. Brief summary about Planned Program

GLOBAL FOOD SECURITY - Nutrition Health & Wellness

This program provides technical and educational information to limited resource families and individuals to help them understand the importance of nutrition and diet. Additionally, it heightens awareness of the relationship between high calorie food consumption and lack of exercise to health status. Research based information will also expand their knowledge and empower them to make better choices for their overall well being.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior		100%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

A large number of Texas citizens, whether living in rural or urban areas, socially disadvantaged or middle income are experiencing problems with diet related illnesses. The prevalence of obesity in more than 60% of the adult population has tripled in children and adolescents. Among children and adolescents, 15% are overweight and more than 70% have diseases that are associated with obesity such as hypertension and elevated cholesterol levels. In Texas, obesity related diseases including diabetes, hypertension, cancer and heart disease are found in higher rates among various members of racial-ethnic minorities (e.g., African American and Hispanic American).

2. Scope of the Program

- ☑ In-State Extension
- ☑ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that many families and adults lack basic knowledge regarding the importance of good nutrition in providing optimal health and well being. It is assumed that the Family & Consumer Sciences staff will network with local agencies and organizations, faith- based communities, schools, and other groups to engage the target audience in meaningful, informal learning activities and experiences.

It is assumed that the Outcome and Output plans and logic model concept will produce results for youth and adults engaged.

2. Ultimate goal(s) of this Program

The goals of this program are to: provide families with relevant nutrition education and access to enhance food resources, present opportunities for participants to experience a variety of foods, increase consumption of vegetables and fruits, and engage in regular physical fitness activities.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	8.0	0.0	0.0
2013	0.0	8.0	0.0	0.0
2014	0.0	8.0	0.0	0.0
2015	0.0	8.0	0.0	0.0
2016	0.0	8.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Provide one-on-one consultations
Conduct on-site food demonstrations
Provide train-the-trainer opportunities
Conduct educational programs and classes
Teach a series of nutrition classes to special interest groups
Exhibit educational displays at various sites

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☑ Other 1 (Exhibits)
☐ Other 2	☐ Other 2

3. Description of targeted audience

Minority families and individuals
Senior adults
Single parents
Persons coping with and at risk for chronic illnesses

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	20000	18000	2000	3800
2013	20000	18000	2000	3800
2014	20000	18000	2000	3800
2015	20000	18000	2050	3850
2016	20000	18000	2050	3850

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	1	0
2013	0	1	0
2014	0	1	0
2015	0	1	0
2016	0	1	0

V(H). State Defined Outputs

1. Output Target

V(I). State Defined Outcome

O. No	Outcome Name
1	Conduct educational programs on basic nutrition, enroll participants in a series of nutrition educational classes, conduct nutrition workshops and seminars on new dietary guidelines and MyPyramid, disseminate information letters addressing nutrition and health, and conduct on site food demonstrations for adults and youth.

Outcome # 1

1. Outcome Target

Conduct educational programs on basic nutrition, enroll participants in a series of nutrition educational classes, conduct nutrition workshops and seminars on new dietary guidelines and MyPyramid, disseminate information letters addressing nutrition and health, and conduct on site food demonstrations for adults and youth.

2. Outcome Type :

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

2012:950 **2013:**950 **2014:**950 **2015:**950 **2016:**950

3. Associated Knowledge Area(s)

- ☑ 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Texas budget crisis could have a negative impact on targeted Extension audiences. Therefore, families' ability to participate in educational classes and workshops may be compromised. Also, the rising gas prices cause additional hardships for the limited resource audiences.

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

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

Description

Pre and post tests as well as surveys and observations during the meetings will be used to evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

- ☐ Case Study
- ☑ Observation
- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☑ Other (surveys and monthly reports)

Description

On-site surveys and observations will be used to collect data on the program.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Global Food Security - Sustainable Agriculture Production Systems

2. Brief summary about Planned Program

This program will focus on developing a sustainable farming operations focusing on small scale family farms and farmers that are socially disadvantaged. The purpose is to ensure that these agricultural operations are not only profitable but that they are also friendly to the community and the environment.

In general, these alternatives and sustainable production practices could enhance profitability of farming operations and minimize fluctuation in farm income to improve the economic well being which may improve the quality of life of limited-resource farmers.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

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		20%		0%
205	Plant Management Systems		20%		0%
211	Insects, Mites, and Other Arthropods Affecting Plants		20%		0%
301	Reproductive Performance of Animals		20%		0%
303	Genetic Improvement of Animals		20%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

A majority of the agricultural producers that get assistance from the Cooperative Extension Program are small farmers with less than 50 acres of land. Many of these socially disadvantaged farmers work full time, and the farm is a second source of income. A low-input sustainable agricultural system is needed to assist these producers get optimum production in the most economical manner.

The South lends itself to many sustainable alternatives because of its mild climate and long growing season. Fruit and vegetable crop productions have been suggested as agricultural alternatives that could improve the income situation of small-scale farmers who utilize Cooperative Extension. Many of these individuals are limited resource farmers seeking methods to improve their crop production potential and profitability. Studies have shown that low-input, alternative agriculture using alternative crops and environmentally friendly production practices will enhance productivity without polluting the environment. Variety trials, fertilizer treatments and different cultural practices have been investigated to determine the relationship between plants and growth factors, appropriate crop management practices and pest control. For small livestock producers, sustainable methods are being promoted that will assist these agricultural operations facing problems such as inadequate rotational grazing techniques, poor selection and management of breeding stock, and problems of controlling animal diseases and parasites.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

This program assumes that with contributions from the Cooperative Extension staff, better production practices will be identified and used for the profitable production of fruits, vegetables, livestock and other alternative crops. To ensure full participation of the stakeholders, applied research will be conducted with socially disadvantaged farmers. This applied research will allow the farmers to work closely with Cooperative Extension staff while gaining hands-on experience in sustainable agriculture. This training will be in addition to the workshops, seminars and other educational programs provided to the farmers. The planning and execution of the plans will continue to be in collaboration with clientele.

2. Ultimate goal(s) of this Program

To train agricultural producers in the use of alternative enterprises and production systems that will help them maximize the quality and quantity of goods produced. The impact of different cropping/production systems and cultural practices will be used to increase farm profitability.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	4.0	0.0	0.0
2013	0.0	4.0	0.0	0.0
2014	0.0	4.0	0.0	0.0
2015	0.0	4.0	0.0	0.0
2016	0.0	4.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cooperative Extension will:
Conduct educational programs
Conduct subject matter workshops/field days/ tours
Provide one-on-one technical assistance/consultations
Conduct training programs
Assist clients with development of farm plans
Hands-on farm demonstrations

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

☑ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Small farmers; limited resource farmers; family farmers and socially disadvantaged farmers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	275	3200	110	275
2013	275	3200	110	275
2014	275	3200	110	275
2015	275	4000	200	300
2016	275	4000	200	300

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs focusing on sustainable production practices in crops and livestock.
  Provide one-on-one technical assistance/consultations.
  Assist small scale and socially disadvantaged farmers with alternative marketing plans.

2012:250 **2013:**250 **2014:**250 **2015:**250 **2016:**250

V(I). State Defined Outcome

O. No	Outcome Name
1	Program participants are expected to benefit from the educational training programs, workshops and technical assistance offered by extension service personnel. This will be measured by: Number of farms adopting sustainable techniques for agricultural production, Number of farms producing alternative crops Number of farms adopting new, sustainable management practices, Number of farms participating in on-farms demonstrations in sustainable agriculture.

Outcome # 1

1. Outcome Target

Program participants are expected to benefit from the educational training programs, workshops and technical assistance offered by extension service personnel. This will be measured by:
Number of farms adopting sustainable techniques for agricultural production,
Number of farms producing alternative crops
Number of farms adopting new, sustainable management practices,
Number of farms participating in on-farms demonstrations in sustainable agriculture.

2. Outcome Type :

- (●) Change in Knowledge Outcome Measure
- ( ) Change in Action Outcome Measure
- ( ) Change in Condition Outcome Measure

2012:150 **2013:**150 **2014:**150 **2015:**150 **2016:**150

3. Associated Knowledge Area(s)

- ☑ 102 - Soil, Plant, Water, Nutrient Relationships
- ☑ 205 - Plant Management Systems
- ☑ 211 - Insects, Mites, and Other Arthropods Affecting Plants
- ☑ 301 - Reproductive Performance of Animals
- ☑ 303 - Genetic Improvement of Animals

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

In recent years, disasters such as hurricanes and droughts had major impacts on agriculture and on the economy in various parts of the State of Texas.

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

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 (Observation)

Description

Pre and post tests, along with surveys will be conducted to collect data.

2. Data Collection Methods

☐ Sampling
☐ Whole population

Survey (Mail, Telephone, On-Site).

☑ Mail
☐ Telephone
☑ On-Site

Interview

☐ Structured
☐ Unstructured

☐ Case Study
☐ Observation
☐ Portfolio Reviews
☐ Tests

- ☐ Journals
- ☐ Other

Description

A data collection will be conducted during and at the end of each year. Additionally, data collected during the monthly report process from Extension personnel will be used.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security - Agri-business Technical Assistance

2. Brief summary about Planned Program

This program provides technical and educational assistance to farmers and ranchers by assisting them in the identification of efficient agri-business practices, proper business management, and accounting/bookkeeping.

Increase community awareness of programs by way of mass marketing, social networking, and information delivery on small business and community & economic development opportunities.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management		90%	90%	0%
903	Communication, Education, and Information Delivery		10%	10%	0%
	Total		100%	100%	0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The rate of growth in world food production, which has been slowing down for the past three decades, will continue to decelerate. It dropped from 3 percent a year in the 1960s to 2 percent in the 1980s, and is expected to continue to fall to 1.8 percent. World population, meanwhile, is forecast to increase to around 7 billion, 94 percent of the increase being in developing countries. In order to keep up with the growth in population, farmers and ranchers are going to have to produce more by being efficient and knowledgeable in Ag-production. Agri-business training and business management is essential if farmers and ranchers are going to be effective in increasing their production.

