

2014 Texas A&M University and Prairie View A&M University Combined Research and Extension Annual Report of Accomplishments and Results

Status: Accepted

Date Accepted: 05/06/2015

I. Report Overview

1. Executive Summary

Texas is the second largest state in the nation with approximately 26 million citizens. The size and scope of Texas poses unique challenges with a wide range of diversity including both the agricultural and human sectors. The issues and needs of Texans vary by numerous factors and, in many cases, are complex. Texas is one of the most rural and most urban states in the nation with a majority of its citizens living in 20 of the 254 counties in the state.

AgriLife Extension and AgriLife Research

Texas A&M AgriLife Research (AgriLife Research) and the Texas A&M AgriLife Extension Service (AgriLife Extension) are the land grant research and Extension components of the Texas A&M System and are headquartered in College Station, Texas. Since its beginning in 1876 as a land grant institution, Texas A&M University has been a recognized leader in agriculture, food, and natural resources. Today, AgriLife Research, and AgriLife Extension continue this legacy through outstanding academic programs, important contributions to science through research and discovery, and lifelong learning and youth development through Extension programs. The work of both AgriLife Research and AgriLife Extension is guided by strategic plans and/or roadmaps. The major topical areas in the AgriLife Research strategic plan are identified as imperatives. These imperatives are vital and equally important to ensuring a positive future for Texas and its citizens. The imperatives are as follows: 1) Sustain healthy ecosystems and conserve our natural resources. 2) Enhance competitiveness, prosperity, and sustainability of urban and rural agricultural industries. 3) Improve public health and well-being. 4) Mitigate negative effects of global climate change. 5) Create and utilize fundamental information (genomic, proteomic and metabolomic) to optimize plant and animal production, and human health. The Extension Strategic Plan, developed by AgriLife Extension, is designed to enable the dissemination of research based information to the citizens of Texas on issues of importance as identified through grassroots and other stakeholder input processes. This information is intended to allow the citizens of Texas to make sound decisions that will improve the overall quality of life for themselves and all Texans. The goals of the Extension Roadmap are: 1) Ensure a sustainable, profitable, and competitive food and fiber system in Texas. 2) Enhance natural resource conservation and management. 3) Build local capacity for economic development in Texas communities. 4) Improve the health, nutrition, safety, and economic security of Texas families. 5) Prepare Texas youth to be productive, positive, and equipped with life skills for the future. 6) Expand access to Extension education and knowledge resources. Work on issues of importance in the state is a joint endeavor by both AgriLife Research and AgriLife Extension. Research based information is translated to practical best management practices and disseminated via multiple channels including the network of agents in all 254 counties in the state. Identification of issues and needs is conducted at multiple levels by both AgriLife Research and AgriLife Extension. Grassroots involvement by citizens, advisory groups, and commodity and industry groups are just a few of the ways this information is generated. Work with other states on areas of shared interest is also of high priority. Efforts by AgriLife Research and the AgriLife Extension in 2013 were very successful. Data in this report highlight the activities and success of major program areas supported by AgriLife Research and AgriLife Extension.

Cooperative Extension Program and Cooperative Agricultural Research Center

The Cooperative Extension Program at Prairie View A&M University is a link of the triad (Academics, Research and Service) within the College of Agriculture and Human Sciences. The mission of the Cooperative Extension Program is to respond to the needs of underserved Texans through life changing opportunities that empower families, promote agriculture, strengthen communities and foster leadership development in youth. The Cooperative Extension Program uses various methods to engage stakeholder groups to identify and address emerging issues and meet state and federal priorities. The Cooperative Agricultural Research Center through its research systems are conducting research on: i) developing practical ways on how to Increase the efficiency of artificial insemination and embryo transfer in caprine; ii) using non-invasive real-time ultrasound measurements to evaluate caprine animal development across gender and traits; iii) develop value added caprine products iv) using biotechnological techniques to eliminate undesirable constituents product from plant with high potential in weight-loss commercial market through the develop; v) optimum crop water management and allocation; vi) inventory of water resources at different scales across the state, vii) Biodegradable polymer systems, viii) watershed management; viii) flood prediction and mitigation in the greater Houston area; and ix) in-situ and remote sensing of natural resources, e.g. water resources.

Texas population is approximately 27 million, which includes a population of over 6.5 million individuals and families at or below the poverty level. The federal priorities classified by the National Institute of Food and Agriculture (NIFA) are addressed through both formal and informal educational programs and activities. Currently we have staff in 36 of the 254 Texas counties. Given the targeted audience that encompasses various ethnic groups, religions, cultural and socioeconomic backgrounds, the outreach methods used to address the needs of the clientele are focused and in alignment with the audience which the institution has served purposefully since its inception. The present and emerging needs such as Global Food Security and Hunger, Childhood Obesity, Climate Change, Food Safety, Human Development and Family-Well Being, Youth Development, Individual and Family Resource Management provided the direction for development and implementation of educational outreach methods in the counties. These methods delivered through cooperation between Extension program areas and Research system groups.