Programs are not being marketed through mass media outlets such as facebook, twitter, websites, and radio. Statistics below show that social and media outlets are becoming increasingly appealing in reaching Americans.

-77% of Americans use the internet.
-74% of Americans listen daily to the radio.
-The weekly Internet Radio audience has increased 50% over the past year.
-At-work streaming has increased an average of 43% each year over the last five years.
-47% of online adults use social networking sites.
-73% of teens and young adults are a member of at least one social network.
-More than 1.5 million local businesses have active Pages on Facebook.
-The average user spends more than 55 minutes per day on Facebook.
-Facebook has 400+ million active users, with over 1.5 million business pages.
-Twitter has 24+ million unique visitors per month, with 500 million tweets per day.
-11 Percent (or 33.88m) of US Online Adults Use Twitter.
-There are approximately 50 million Tweets sent per day, at about 600 tweets per second.
-LinkedIn has 60+ million professionals worldwide, including all Fortune 500 companies.
-The global average time spent per person on social networking sites is now nearly five and half hours per month.
-The active US-Based social network audience grew roughly 29% from 115 million in February 2009 to 149 million in February 2010.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The implementation of this program is expected to get farmers, ranchers, and agri-business owners to understand the financial aspect of modern farming which often can include complex accounting and bookkeeping. Staff will assist agri-businesses with farm management, price trends, and latest developments that affect the efficiencies and profitability of their business. Proper management begins with proper accounting of expenditures and profit margins which will assist in the identification of efficient agri-business practices.

In order to capitalize on the use of media technology by community members, staff will use social media outlets such as facebook, twitter, LinkedIn, Internet radio, as well as FM radio to promote programs that will increase the overall standard of living for underserved Americans.

2. Ultimate goal(s) of this Program

Small farmers, ranchers, and agribusiness owners will implement efficient and effective accounting business practices that can decrease their business expenses and increase production and profits.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	0.0	4.0	0.0
2013	0.0	0.0	4.0	0.0
2014	0.0	0.0	4.0	0.0
2015	0.0	0.0	4.0	0.0
2016	0.0	0.0	4.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Workshops and trainings will be conducted for both staff and clientele
Conduct educational programs
Provide one-on-one consultations
Assist communities in rural viability assessments
Develop and host a Community and Economic Development Radio Program
Develop and maintain social media sites including a community development web portal

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☐ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Low income community residents, low income neighborhoods, small town officials, community leaders

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	1400	17000	0	0
2013	1400	17000	0	0
2014	1400	17000	0	0
2015	1400	17000	0	0
2016	1400	17000	0	0

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Develop and conduct programs that promote proper agribusiness management.
  Conduct one-on-one training to farmers and ranchers on proper accounting and bookkeeping.
  Conduct programs on agribusiness planning and financial reporting.

2012:900 **2013:**900 **2014:**900 **2015:**900 **2016:**900

V(I). State Defined Outcome

O. No	Outcome Name
1	People in communities will organize to enhance their communities and the place where they reside. Community residents will participate in community clean-up and fix-up activities. Families and individuals will adopt home beautification and maintenance practices. Community residents will establish and conduct programs that provide education recreation and a safe environment. Communities will establish rural water systems, and repair, upgrade and expand existing ones. Organized communities will acquire and maintain quality volunteer fire and safety departments, Communities will acquire facilities to conduct meetings and recreational and educational activities. Organized groups and individuals will establish facilities to market their products.

Outcome # 1

1. Outcome Target

People in communities will organize to enhance their communities and the place where they reside.
Community residents will participate in community clean-up and fix-up activities.
Families and individuals will adopt home beautification and maintenance practices.
Community residents will establish and conduct programs that provide education recreation and a safe environment.
Communities will establish rural water systems, and repair, upgrade and expand existing ones.
Organized communities will acquire and maintain quality volunteer fire and safety departments,
Communities will acquire facilities to conduct meetings and recreational and educational activities.
Organized groups and individuals will establish facilities to market their products.

2. Outcome Type :

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

2012:825 **2013:**825 **2014:**825 **2015:**825 **2016:**825

3. Associated Knowledge Area(s)

- ☑ 601 - Economics of Agricultural Production and Farm Management
- ☑ 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Changes in government regulations and changes in funding will affect the program outcomes.

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

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

Description

A comparison among participants will be done.

2. Data Collection Methods

☐ Sampling
☐ Whole population

Survey (Mail, Telephone, On-Site).

☐ Mail
☐ Telephone
☑ On-Site

Interview

☐ Structured
☐ Unstructured

☐ Case Study
☑ Observation
☐ Portfolio Reviews
☐ Tests
☐ Journals

☑ Other (surveys and monthly reports)

Description

Participant observation will be used to collect data

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Climate Change - Youth Development

2. Brief summary about Planned Program

The Youth Development program is designed for limited resource youth in eighteen rural and urban Texas counties and is an educational opportunity that focuses on their assets, potential strengths and developmental needs. Youth will be engaged in diverse methods to build on strategies that increase their connections to positive, supportive relationships with challenging, meaningful experiences through clubs, project groups, school enrichment and after school programs. The planned program will focus on three of the NIFA priority areas including:

Climate change - Community Gardens: Preparing for the world of Work: Developing Leadership and Life Skills. Sustainable Energy - Developing Science, Engineering and Technology Skills. Childhood Obesity - Healthy Lifestyles.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development		20%		0%
802	Human Development and Family Well-Being		40%		0%
806	Youth Development		40%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In Texas counties where the 1890 Cooperative Extension Program is implemented, there still exists an ongoing and pervasive need for additional educational programs in science, engineering technology, healthy lifestyles and leadership development for children and youth. Texas is also experiencing a shortage of young people and minorities understanding science and selecting science as a career. There is a need for a diverse pool of trained scientists to frame and solve problems and educate others. Census records indicate that the number of youth in Texas has increased ten-fold over the 50 plus years due largely to the growing Hispanic population.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that the Cooperative Extension Program 4-H agents and adult volunteer leaders have the necessary skills to collaborate with local schools and other youth serving agencies for club establishment, afterschool and school enrichment programs.

It is assumed that the Outcome and Output plans and logic model concept will produce results for youth and adults engaged.

2. Ultimate goal(s) of this Program

Limited resource Texas youth will experience cognitive and behavioral skills development through the science, engineering and technology program. Youth will possess skills needed to compete in a diverse and demanding workforce. Youth will apply knowledge and skills to foster positive lifestyle choices through healthy lifestyle outreach programs.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	7.0	0.0	0.0
2013	0.0	7.5	0.0	0.0
2014	0.0	7.5	0.0	0.0
2015	0.0	8.0	0.0	0.0
2016	0.0	8.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Clubs/Projects Groups

Youth will be organized into community 4-H clubs in 25 Texas counties facilitated by Extension agents in the Cooperative Extension Program. Programs and projects conducted will prepare youth for science and technology and advancements and school and community gardens will address healthy lifestyle through planned physical and nutrition activities. Collaboration with local businesses and agencies will expose youth with job readiness and careers.

School Enrichment

Various school enrichment programs will focus on childhood obesity and science programs. Local Extension websites, blogs, and social media sites will be used to promote and highlight program successes.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☐ TV Media Programs
☑ Demonstrations	☑ Web sites
☑ Other 1 (4-H Clubs)	☑ Other 1 (Exhibits)
☑ Other 2 (School enrichment)	☑ Other 2 (DVDs)

3. Description of targeted audience

Limited-resource youth, ages 8 thru 19, will be targeted for this program. Special recruitment efforts will be marketed to parents, adults and other agencies for support and collaboration to meet expected

goals.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	1600	4700	13100	38500
2013	1700	4800	13200	39500
2014	1800	4900	13300	40500
2015	1900	5000	13400	41500
2016	2000	5100	13500	42500

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Developing Science, Engineering, and Technology Skills
  Reducing Childhood Obesity Through Healthy Lifestyle Program
  Developing Life Skills
  Preparing Youth for an Employable Future

2012:550 **2013:**550 **2014:**550 **2015:**600 **2016:**600

V(I). State Defined Outcome

O. No	Outcome Name
1	Youth Involved: 4-H Clubs, School Enrichment, Special Interest Groups, Day Camps: Developing Science, Engineering and Technology Skills
2	Youth Involved: 4-H Clubs, School Enrichment, Special Interest and Day Camps: Reducing Childhood Obesity Through healthy Lifestyles Program
3	Youth Involved: 4-H Clubs, School Enrichment, Special Interest and Day Camps: Developing Life Skills

Outcome # 1

1. Outcome Target

Youth Involved: 4-H Clubs, School Enrichment, Special Interest Groups, Day Camps: Developing Science, Engineering and Technology Skills

2. Outcome Type :

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

2012:500 **2013:**500 **2014:**500 **2015:**500 **2016:**600

3. Associated Knowledge Area(s)

- ☐ 608 - Community Resource Planning and Development
- ☐ 802 - Human Development and Family Well-Being
- ☑ 806 - Youth Development

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

Outcome # 2

1. Outcome Target

Youth Involved: 4-H Clubs, School Enrichment, Special Interest and Day Camps: Reducing Childhood Obesity Through healthy Lifestyles Program

2. Outcome Type :

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

2012:500 **2013:**700 **2014:**800 **2015:**800 **2016:**800

3. Associated Knowledge Area(s)

- ☐ 608 - Community Resource Planning and Development
- ☐ 802 - Human Development and Family Well-Being
- ☑ 806 - Youth Development

4. Associated Institute Type(s)

- [x] 1890 Extension
- [ ] 1890 Research

Outcome # 3

1. Outcome Target

Youth Involved: 4-H Clubs, School Enrichment, Special Interest and Day Camps: Developing Life Skills

2. Outcome Type :

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

2012:600	**2013:**700	**2014:**750	**2015:**800	**2016:**800

3. Associated Knowledge Area(s)

- [ ] 608 - Community Resource Planning and Development
- [ ] 802 - Human Development and Family Well-Being
- [x] 806 - Youth Development

4. Associated Institute Type(s)

- [x] 1890 Extension
- [ ] 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- [x] Natural Disasters (drought, weather extremes, etc.)
- [x] Economy
- [x] Appropriations changes
- [x] Public Policy changes
- [ ] Government Regulations
- [x] Competing Public priorities
- [x] Competing Programmatic Challenges
- [x] Populations changes (immigration, new cultural groupings, etc.)

- ☑ Other (social environmental changes)

Description

Changes in funding as well as the population will affect outcomes of the program.

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

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

Description

Pre and post tests as well as comparisons between participants will be used.

2. Data Collection Methods

- ☑ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☑ Structured
- ☑ Unstructured

- ☐ Case Study
- ☑ Observation
- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals

☑ Other (surveys and monthly reports)

Description

Data will be collected from participants using several methods including surveys, observation, and sampling of the population.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Climate Change - Sustaining Families & Economic Vitality

2. Brief summary about Planned Program

This program provides educational and technical information to limited resource families to strengthen family systems and resiliency. This program engages parents and their children in informal learning activities and guidance to access available resources.

Additionally, this program provides families with information to develop an understanding of how individuals and families obtain and use resources of time, money and human capital to achieve their standard of living and overall quality of life.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management		50%		0%
802	Human Development and Family Well-Being		50%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Families face critical challenges and issues related to the economy, both parents active in the work place, teenage pregnancies, increasing violence against youth, increased single-parent families, and educational and societal influences. Regardless of resources, families want to spend and save wisely, rear children to be productive citizens, and demonstrate positive family and community changes.

Over the past three years bankruptcy in Texas has increased. Approximately 12% of local households reported annual income of less than $15,000. To avoid financial crisis and obtain satisfaction from income, individuals and families must have a tailored money management plan. Strong families are the foundation for quality communities and a nation with a positive future.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that extension staff will plan and implement educational programs to meet the diverse needs of families and staff will continue to network with local agencies and organizations to present money management and parenting education using a variety of teaching methods.

It is assumed that the Outcome and Output plans and logic model concept will produce results for youth and adults engaged.

2. Ultimate goal(s) of this Program

The goals of this program are to: provide limited resource families with relevant financial information to develop skills in budgeting, savings and investing. Families will enhance communication, and parents will be empowered with information to access community and other resources needed to enhance their family infrastructure.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	8.5	0.0	0.0
2013	0.0	8.5	0.0	0.0
2014	0.0	8.5	0.0	0.0
2015	0.0	8.5	0.0	0.0
2016	0.0	8.5	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Provide one-on-one consultations
Conduct educational programs and classes
Exhibit educational displays at various sites

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☐ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☐ Demonstrations	☐ Web sites
☑ Other 1 (Train-the-Trainer)	☑ Other 1 (Exhibits)
☐ Other 2	☐ Other 2

3. Description of targeted audience

Minority families and individuals
Senior adults
Single parents
Limited resource families
College students
Individuals who have experienced job loss
Teen parents

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	3000	10000	2000	3800
2013	3500	10000	2000	3800
2014	3500	10000	2000	3800
2015	3500	10000	2050	3850
2016	3500	10000	2050	3850

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	1	0
2013	0	1	0
2014	0	1	0
2015	0	1	0
2016	0	1	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs on family resource management, life skills, budgeting, and credit to assist families cope with the climate change within the home environment.

  2012:1000 **2013:**1000 **2014:**1000 **2015:**1000 **2016:**1000

V(I). State Defined Outcome

O. No	Outcome Name
1	Improve credit scores Increase number of clients developing a budget plan Increase savings Increase number of individuals and families setting goals Learn new ways to manage anger Learn how to cope with stress Identify effective discipline strategies Increased awareness of dealing with bullies

Outcome # 1

1. Outcome Target

Improve credit scores
Increase number of clients developing a budget plan
Increase savings
Increase number of individuals and families setting goals
Learn new ways to manage anger
Learn how to cope with stress
Identify effective discipline strategies
Increased awareness of dealing with bullies

2. Outcome Type :

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

2012:1200 **2013:**1200 **2014:**1200 **2015:**1200 **2016:**1200

3. Associated Knowledge Area(s)

- ☑ 801 - Individual and Family Resource Management
- ☑ 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Texas budget crisis could have a negative impact on targeted Extension individuals and families. Families are suffering from:

Economic recession
Lack of community resources and support systems
Families in transition
Parents suffering from depression and other illnesses
Extreme weather conditions and changes in population will affect outcomes
Lack of child care and family support
Rising cost of fuel

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

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

Description

Pre and post test as well as surveys and observations during the meetings will be used to evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☑ Unstructured

- ☐ Case Study
- ☑ Observation

- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☐ Other

Description

On-site surveys and observations will be used to collect data on the program.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Climate Change - Economic Growth and Development

2. Brief summary about Planned Program

This program provides technical and educational assistance to low-income, agricultural and traditional business clientele to help them establish, maintain and expand their businesses. The program also facilitates the creation of additional jobs.

Increase community awareness of programs by way of mass marketing, social networking, and information delivery on small business and community & economic development opportunities.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation		90%		0%
903	Communication, Education, and Information Delivery		10%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In Texas, every county the 1890 Extension program serves has identified economic growth and development as an issue or problem. This was revealed through the program development process of long range planning. Stakeholders including clientele, community and county leaders, advisory committee members, and agency and organization representatives ranked this issue as priority for the 1890 Extension program to address. Business development activity lags in traditionally agricultural and natural resource dependent communities among low-income and underrepresented groups. This was ascertained by the Rural Business-Cooperative Service. This is also true in suburban and urban areas for these groups. Specific recommendations have been made to provide assistance to small farmers in helping them to establish, maintain and expand their farming operations in addition to providing technical assistance to traditional business owners and those wanting to start a business. These recommendations are expected to result in the improvement of economic conditions among the low-income and an increase in the number of jobs available to them.

Programs are not being marketed through mass media outlets such as facebook, twitter, websites, and radio. Statistics below show that social media and other media outlets are becoming increasingly appealing in reaching Americans.

-77% of Americans use the internet.
-74% of Americans listen daily to the radio.
-The weekly Internet Radio audience has increased 50% over the past year.
-At-work streaming has increased an average of 43% each year over the last five years.
-47% of online adults use social networking sites.
-73% of teens and young adults are a member of at least one social network.
-More than 1.5 million local businesses have active Pages on Facebook.
-The average user spends more than 55 minutes per day on Facebook.
-Facebook has 400+ million active users, with over 1.5 million business pages.
-Twitter has 24+ million unique visitors per month, with 500 million tweets per day.
-11 Percent (or 33.88m) of US Online Adults Use Twitter.
-There are approximately 50 million Tweets sent per day, at about 600 tweets per second.
-LinkedIn has 60+ million professionals worldwide, including all Fortune 500 companies.
-The global average time spent per person on social networking sites is now nearly five and one half hours per month.
-The active US-Based social network audience grew roughly 29% from 115 million in February 2009 to 149 million in February 2010.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that the Cooperative Extension Program Extension agents, headquarters staff, and community volunteers have the necessary skills to provide technical and educational assistance to agricultural and traditional business clientele in establishing, maintaining and business expansion through loan acquisition.

It is assumed that the Outcome and Output plans and logic model concept will produce results in maintaining and expanding businesses.

2. Ultimate goal(s) of this Program

Limited resource individuals and underrepresented groups in agriculture and natural resource dependent communities will establish, maintain, expand businesses and create additional jobs.Networks will be established and communities will be made aware of programs through the use of mass media marketing.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	4.0	0.0	0.0
2013	0.0	4.0	0.0	0.0
2014	0.0	4.0	0.0	0.0
2015	0.0	4.0	0.0	0.0
2016	0.0	4.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct educational programs
Conduct business development seminars
Provide one-on-one consultations
Assist communities in assessing their strengths and weaknesses
Conduct business development training
Assist clients with writing business plans
Develop and host a Community and Economic Development Radio Program
Develop and maintain social media sites including a community development web portal

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☐ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Low-income individuals, underrepresented groups, limited resource business owners and small farm and potential small farm producers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	760	2800	200	1500
2013	760	2800	200	1500
2014	760	2800	200	1500
2015	760	2800	200	1500
2016	760	2800	200	1500

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs on production, management and marketing for small farm producers.
  Conduct business development seminars and workshops.
  Provide one-on-one consultations for small business owners and aspiring entrepreneurs.
  Assist clients in developing business plans.

2012:725 **2013:**725 **2014:**725 **2015:**725 **2016:**725

V(I). State Defined Outcome

O. No	Outcome Name
1	Business plans approved New businesses started Jobs maintained/saved Jobs created Businesses expanded Youth maintaining businesses Youth starting new businesses Dollars saved Businesses experiencing increased income Loans and grants received

Outcome # 1

1. Outcome Target

Business plans approved
New businesses started
Jobs maintained/saved
Jobs created
Businesses expanded
Youth maintaining businesses
Youth starting new businesses
Dollars saved
Businesses experiencing increased income
Loans and grants received

2. Outcome Type :

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

2012:375 **2013:**375 **2014:**375 **2015:**375 **2016:**375

3. Associated Knowledge Area(s)

- ☑ 602 - Business Management, Finance, and Taxation
- ☐ 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Hurricanes and droughts can affect the local economy and thus affect the program.

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

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 (Numbers from outcome indicators)

Description

Post test as well as participant comparisons will be used to evaluate the program.

2. Data Collection Methods

☐ Sampling
☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

☐ Case Study
☑ Observation
☐ Portfolio Reviews
☐ Tests
☐ Journals

☑ Other (survey and monthly reports)

Description

Surveys and observation of participants will be the major form of data collection

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Climate Change - Community Development

2. Brief summary about Planned Program

This program provides assistance to low-income families and individuals on asset building resources that will facilitate an overall increase of the standard of living for families and communities. Community development specialist will work with individuals, communities, and groups, to inform and educate them on issues related to sustainable housing, community protection and safety, senior programs and resources, programs for limited resource individuals, community and organizational viability assessments, asset and wealth building, saving and investing, credit building, debt management, and budgeting among others.