The Agriculture and Natural Resources (AgNR) unit focused its efforts on developing sustainable farming and ranching operations by improving their ability to manage risks related to their operations. Our program focused on Production Risks: through increased diversification of production and application of improved technology, Marketing Risks: by assisting producers to develop Marketing and Business Plans, and Financial Risks: via our efforts to assist producers in developing financial statements and recordkeeping along with assistance in obtaining capital. The program's goal was to ensure that agricultural operations are profitable and friendly to the community and the environment; thereby, increasing viability, competitiveness, and sustainability of rural communities. Three (3) banner programs conducted by agents and specialists were: Sustainable Livestock Production, Small Acreage Horticulture Crop Production and Financial and Risk Management. This year's major interest was to introduce producers to the production of high value horticulture crops and seasonal extension high tunnels. Model plots were established on PVAMU campus and in selected counties. Growing grafted vegetables, heirloom vegetables and strawberries were introduced to the community by producers. Five (5) strawberry plots are presently in place to teach farmers how to grow them as well as illustrate the economic value associated with a high value of crops. Our partnership with National Resource Conservation Service (NRCS) resulted in twelve (12) high tunnels being funded. CEP Extension orchestrated a program where nine (9) of the tunnels were shipped on one truck saving each producer over \$800.00 in shipping cost. Access to capital is often expressed as the number one issue facing limited resource producers. The new Microloan programs gave us the opportunity to work with our USDA partners at the Farm Service Agency (FSA) to conduct workshops to youth and adult audiences. Agents and specialists provided technical assistance in filling out loan requests for 60 applicants totaling \$7,759,650.00. To date, approximately 75% of these loans have been approved. Beekeeping, seasonal high tunnels, specialty crops (Asian melons & strawberries) establishing crops and farmers markets were new initiatives started and/or expanded upon this year. In addition, information was provided to the audience on marketing produce along with plans for community and urban gardens, while addressing areas traditionally considered food deserts.

The Community and Economic Development Unit serves as a resource and assistance center for limited resource families and individuals in pursuit of increasing their standard of living through entrepreneurship, community program participation, home ownership, and government assistance programs. Primarily the Community & Economic Development (CED) staff offers professional consultation and technical assistance for entrepreneurs and community organizations looking to start or expand their operations. CED staff provides insight on the local business climate and feasibility of the proposed business idea or expansion and provide local government and community analysis of critical economic development issues. In 2014 the CED staff provided one on one consulting to 127 individuals. Over \$2,080,000 in new loan applications were assisted with by CED staff across the State. Approximately 8,503 entrepreneurs and community members attended CED programs across the State in one of 178 trainings held. During the implementation of home ownership programs, over 38 families applied to USDA home ownership or rehabilitation funding totaling over \$2.5 million in USDA 502 new home loan request. 1 (one) home were refinanced resulting in avoiding foreclosure and reduced monthly mortgage; also 4 homes were rehabilitated and upgraded with an estimated total of \$140,000. Additionally the CED Unit executed its pilot Energy Auditing Certification and Entrepreneurship Program. As a part of the program, participants are trained and certified to become Building Analysis Professionals capable of conducting energy audit reports and simple repairs that address air loss, duct leakages, heat exchange, and potential building safety hazards. Participants are taught how to assess air pressures in the home, identify air leakages, measure carbon monoxide levels, determine insulation requirements, suggest lighting types and make appliance recommendations.

The 4-H and Youth Development unit reached 86,030 educational contacts with youth and their adult leaders in 20 Texas counties. Youth ages 5 to 19 and adult leaders in limited-resource communities benefited from receiving 54,124 hours of research-based information and non-formal education via 1588 sessions. Extension agents organized and managed 4-H clubs, provided in-school curriculum enrichment, and coached youth for a variety of multi-level contests. They also mobilized over 200 community organizations and an equal number of concerned adults in underserved communities to address the local needs of youth. Participants developed life, leadership, and job skills in the areas of healthy living, science, and citizenship. Some participants increased their desire to go to college and pursue STEM careers, some improved their ability to solve problems and resolve conflict positively, while others increased healthy eating and physical activity.