Increase community awareness of programs by way of mass marketing, social networking, and information delivery on small business and community & economic development opportunities.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development		90%		
903	Communication, Education, and Information Delivery		10%		
	Total		100%		

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In the counties being served by the 1890 Cooperative Extension Program, there is a shortage of the utilization of community assistance programs and asset building resources. Through the program development process, community and resource development was identified as an area that needed to be addressed in low-income rural communities. Rural communities are unlike urban communities where, in most cases, needed resources and facilities are a part of the community infrastructure. Many of the rural communities are experiencing difficulty in obtaining basic needed resources that ultimately affect and increase their standard of living or quality of life.

Programs are not being marketed through mass media outlets such as facebook, twitter, websites, and radio. Statistics below show that social and media outlets are becoming increasingly appealing in reaching Americans.

-77% of Americans use the internet.
-74% of Americans listen daily to the radio.
-The weekly Internet Radio audience has increased 50% over the past year.
-At-work streaming has increased an average of 43% each year over the last five years.
-47% of online adults use social networking sites.
-73% of teens and young adults are a member of at least one social network.
-More than 1.5 million local businesses have active Pages on Facebook.
-The average user spends more than 55 minutes per day on Facebook.
-Facebook has 400+ million active users, with over 1.5 million business pages.
-Twitter has 24+ million unique visitors per month, with 500 million tweets per day.
-11 Percent (or 33.88m) of US Online Adults Use Twitter.
-There are approximately 50 million Tweets sent per day, at about 600 tweets per second.
-LinkedIn has 60+ million professionals worldwide, including all Fortune 500 companies.
-The global average time spent per person on social networking sites is now nearly five and half hours per month.
-The active US-Based social network audience grew roughly 29% from 115 million in February 2009 to 149 million in February 2010.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The implementation of this program is expected to get residents of small towns and rural low-income neighborhoods to take advantage of community programs, neighborhood initiatives, and participate in asset building programs that will empower them and increase their overall quality of life. In working with county staff and local leaders, small towns and communities will organize and work on issues that are important to the community such as housing, neighborhood clean-up projects, community center development, parks, and farmers markets. Some of the organized groups will apply for and receive their

501(c) 3 status. Staff will also work with communities to address poverty, family financial management, asset building, and opportunities available to the community at large by way of one-on-one counseling, trainings and workshops.

In order to capitalize on the use of media technology by community members, staff will use social media outlets such as facebook, twitter, LinkedIn, Internet radio, and FM radio to promote programs that will increase the overall standard of living for underserved Americans.

2. Ultimate goal(s) of this Program

Community members will be made aware of and utilize government programs available to low-moderate income individuals. Low income individuals and families will acquire and maintain housing that meets approved government inspection standards. Low-income communities/neighborhoods will acquire, maintain and enhance community facilities. Community residents and leaders will become involved in activities that enhance their communities and their place of residence.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	3.0	0.0	0.0
2013	0.0	3.0	0.0	0.0
2014	0.0	3.0	0.0	0.0
2015	0.0	3.0	0.0	0.0
2016	0.0	3.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Workshops and trainings will be conducted for both staff and clientele
Conduct educational programs
Provide one-on-one consultations
Assist communities in rural viability assessments
Develop and host a Community and Economic Development Radio Program
Develop and maintain social media sites including a community development web portal

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☐ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Low income community residents, low income neighborhoods, small town officials, community leaders.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	1150	15000	0	0
2013	1150	15000	0	0
2014	1150	15000	0	0
2015	1150	15000	0	0
2016	1150	15000	0	0

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Develop and conduct programs that promote individual and community improvement in counties.
  Provide families and individuals information on housing programs targeting low-income.
  Provide assistance to low-income individuals and families needing help in completing housing loan applications.
  Provide assistance to low-income individuals and families needing help in completing government loan/grant applications.
  Conduct in-service training for county staff on asset building for families and communities and resources available to the low-moderate income.
  Disseminate applicable information in rural communities needing facilities and facilities upgrades.
  Provide technical assistance to communities when needed.

2012:750 **2013:**750 **2014:**750 **2015:**750 **2016:**750

V(I). State Defined Outcome

O. No	Outcome Name
1	Low income individuals and families will show an increase in assets and home values. More low income individuals and families will be made aware of resources and programs available to them and will make use of those resources. Families and individuals will acquire housing that meets approved government inspection standards. People in communities will organize to enhance their communities and the place where they reside. Community residents will establish and conduct programs that provide education recreation and a safe environment. Communities will acquire facilities to conduct meetings and recreational and educational activities. Organized groups and individuals will establish facilities to market their products.

Outcome # 1

1. Outcome Target

Low income individuals and families will show an increase in assets and home values.

More low income individuals and families will be made aware of resources and programs available to them and will make use of those resources.

Families and individuals will acquire housing that meets approved government inspection standards.

People in communities will organize to enhance their communities and the place where they reside.

Community residents will establish and conduct programs that provide education recreation and a safe environment.

Communities will acquire facilities to conduct meetings and recreational and educational activities.

Organized groups and individuals will establish facilities to market their products.

2. Outcome Type :

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

2012:100 **2013:**100 **2014:**100 **2015:**100 **2016:**100

3. Associated Knowledge Area(s)

- ☑ 608 - Community Resource Planning and Development
- ☑ 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Natural disasters such as hurricanes are external factors that can affect the outcome of the program.

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

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

Description

Participant comparison will be used to evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

- ☐ Case Study
- ☑ Observation

- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☑ Other (survey and monthly report)

Description

On-site observation will be used to collect data. Surveys will also be conducted.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Climate Change - Plants and Their Systems

2. Brief summary about Planned Program

Programs conducted by the Cooperative Extension Program at Prairie View A&M University will be geared towards the needs of small scale and limited resource farmers and will focus on fruit and vegetable crop production in an effort to improve the income situation of the target clientele. Variety trials, fertilizer treatments and different cultural practices will be investigated to determine the relationship between plants and growth factors, appropriate crop management practices and pest control methods.

The Cooperative Extension Program will conduct programming in the areas of the development of community gardens in both urban and rural areas to address the needs of the clientele.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
204	Plant Product Quality and Utility (Preharvest)		10%		
205	Plant Management Systems		10%		
211	Insects, Mites, and Other Arthropods Affecting Plants		20%		
212	Pathogens and Nematodes Affecting Plants		20%		
213	Weeds Affecting Plants		20%		
215	Biological Control of Pests Affecting Plants		20%		
	Total		100%		

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

A majority of the agricultural producers that get assistance from the Cooperative Extension Program are small farmers with less than 50 acres of land. Many of these socially disadvantaged farmers work full time, and the farm is a second source of income. A low-input sustainable agricultural system is needed to assist these producers get optimum production in the most economical manner.

The South lends itself to many sustainable alternatives because of its mild climate and long growing season. Fruit and vegetable crop productions have been suggested as agricultural alternatives that could improve the income situation of small-scale farmers who utilize Cooperative Extension. Many of these individuals are limited resource farmers seeking methods to improve their crop production potential and profitability. Studies have shown that low-input, alternative agriculture using alternative crops and environmentally friendly production practices will enhance productivity without polluting the environment. Variety trials, fertilizer treatments and different cultural practices have been investigated to determine the relationship between plants and growth factors, appropriate crop management practices and pest control.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

This program assumes that with contributions from the Cooperative Extension staff, better production practices will be identified and used for the profitable production of fruits, vegetables, berries and other alternative crops. To ensure full participation of the stakeholders, applied research will be conducted with socially disadvantaged farmers. This applied research will allow the farmers to work closely with Cooperative Extension staff while gaining hands-on experience in sustainable agriculture. This training will be in addition to the workshops, seminars and other educational programs provided to the farmers. The planning and execution of the plans will continue to be in collaboration with clientele.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to train agricultural producers in the use of alternative enterprises and production systems that will help them maximize the quality and quantity of goods produced. The impact of different cropping/production systems and cultural practices will be used to increase farm profitability.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	4.8	0.0	0.0
2013	0.0	5.0	0.0	0.0
2014	0.0	5.3	0.0	0.0
2015	0.0	5.8	0.0	0.0
2016	0.0	5.8	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cooperative Extension will:
Conduct educational programs
Conduct subject matter workshops/field days/ tours
Provide one-on-one technical assistance/consultations
Conduct training programs
Assist clients with development of farm plans

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

☑ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Small farmers; limited resource farmers; family farmers and socially disadvantaged farmers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	300	2400	75	180
2013	350	3000	100	225
2014	350	3000	100	225
2015	350	3000	100	225
2016	350	3000	100	225

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs focusing on sustainable production practices in crops and livestock.
  Provide one-on-one technical assistance/consultations.
  Assist small scale and socially disadvantaged farmers with alternative marketing plans.

2012:525	**2013:**575	**2014:**575	**2015:**575	**2016:**575

V(I). State Defined Outcome

O. No	Outcome Name
1	Program participants are expected to benefit from the educational training programs, workshops, and technical assistance offered by extension service personnel. This will be measured by: Number of farms adopting best management practices Number of farms adopting sustainable techniques for agricultural production Number of farms producing alternative crops Number of farms adopting new, sustainable management practices Number of farms participating in on-farm demonstrations in sustainable agriculture Number of farms adopting new management techniques

Outcome # 1

1. Outcome Target

Program participants are expected to benefit from the educational training programs, workshops, and technical assistance offered by extension service personnel. This will be measured by:

Number of farms adopting best management practices

Number of farms adopting sustainable techniques for agricultural production

Number of farms producing alternative crops

Number of farms adopting new, sustainable management practices

Number of farms participating in on-farm demonstrations in sustainable agriculture

Number of farms adopting new management techniques

2. Outcome Type :

- (●) Change in Knowledge Outcome Measure
- ( ) Change in Action Outcome Measure
- ( ) Change in Condition Outcome Measure

2012:75	**2013:**100	**2014:**100	**2015:**100	**2016:**100

3. Associated Knowledge Area(s)

- ☑ 204 - Plant Product Quality and Utility (Preharvest)
- ☑ 205 - Plant Management Systems
- ☑ 211 - Insects, Mites, and Other Arthropods Affecting Plants
- ☑ 212 - Pathogens and Nematodes Affecting Plants
- ☑ 213 - Weeds Affecting Plants
- ☑ 215 - Biological Control of Pests Affecting Plants

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

Natural disasters such as drought have made agricultural production difficult for small scale farmers.

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

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

Description

Pre and post tests, along with surveys will be used to help evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☑ Mail
- ☑ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

☐ Case Study
☐ Observation
☐ Portfolio Reviews
☐ Tests
☐ Journals
☐ Other

Description

A data collection will be conducted during and at the end of each year. Additionally, data collected during the monthly report process from Extension personnel will be used.

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Childhood Obesity - Family Nutrition

2. Brief summary about Planned Program

This program provides technical and educational information to limited resource families and individuals to help them understand the importance of nutrition and diet. Additionally, it heightens awareness of the relationship between high calorie food consumption and lack of exercise to health status. Research based information will also expand their knowledge and empower them to make better choices for their overall well being.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior		100%		
	Total		100%		

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

A large number of Texas citizens, whether living in rural or urban areas, socially disadvantaged or middle income, are experiencing problems with diet related illnesses. The prevalence of obesity in more than 60% of the adult population has tripled in children and adolescents. Among children and adolescents,

15% are overweight and more than 70% have diseases that are associated with obesity such as hypertension and elevated cholesterol levels. In Texas, obesity related diseases including diabetes, hypertension, cancer and heart disease are found in higher rates among various members of racial-ethnic minorities (e.g., African American and Hispanic Americans).

The prevalence of overweight among American children ages 6 - 11 more than doubled in the past 20 years, going from 7% in 1980 to 16% in 2002. The rate of overweight among adolescents ages 12-19 has more than tripled during the same time period, increasing from 5% to 16%. There is not one single cause for the change in children's weight. Many factors have contributed, including more sedentary lifestyles; more on screen entertainment (TVs, DVDs, computer, etc.); increasing size of food/beverage portions; and marketing of foods/beverages directly to children, as well as greater access to snacks foods and soft drinks. The benefits of family mealtime go far beyond the actual food on the table. Family meals have a positive effect on nutrition. Eating more family meals is associated with higher intake of fruits, vegetables, grains, and calcium-rich foods, as well as lower soft drink intake. Additionally, family meal times help bring a sense of unity of family life and increase communication skills.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that many families and adults lack basic knowledge regarding the importance of good nutrition in providing optimal health and well being. It is assumed that the Family & Consumer Sciences staff will network with local agencies and organizations, faith- based communities, schools, and other groups to engage the target audience in meaningful, informal learning activities and experiences.

It is assumed that the Outcome and Output plans and logic model concept will produce results for youth and adults engaged.

2. Ultimate goal(s) of this Program

The goals of this program are to: provide families with relevant nutrition education and access to enhance food resources, present opportunities for participants to experience a variety of foods, increase consumption of vegetables and fruits, and engage in regular physical fitness activities.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	7.0	0.0	0.0
2013	0.0	7.0	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2014	0.0	7.0	0.0	0.0
2015	0.0	7.0	0.0	0.0
2016	0.0	7.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Provide one-on-one consultations
Conduct on-site food demonstrations
Provide train-the-trainer opportunities
Conduct educational programs and classes
Teach a series of nutrition classes to special interest groups
Exhibit educational displays at various sites

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☐ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☑ Other 1 (Train-the-Trainer)	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Minority families and individuals
Senior adults
Single parents
Persons coping with and at risk for chronic illnesses

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	20000	18000	2000	3800
2013	20000	18000	2000	3800
2014	20000	18000	2000	3800
2015	20000	18000	2050	3850
2016	2000	18000	2050	3850

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	1	0
2013	0	1	0
2014	0	1	0
2015	0	1	0
2016	0	1	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs on basic nutrition, enroll participants in a series of nutrition educational classes, conduct nutrition workshops and seminars on new dietary guidelines and MyPyramid, disseminate information letters addressing nutrition and health, and conduct on site food demonstrations for adults and youth.

  2012:950 **2013:**950 **2014:**950 **2015:**950 **2016:**950

V(I). State Defined Outcome

O. No	Outcome Name
1	Participants understand and use MyPyramid in meal buying and preparation. Participants become aware of diet related diseases. Participants understand the connection between diet and exercise. Participants increase consumption of fruits and vegetables. Expectant teen mothers adopt healthy eating habits. Participants modify recipes to decrease amount of calories.

Outcome # 1

1. Outcome Target

Participants understand and use MyPyramid in meal buying and preparation. Participants become aware of diet related diseases. Participants understand the connection between diet and exercise. Participants increase consumption of fruits and vegetables. Expectant teen mothers adopt healthy eating habits. Participants modify recipes to decrease amount of calories.

2. Outcome Type :

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

2012:4000 **2013:**4000 **2014:**4000 **2015:**4000 **2016:**4000

3. Associated Knowledge Area(s)

- ☑ 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 (CEP staff changes)

Description

Individual class participants unable to complete educational series
Lack of available transportation
Weather conditions
Personnel changes at community sites and other agencies

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

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

Description

Pre and post test as well as surveys and observations during the meetings will be used to evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

- ☐ Case Study
- ☑ Observation
- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☑ Other (surveys and monthly reports)

Description

On-site surveys and observations will be used to collect data on the program.

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

This program provides technical and educational information to limited resource families and individuals to help them understand the importance of food safety. Additionally, it heightens awareness of the relationship between basic sanitation practices when handling food, reduces waste, conserve nutrients and prevent foodborne illness.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ○ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins		100%		
	Total		100%		

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Food quality and safety involves purchasing, preparing, and storing food using procedures that prevent the spread of bacteria and reduce the risk of foodborne illness. Every year more than 76 million

people get sick from food poisoning. Providing clients with proper food handling procedures, teaching the effectiveness of personal hygiene, preparing food properly, and storing food properly will allow clients to handle food safely and can prevent contamination which causes foodborne illness.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

It is assumed that many families and adults lack basic knowledge regarding the importance of food safety. It is assumed that the Family & Consumer Sciences staff will network with local agencies and organizations, faith- based communities, schools, and other groups to engage the target audience in meaningful, informal learning activities and experiences.

It is assumed that the Outcome and Output plans and logic model concept will produce results for youth and adults engaged.

2. Ultimate goal(s) of this Program

The goals of this program are to: provide limited resource families with relevant information to develop prevent foodborne illnesses. Families will know how to keep food safe when shopping; use proper kitchen safety procedures to prevent cross contamination which can contribute to illness. Also, families will practice personal cleanliness when handling food.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	7.0	0.0	0.0
2013	0.0	7.0	0.0	0.0
2014	0.0	7.0	0.0	0.0
2015	0.0	7.0	0.0	0.0
2016	0.0	7.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Provide one-on-one consultations

Conduct on-site food demonstrations
Provide train-the-trainer opportunities
Conduct educational programs and classes
Teach a series of food safety classes to special interest groups
Exhibit educational displays at various sites

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☐ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☑ Other 1 (Train-the-Trainer)	☑ Other 1 (Exhibits)
☐ Other 2	☐ Other 2

3. Description of targeted audience

Minority families and individuals
Senior adults
Single parents
Persons coping with and at risk for chronic illnesses
Youth

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	5000	3000	3000	3800
2013	5000	3000	3000	3800
2014	5000	3000	3000	3800
2015	5000	3000	3050	3850
2016	5000	3000	3050	3850

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015	0	0	0
2016	0	0	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs on basic food safety, enroll participants in a series of nutrition food safety classes, disseminate information letters addressing food safety and foodborne illnesses and conduct on site demonstrations for adults and youth.

  2012:1000 **2013:**1000 **2014:**1000 **2015:**1000 **2016:**1000

V(I). State Defined Outcome

O. No	Outcome Name
1	Participants will be able to identify sanitation and food safety Practice personal cleanliness when handling food Identify causes of foodborne illness Identify symptoms of foodborne illness Identify and use appropriate food safety techniques to prevent foodborne illness Use food safety procedures when preparing and serving meals

Outcome # 1

1. Outcome Target

Participants will be able to identify sanitation and food safety
Practice personal cleanliness when handling food
Identify causes of foodborne illness
Identify symptoms of foodborne illness
Identify and use appropriate food safety techniques to prevent foodborne illness
Use food safety procedures when preparing and serving meals

2. Outcome Type :

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

2012:2500 **2013:**2500 **2014:**2500 **2015:**2500 **2016:**2500

3. Associated Knowledge Area(s)

- ☑ 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 (CEP staff changes)

Description

Population and staff changes will also affect the outcome of the program
Lack of available transportation
Economy

Extreme weather conditions and changes in population will affect outcomes

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

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

Description

Pre and post test as well as surveys and observations during the meetings will be used to evaluate the program.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☑ Unstructured

- ☐ Case Study
- ☑ Observation
- ☐ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☑ Other (surveys and monthly reports)

Description

Surveys, interview and monthly reports will be used to collect data on the program.

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Food Safety/Global Food Security - Animal Systems - Research

2. Brief summary about Planned Program

Key research areas are designed to improve scientific understanding of physiological mechanisms affecting reproduction, growth and performance of farm animals. These undertakings are crucial for development of efficient production practices and promotion of a healthy and competitive livestock industry in Texas. Application of science-based information allows for the development of humane and cost-effective production practices that promote animal well-being and minimize stress. Also, it is necessary to produce animals that provide consumers with the quality meat, milk and food by-products they desire at an affordable price. High production efficiency and growth are critical elements for expanding local, national and international markets and effectively competing in global markets.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ◉ Yes
- ○ No

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%		10%
302	Nutrient Utilization in Animals		0%		10%
303	Genetic Improvement of Animals		0%		10%
304	Animal Genome		0%		20%
305	Animal Physiological Processes		0%		10%
307	Animal Management Systems		0%		20%
308	Improved Animal Products (Before Harvest)		0%		10%
313	Internal Parasites in Animals		0%		10%
	Total		0%		100%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The science and landscape of agriculture has changed in recent years necessitating the need to implement management practices that accommodate needs that are concomitant with diminishing agricultural lands. In addition, there are increasing demands being placed on the traditional crop sources (i.e. corn, soybeans, wheat, etc.) used in foods, feed, fiber and fuel. An increasing amount of our base feedstock is being channeled into fuels and plastics production, which greatly impacts livestock production. Greater attention will have to be given to alternative production schemes, in particular, more forage-based intensive systems.

2. Scope of the Program

- ☐ In-State Extension
- ☑ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☑ Integrated Research and Extension
- ☑ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Reproductive efficiency enhances profitability of animal production systems. Research will address issues that affect lifetime reproductive efficiency in grazing ruminants. Focus areas include projects that

identify factors that influence uterine health and embryonic and fetal survival. Decreased early embryonic losses will increase farm animal production efficiency and wellbeing. Biotechnology allows incorporation of molecular data into genetic evaluations. Assisted reproduction technologies, marker assisted selection, and germplasm conservation provide the tools to enhance genetic selection of selected phenotypes. Identification of molecular markers for desirable traits, including disease and stress resistance, will facilitate recommendations for interventions that maintain optimal herd health and profitability in the Texas Gulf Coast Region. Enhanced public understanding of the concepts and applications of animal well-being and the physiological basis for animal growth, reproduction, and cost effective production can be achieved through field days, workshops and other educational programs.

2. Ultimate goal(s) of this Program

The overall goal of the Animal Systems focus area is to increase the efficiency of producing livestock with an emphasis on grazing ruminants (beef cattle and goats). This goal will be accomplished through research activities that generate scientific and technical information on animal production practices that are applicable locally, nationally and internationally.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	0.0	0.0	22.0
2013	0.0	0.0	0.0	23.1
2014	0.0	0.0	0.0	23.1
2015	0.0	0.0	0.0	23.1
2016	0.0	0.0	0.0	23.1

V(F). Planned Program (Activity)

1. Activity for the Program

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 which 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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☑ Education Class	☐ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☐ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☑ Other 1 (Reports/Information Briefs)
☐ Other 2	☑ Other 2 (Publications)

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	650	850	90	360
2013	700	900	110	390
2014	700	900	120	420
2015	700	900	120	420
2016	700	900	120	420

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

2012:2 **2013:**2 **2014:**2 **2015:**2 **2016:**2

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	18	0	18
2013	20	0	20
2014	22	0	22
2015	24	0	24
2016	26	0	26

V(H). State Defined Outputs

1. Output Target

- 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.

2012:18 **2013:**20 **2014:**22 **2015:**24 **2016:**26

V(I). State Defined Outcome

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.

Outcome # 1

1. Outcome Target

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. Outcome Type :

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Associated Knowledge Area(s)

- ☑ 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

4. Associated Institute Type(s)

- ☐ 1890 Extension
- ☑ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 (CARC staff changes)

Description

Meaningful program content is dependent on an awareness of industry and producer needs and trends over the short and long term. These needs are determined by maintaining contacts with industry, producers, consumers, and state and federal organizations. Program input/design, implementation and output assessment will be monitored to allow for future directions. This requires a close working relationship between extension, research and academics within and external to our own university structure as well as with local, state and federal agencies. Measurable outcomes of program inputs will be monitored and evaluated continuously in order to determine effectiveness in accomplishing program goals and objectives. Groups involved in program development, implementation and assessment include:

The Cooperative Extension Program at PVAMU
The Department of Agriculture, Nutrition and Human Ecology at PVAMU
1862 and 1890 Land Grant Institutions
Texas Agrilife Research
Texas A&M University
Texas A&M University System Institutions
Texas Medical Center in Houston
Agribusiness Linkages
The Texas Department of Agriculture

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

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

Description

Formative evaluations will be conducted yearly as part of our yearly plan of work update/evaluation. A summative evaluation will be conducted at the end of the 5 year plan of work. Progress at achieving the goals will be evaluated annually taking into consideration specific goals, measurable objectives, and quantifiable outcomes stated in the yearly plan of work.

2. Data Collection Methods

- ☑ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☑ Structured
- ☑ Unstructured

- ☐ Case Study
- ☐ Observation
- ☑ Portfolio Reviews
- ☑ Tests
- ☑ Journals
- ☑ Other (stakeholder input surveys)

Description

Publications, presentations, abstracts, annual reports, newsletters, workshops and field days, conferences, seminars, student graduation rates, and external funding.

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Nutrition and Childhood Obesity/Food Safety - Research - Food Systems

2. Brief summary about Planned Program

The Food Systems Program (FSP) supports the land grant-mission and goals of USDA through addressing issues of regional and national importance of ensuring high-quality, affordable, and safe foods. Critical issues facing the underserved population locally, nationally and globally involve the incidences of increases in outbreaks of foodborne illnesses resulting from contamination in the food chain. The goals of the FSP are: 1. To 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. To accomplish these goals research will be conducted to develop methods for enhancing the quality of food and food products, examine strategies for mitigating the transmission of natural food borne pathogens, examine methods for the reduction of natural and introduced toxicants in foods and feed, examine nutrient quality enhancement of food and food products, examine mechanisms involved in nutrient utilization and diseases, evaluate strategies for minimizing the transfer of microbial pathogens during food handling, evaluate strategies for translating nutrition knowledge into better food selection.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ◉ Yes
- ○ No

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		0%		10%
502	New and Improved Food Products		0%		10%
503	Quality Maintenance in Storing and Marketing Food Products		0%		10%
701	Nutrient Composition of Food		0%		10%
702	Requirements and Function of Nutrients and Other Food Components		0%		20%
703	Nutrition Education and Behavior		0%		10%
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources		0%		20%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins		0%		10%
	Total		0%		100%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The Food Systems Program (FSP) supports the land grant-mission and goals of USDA through addressing issues of ensuring high-quality, affordable, and safe food. Critical issues facing the underserved populations locally, nationally and globally involve the incidences of increases in illnesses and diseases resulting from contamination in the food chain. These issues have been defined with input from discussion groups at the University including researchers, extension program specialists, staff, students and from reviews of current and related literature, including the strategic plans of USDA agencies (eg. ARS, NIFA, the National Institute of Health (NIH), the Centers for Disease Control (CDC) and the Texas Department of Health and Human Services. Cooperative Extension Program has regular futures forums that help in determining issues related to our clientele. The most recent data presented by the CDC indicates that 76 million cases of food borne illnesses occur each year in the United States with exhibited mild symptoms. However, some 325,000 foodborne illness cases require hospitalization and another 5,000 foodborne illnesses result in deaths. The outbreaks of food borne illnesses varies in method of spreading but a significant number of incidents are widespread affecting individuals in various places with the onset of symptoms occurring over a several week time span. Based upon CDC reports and unpublished data here at the Center, in addition to technological advances in detection and control of pathogens, education of food handlers and the utilization of food safety practices may be the most effective manner to reduce the risk of increasing the pathogen population. Projects within the FSP address issues of high national importance regarding the high incidence of food borne illnesses through research activities focusing on mechanisms and biomarkers of nutritionally and foodborne illnesses and disease, improving the organoleptic and functional qualities and safety of food. Furthermore the translation of research knowledge into effective programs for reducing these problems is not fully understood. Increasing the nutritional value of foods (whole, enriched, fortified or enhanced) through value added efforts and

improving the organoleptic characteristics of foods have a major role in consumer acceptance and food choices to reduce the illnesses associated with poor diet and inadequate nutrient intake.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☑ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The FSP recognizes that safe and affordable food are at the very heart of our existence and without it life would end. The quality of life and well-being of our society is impacted by a variety of factors including unsafe and/or contaminated food. The exposure to food borne pathogens is an issue that must be addressed to reduce the incidence of illnesses and diseases in the population. Research that will examine the quality and the functional properties of meats, milk and value-added products is significant in food manufacturing and processing technologies. Additionally, research activities will investigate the relationship between and the mechanisms of food/food component and nutritionally related diseases; and identify evaluation tools, methods and instrumentation for measuring the relationship between foods and/or food components nutritionally related diseases and illnesses. These activities will help to reduce the incidence of these types of illnesses and diseases. The acceptance of any food or food product is not only determined by its nutritional and organoleptic qualities but also by its safety. Food quality and safety are the most important factors for consumer's acceptance and consumption and are issues that are federally regulated. The movement of pesticides, herbicides and antibiotic residues throughout the food chain is of foremost importance. Research that will examine the presence of these hazards along the food chain from the farm to the table will provide knowledge for the withdrawal process, processing methods and alternatives to traditional methods for the preservation and increase in production of meat and milk products.

2. Ultimate goal(s) of this Program

The Food System Program goals are: 1) To increase the body of knowledge in the understanding of nutrients and mechanisms implicated in illnesses and diseases; and 2) To increase the body of knowledge in the area of quality and safety of meat, milk, and value-added products.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	0.0	0.0	16.5
2013	0.0	0.0	0.0	17.3
2014	0.0	0.0	0.0	17.3

Year	Extension		Research	
	1862	1890	1862	1890
2015	0.0	0.0	0.0	17.3
2016	0.0	0.0	0.0	17.3

V(F). Planned Program (Activity)

1. Activity for the Program

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 tranfer of microbial pathogens during food handling.
-Evaluating strategies for translating nutrition knowledge into better food selection.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☐ Education Class	☐ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☐ One-on-One Intervention	☐ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☑ Other 1 (Reports/Information Briefs)
☐ Other 2	☑ Other 2 (Publications)

3. Description of targeted audience

The primarily targeted audience is 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 service area.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	400	950	200	500
2013	400	1000	200	500
2014	400	1000	200	500
2015	400	1000	200	500
2016	400	1000	200	500

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

2012:2 **2013:**2 **2014:**2 **2015:**1 **2016:**1

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	14	0	14
2013	16	0	16
2014	18	0	18
2015	20	0	20
2016	22	0	22

V(H). State Defined Outputs

1. Output Target

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

2012:14 **2013:**16 **2014:**18 **2015:**20 **2016:**22

V(I). State Defined Outcome

O. No	Outcome Name
1	Commercialization of methods/technologies for improving the quality, safety and use of food and food products that will ensure 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.

Outcome # 1

1. Outcome Target

Commercialization of methods/technologies for improving the quality, safety and use of food and food products that will ensure 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. Outcome Type :

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

2012:400 **2013:**400 **2014:**400 **2015:**500 **2016:**500

3. Associated Knowledge Area(s)

- ☑ 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 Agricultural and
- ☑ 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally

4. Associated Institute Type(s)

- ☐ 1890 Extension
- ☑ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 (CARC staff changes)

Description

External factors that may affect the outcomes of the defined programs include, but may not be limited to competing programmatic challenges, economic challenges, and/or program redirection. Partnerships and/or collaborations with the following agencies, organizations and industries are crucial in accomplishment of the program's activities and goals:
-Cooperative Extension Program at the University.
-Department of Agriculture, Nutrition and Human Ecology at the University.
-Other 1862 and 1890 Land Grant Institutions.
-Texas A&M University and with other Institutions within the System.
-Linkages with Texas Medical Center (Houston, TX), Nanofluence Health Corporation (Northfield, IL), Hibiscus Plantation (Waller, TX), and Alltech Biotechnology Corporation (Lexington, KY).

As new challenges arises and are of immediate urgency, as a part of the food system program commitment to enhancing the quality of life of the underserved populations, the food systems program will address these issues. The defined program will not change unless effective programs have been implemented to alter the need as addressed.

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

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

Description

The food system program activities will be evaluated during and after program initiation. The progress of each activity will be evaluated annually as a part of the CARC fiscal year annual accomplishment and plan of work. The scientist leading each activity will report specifically on the progress that has been made on that activity. The progress report of the activity will include finished tasks, undone tasks and address problems and solutions with associated activity and a recommendation for continual support of activity. The overall program will be evaluated based upon the stated outputs and outcomes. The use and input of extension personnel, industrial and other partners will help to effectively evaluate and accomplish the activities and goals of the program. The evaluation process will review whether the facilities and other resources presently at the university are adequate to accomplish the goals.

2. Data Collection Methods

- ☑ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☑ On-Site

Interview

- ☑ Structured
- ☑ Unstructured

- ☐ Case Study
- ☑ Observation
- ☑ Portfolio Reviews
- ☑ Tests
- ☑ Journals
- ☐ Other

Description

Publications, presentations, abstracts, annual reports, newsletters, workshops, field days, seminars, student thesis reports, and bulletins.

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Climate Change/Bioenergy - Plant and Environmental Systems

2. Brief summary about Planned Program

The Plant and Environmental Systems Research focus areas has numerous projects that have been designed based on stakeholder input and strategic directions. Project work to be pursued will build on individual as well as collaborative efforts to forage a new phase by developing major projects in which all team members contribute some portion of the work based upon their expertise, while maintaining the previous track record of focused research. The major projects to be pursued by the group will focus on a very important and vital portion of the regional environment, the Texas Gulf Coast Prairie Wetland Ecosystems. The project activities will be focused on the following three main components, with the associated subtopics: 1) Alternative Cropping Systems and Biomass Production: a) Bioenergy Crops; b) Environmental Biotechnology; c) Cellulose and Fatty Acid Enhancement; d) Biomass Genomics; e) Wetland Plants; f) Environmental Biochemistry of Prairie Grasses; and g) Plant Growth-Soil Microbial Interactions; 2) Biogeochemical Processes: a) Petroleum Remediation; b) Toxic Chemical Remediation; c) Microbial Control; d) Fe and Mn Dynamics; e) Plant-Soil-Microbial Interactions; and f) Biodegradable Polymer Systems; and3) Soil and Water Monitoring: a) Soil Descriptions; b) Redoximorphic Features; c) Seasonally Wet Soils; d) Wetland Soils; e) Wetland Hydrology; f) Wetland Delineation; g) Water Table Monitoring; h) Water Storage Monitoring; and i) Rainfall Variability & Microsite Level.

3. Program existence :

- ○ New (One year or less)
- ○ Intermediate (One to five years)
- ◉ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ◉ Yes
- ○ No

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		0%		10%
103	Management of Saline and Sodic Soils and Salinity		0%		10%
104	Protect Soil from Harmful Effects of Natural Elements		0%		10%
112	Watershed Protection and Management		0%		10%
131	Alternative Uses of Land		0%		10%
132	Weather and Climate		0%		10%
133	Pollution Prevention and Mitigation		0%		10%
201	Plant Genome, Genetics, and Genetic Mechanisms		0%		10%
202	Plant Genetic Resources		0%		10%
206	Basic Plant Biology		0%		10%
	Total		0%		100%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Agricultural, environmental and energy resources within the state of Texas and the U.S.A. must be protected in order to maintain our quality of life as well as to provide stable economic growth. Identification of growth areas for continued collaborative research will strengthen our partnerships on all levels, including: university (departmental), regional (other universities and state agencies) and national (federal agencies).

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☑ Integrated Research and Extension
- ☑ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

1. Plant systems research is valued highly by our stakeholders.
2. Environmental systems components are beneficial to communities.

3. Applied and supporting basic research serve to bolster our fundamental knowledge within the food and agricultural sciences.

2. Ultimate goal(s) of this Program

1. To develop and maintain a premier research program focused on applied and basic research in plant and environmental systems studies.
2. To promote a central core research concept with associated integrated research, teaching, and extension components.
3. To serve our local and regional communities by providing plant and environmental systems information which guides the growth of the urban fringe.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	0.0	0.0	16.6
2013	0.0	0.0	0.0	17.0
2014	0.0	0.0	0.0	17.0
2015	0.0	0.0	0.0	17.0
2016	0.0	0.0	0.0	17.3

V(F). Planned Program (Activity)

1. Activity for the Program

Conduct research activities centered around:
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. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods

☑ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☑ Other 1 (Information Briefs)
☐ Other 2	☐ Other 2

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	160	400	50	300
2013	180	500	50	350
2014	180	500	50	350
2015	180	500	50	350
2016	180	500	50	350

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

2012:2 **2013:**2 **2014:**2 **2015:**1 **2016:**1

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	14	0	14
2013	16	0	16
2014	16	0	16
2015	16	0	16
2016	16	0	16

V(H). State Defined Outputs

1. Output Target

- 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.

2012:14 **2013:**16 **2014:**16 **2015:**16 **2016:**16

V(I). State Defined Outcome

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

Outcome # 1

1. Outcome Target

-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. Outcome Type :

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Associated Knowledge Area(s)

- ☑ 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

4. Associated Institute Type(s)

- ☐ 1890 Extension
- ☑ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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 (CARC staff chagnes)

Description

Our regional climatic dynamics can have an extremely adverse effect on our applied systems research. Economic, appropriations, and policy changes will determine our ability to address focus areas. Government regulations will direct our focus as landowners and end-users seek our knowledge to address plant and environmental systems needs.

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

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

Description

Evaluations of program efforts will occur during the ongoing study phase and will consist of measures that indicate a clear focus on outcomes from the studies.

2. Data Collection Methods

- ☑ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☐ Mail
- ☐ Telephone
- ☐ On-Site

Interview

- ☐ Structured

- ☐ Unstructured
- ☐ Case Study
- ☑ Observation
- ☑ Portfolio Reviews
- ☐ Tests
- ☐ Journals
- ☐ Other

Description

Methods to address data collection will include sampling of research outcomes based on observation and portfolio reviews. Care will be given to maintain confidentiality within the project framework while allowing outcomes to be clearly recorded based upon level of importance to stakeholders.

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Global Food Security and Hunger - Economics, Markets and Policy

2. Brief summary about Planned Program

Programs conducted by the Cooperative Extension Program at Prairie View A&M University will be geared towards the needs of small scale and limited resource farmers and will focus on farm financial management, business planning and the marketing of agricultural products.

In the area of Economics of Agricultural Production and Farm Management, the Cooperative Extension Program will assist small scale agricultural producers by conducting economic analyses that will assist them to be economically profitable and sustainable. Educational programs focusing on strategies for farm profitability and sustainability will be developed and used in the delivery of extension programs to small scale and limited resource farmers.

The Cooperative Extension Program will conduct programming in the areas of farm and home planning including farm income, debt and spending as it addresses the area of Business Management and Finance, and Taxation. Educational programs, events, activities and technical assistance will be developed and implemented to address the relevant issues and needs of limited resource farm families.

Educational programs focusing on alternative and niche markets will be provided to small scale and limited resource agricultural producers. Information about selling high quality products at the local and regional levels will be addressed. Other items included in the area of marketing and distribution practices will focus on gaining an understanding of the agricultural distribution network, better understanding of economic policy and the role that family farms play in the global marketing of agricultural products.

3. Program existence :

- ◯ New (One year or less)
- ◉ Intermediate (One to five years)
- ◯ Mature (More than five years)

4. Program duration :

- ◯ Short-Term(One year or less)
- ◯ Medium-Term (One to five years)
- ◯ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ◯ No

6. Expending other than formula funds or state-matching funds :

- ◉ Yes
- ◯ No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management		50%		0%
602	Business Management, Finance, and Taxation		25%		0%
604	Marketing and Distribution Practices		25%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Agriculture is a major component of the economy in Texas. Texas has 247,437 farms which sell $21,001,074 in agricultural products annually. Small and limited resource farms (e.g., farms generating less than $10,000 in annual sales) constitute approximately 71.5% of these farms, according to the 2007 Census of Agriculture (USDA, NASS, 2007).

Small and limited resource farmers are a large and important part of the state and national economy. Nearly 40% of the value of farm products produced in the United States is still generated by small farms. According to the 2002 U.S. Census of Agriculture, 39% of farms had sales of less than $2,500. These farms are engaged in a variety of crop and livestock enterprises, including traditional field crops, beef, and new alternatives crops targeted to niche markets. Small farmers have numerous challenges, some of which are due to the lack of size, lack of knowledge about enterprise selection appropriate to financial resources and lack of skills. The Cooperative Extension Program will continue to address problems associated with enterprise and market selection and optimal resource allocation in production, and risk management. Furthermore, extension and outreach programs will be designed with

the ultimate goal of enhancing the economic viability of small and limited resource farms and families. Some major factors affecting small farmers and ranchers are poor management skills, inability to maintain cash flow, past racial discrimination and lack of information to make informed decisions resulting in a lack of effective management. Therefore, farm business and financial management are needed to address these issues.

Small farm families face barriers to entry into commercial markets. These barriers are mainly due to the lack of knowledge of market structure requirements of values and size as well market demand. These farm families lack knowledge of marketing strategies to enhance farm income.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☑ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Many small scale farmers and ranchers in Texas depend upon the technical assistance provided by Land-Grant institutions, non-profit groups, state and federal agencies. Small farmers and ranchers are continuing to experience financial difficulties which led to bankruptcy, foreclosures and stressful emotional conditions.

The Cooperative Extension Program at Prairie View A&M University will continue to address these issues and focus on the needs of limited resource farmers. Focusing on these specific needs will help this audience improve their lives. By providing this type of assistance, it is assumed that farmers will be more profitable, decrease debt and improve business management skills. Improvements in these areas will help them to increase their chances of getting loans and other assistance made available by federal and state agencies.

2. Ultimate goal(s) of this Program

The overall, ultimate goal is to enhance the economic viability of small and limited resource farm families by strengthening their technical knowledge and skills and economic decision-making so that they can contribute fully to the agricultural economy.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	6.8	0.0	0.0
2013	0.0	7.3	0.0	0.0
2014	0.0	7.3	0.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2015	0.0	7.3	0.0	0.0
2016	0.0	7.3	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cooperative Extension will:
Conduct educational programs
Conduct subject matter workshops / field days / tours
Provide one-on-one technical assistance / consultations
Conduct training programs
Assist clients with development of farm plans

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☑ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Small farmers; limited resource farmers; family farmers and socially disadvantaged farmers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	250	1850	50	100
2013	275	1850	50	100

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2014	275	1850	50	100
2015	275	1850	50	100
2016	275	1850	50	100

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	3	0
2013	0	3	0
2014	0	4	0
2015	0	5	0
2016	0	8	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs focusing on farm financial management, production and marketing.

  Provide one-on-one technical assistance/consultations.

  Assist small scale and socially disadvantaged farmers with farm plans.

  2012:500 **2013:**500 **2014:**500 **2015:**500 **2016:**500

V(I). State Defined Outcome

O. No	Outcome Name
1	Program participants are expected to benefit from the educational training programs, workshops and technical assistance offered by extension service personnel. This will be measured by: Number of farms adopting a record keeping system Number of farm plans developed Number of farms with increase in income Number of farms adopting new management practices Number of farm loans received as a result of farm business planning

Outcome # 1

1. Outcome Target

Program participants are expected to benefit from the educational training programs, workshops and technical assistance offered by extension service personnel. This will be measured by:

Number of farms adopting a record keeping system

Number of farm plans developed

Number of farms with increase in income

Number of farms adopting new management practices

Number of farm loans received as a result of farm business planning

2. Outcome Type :

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

2012:200 **2013:**200 **2014:**200 **2015:**200 **2016:**200

3. Associated Knowledge Area(s)

- ☑ 601 - Economics of Agricultural Production and Farm Management
- ☑ 602 - Business Management, Finance, and Taxation
- ☑ 604 - Marketing and Distribution Practices

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect 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

Description

In recent years, disasters such as hurricanes, droughts, and wild fires had major impacts on agriculture and on the economy in various parts of the State of Texas.

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

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 (Ongoing)

Description

Pre and post tests, along with surveys will be conducted to collect data.

2. Data Collection Methods

- ☐ Sampling
- ☐ Whole population

Survey (Mail, Telephone, On-Site).

- ☑ Mail
- ☑ Telephone
- ☑ On-Site

Interview

- ☐ Structured
- ☐ Unstructured

- ☐ Case Study
- ☐ Observation
- ☐ Portfolio Reviews

- ☐ Tests
- ☐ Journals
- ☐ Other

Description

A data collection survey will be conducted during, and at the end of each year. Additionally, data collected during the monthly report process from Extension personnel will be used.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Global Food Security and Hunger - Animals and Their Systems

2. Brief summary about Planned Program

This program will focus on developing a sustainable farming operations focusing on increasing the health and productivity of livestock through optimizing nutrition, and reproduction. The purpose is to ensure that these agricultural operations are not only profitable but that they are also friendly to the community and the environment.

In general, these alternatives and sustainable production practices could enhance profitability of farming operations and minimize fluctuation in farm income to improve the economic well being which may improve the quality of life of limited-resource farmers.

3. Program existence :

- ○ New (One year or less)
- ◉ Intermediate (One to five years)
- ○ Mature (More than five years)

4. Program duration :

- ○ Short-Term(One year or less)
- ○ Medium-Term (One to five years)
- ◉ Long-Term (More than five years)

5. Expending formula funds or state-matching funds :

- ◉ Yes
- ○ No

6. Expending other than formula funds or state-matching funds :

- ○ Yes
- ◉ No

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		20%		0%
302	Nutrient Utilization in Animals		20%		0%
307	Animal Management Systems		20%		0%
311	Animal Diseases		20%		0%
312	External Parasites and Pests of Animals		10%		0%
313	Internal Parasites in Animals		10%		0%
	Total		100%		0%

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

A majority of the agricultural producers that get assistance from the Cooperative Extension Program are small farmers with less than 50 acres of land. Many of these socially disadvantaged farmers work full time, and the farm is a second source of income. A low-input sustainable agricultural system is needed to assist these producers get optimum production in the most economical manner.

Small livestock producers, sustainable methods are being promoted that will assist these agricultural operations facing problems such as inadequate rotational grazing techniques, poor selection and management of breeding stock, and problems of controlling animal diseases and parasites.

2. Scope of the Program

- ☑ In-State Extension
- ☐ In-State Research
- ☐ Multistate Research
- ☐ Multistate Extension
- ☐ Integrated Research and Extension
- ☐ Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

This program assumes that with contributions from the Cooperative Extension staff, better production practices will be identified and used for the profitable production of fruits, vegetables, livestock and other alternative crops. To ensure full participation of the stakeholders, applied research will be conducted with socially disadvantaged farmers. This applied research will allow the farmers to work closely with Cooperative Extension staff while gaining hands-on experience in sustainable agriculture. This training will be in addition to the workshops, seminars and other educational programs provided to the farmers. The planning and execution of the plans will continue to be in collaboration with clientele.

2. Ultimate goal(s) of this Program

To train agricultural producers in the use of alternative enterprises and production systems that will help them maximize the quality and quantity of goods produced. The impact of different cropping/production systems and cultural practices will be used to increase farm profitability.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2012	0.0	6.5	0.0	0.0
2013	0.0	6.8	0.0	0.0
2014	0.0	6.8	0.0	0.0
2015	0.0	6.8	0.0	0.0
2016	0.0	6.8	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Cooperative Extension will:
Conduct educational programs
Conduct subject matter workshops / field days / tours
Provide one-on-one technical assistance / consultations
Conduct training programs
Assist clients with development of farm plans
Hold On Farm Demonstrations

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension

Direct Methods	Indirect Methods
☑ Education Class	☑ Public Service Announcement
☑ Workshop	☐ Billboards
☑ Group Discussion	☑ Newsletters
☑ One-on-One Intervention	☑ TV Media Programs
☑ Demonstrations	☑ Web sites
☐ Other 1	☐ Other 1
☐ Other 2	☐ Other 2

3. Description of targeted audience

Small farmers; limited resource farmers; family farmers and socially disadvantaged farmers.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact

	Direct Contact Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2012	225	2850	100	250
2013	275	3200	110	275
2014	275	3200	110	275
2015	275	3200	110	275
2016	275	3200	110	275

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

2012:0 **2013:**0 **2014:**0 **2015:**0 **2016:**0

3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2012	0	3	0
2013	0	3	0
2014	0	4	0
2015	0	5	0
2016	0	8	0

V(H). State Defined Outputs

1. Output Target

- Conduct educational programs focusing on sustainable production practices in livestock.

  Provide one-on-one technical assistance/consultations.

  Assist small scale and socially disadvantaged farmers with alternative marketing plans.

2012:225 **2013:**250 **2014:**250 **2015:**250 **2016:**250

V(I). State Defined Outcome

O. No	Outcome Name
1	Program participants are expected to benefit from the educational training programs, workshops and technical assistance offered by extension service personnel. This will be measured by: Number of livestock producers adopting sustainable techniques for agricultural production. Number of livestock producers adopting new management techniques. Number of livestock producers participating in on-farm demonstrations in animal agriculture.

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Number of livestock producers adopting sustainable techniques for agricultural production.

Number of livestock producers adopting new management techniques.

Number of livestock producers participating in on-farm demonstrations in animal agriculture.

2. Outcome Type :

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

2012:125 **2013:**150 **2014:**150 **2015:**150 **2016:**150

3. Associated Knowledge Area(s)

- ☑ 301 - Reproductive Performance of Animals
- ☑ 302 - Nutrient Utilization in Animals
- ☑ 307 - Animal Management Systems
- ☑ 311 - Animal Diseases
- ☑ 312 - External Parasites and Pests of Animals
- ☑ 313 - Internal Parasites in Animals

4. Associated Institute Type(s)

- ☑ 1890 Extension
- ☐ 1890 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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Description

Pre and Post test along with surveys will be used to help evaluate the program.

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