There are many types of families in today's society and those families have multiple challenges and issues such as social, bullying, nutrition, obesity, health and wellness, parenting, and financial management. The Family and Consumer Sciences unit conducted engaging activities to address the critical challenges and issues related to obesity with the intent to prevent consequent chronic diseases. These face-to-face activities included educational programs that reached over 29,000 youth and adults helped participants adopt a healthy lifestyle and reduce the risk for chronic illness and disease. Fact sheets, newsletters, and other media outlets reached more than 839,230 individuals addressing obesity and chronic diseases. Conflict within families is one of the most difficult situations to deal with. Much of the conflict resides around lack of communication. However, families are an intricate part of society and they are the dominating fabric of society. Therefore, over 6,500 parents and youth participated in educational workshops subjects such as communication, conflict resolution, bullying, and anger management. Unfortunately, many families do not discuss money management until there is a problem. Good family relationships and economic security begins when families are able to discuss their finances. Within today's economy, money management is a key factor in family stability. The Cooperative Extension agents addressed money management by conducting budgeting and credit education programs. More than 37,000 families attended financial money management workshops. Youth learned how to create budgets based upon careers they were given through the "Real World" curriculum workshop. They also learned the value of an education, selecting a career, and household income versus expenses. Adults learned how to take care of themselves financially as well as their nutritional health by participating in the "Small Steps to

Health and Wealth" and "Balance Living" curriculum. Family and Consumer Sciences agents are also working within the community to support the growing economy and help limited resource clientele reach the American dream of homeownership. While hosting housing fairs and providing educational outreach, FCS agents were able to assist 3 families in homeownership. The purchase of these homes was valued at over \$130,000 each. Additionally, FCS agents and headquarters staff members are working with their Ag & Natural Resource and 4-H agents to demonstrate healthy meals made from their cylinder and family gardens.

Each of the aforementioned accomplishments have addressed and provided assistance for the limited resource clientele served by the Cooperative Extension Program and the Cooperative Agricultural Research Center in critical areas of importance to the State of Texas. In addition, the programs have persistently addressed federal initiatives for agriculture and natural resources, individuals, families and communities as well as youth and adult leadership development in accordance with the land-grant mission championed by the College of Agriculture and Human Sciences at Prairie View A&M University.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	427.0	76.0	148.9	48.0
Actual	516.1	52.5	269.5	29.0

II. Merit Review Process

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

- Internal University Panel

2. Brief Explanation

AgriLife Extension and AgriLife Research

AgriLife Research and AgriLife Extension Administrative Leaders serve as merit reviewers for the Federal Plan of Work, the Federal Report of Accomplishments and Results, and associated grants and contracts. This team is comprised of senior administrative staff, as well as department heads, associate department heads for Extension, and resident directors at research centers. This leadership team is responsible for the oversight and management of all programs conducted by research and Extension faculty.

Cooperative Extension Program and Cooperative Agricultural Research Center

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. Stakeholder Input

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

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

Brief explanation.

AgriLife Extension and AgriLife Research

Both AgriLife Extension and AgriLife Research utilize various methods to reach stakeholder groups within the State of Texas. AgriLife Extension uses multiple sources of input from stakeholders. These include local clientele, commodity/special interest groups, trend data monitored by specialists, various county committees, elected officials, and emerging issues. Teams of Extension and research faculty meet based on need to analyze these issues, which leads to priority setting and development of programs to address the needs and issues raised by the various stakeholder groups and methods. Local Leadership Advisory Boards (LABs) lead efforts to raise new and validate current issues being addressed in local communities. The process allows for flexibility in approaches based on community resources. Face-to-face meetings and an online data collection effort are part of the options offered. Approximately 2,500 individuals serve on Leadership Advisory Boards across the state. To date, over 4,000 individuals have been involved in this process. In addition, another 10,000 citizens serve on program area committees, task forces, coalitions, and youth boards. These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent all 254 counties in the state. AgriLife Research Administration, Department Heads, and Resident Directors regularly met with the major agricultural industries and commodity groups in Texas. AgriLife Research has encouraged the public to participate in helping set priorities, assess current program and process effectiveness, and determine future directions. These processes were open, fair, and accessible to encourage individuals, groups, and organizations to have a voice, and treated all with dignity and respect. Stakeholders were initially identified by membership in listed organizations, though all events were public and were announced in the press and other written notice. Input from these events was captured by AgriLife Research participants, and in some cases, was published for further public use. Stakeholder input has always been critical to AgriLife Research processes and programs, and listed

events and organizations continue as essential partners in setting the AgriLife Research agenda, and recognizing and addressing emerging issues. A concentrated effort was done for small grains, corn, sorghum, cotton, peanuts, cow-calf and beef cattle feedlots, resulting in a jointly developed strategic plan.

Cooperative Extension Program and Cooperative Agricultural Research Center

The Cooperative Extension Program (CEP) used various methods to reach stakeholder groups within the State of Texas. Multiple sources of input from stakeholders including local clientele commodity/special interest groups, emerging issues, various county committees and elected officials. CEP also used media outlets such as public service announcements and online communications. Focused programs were conducted and analyzed, which led to priority setting and development of educational programs addressing the needs and issues raised by various stakeholder groups in stakeholder input process. Extension used Leadership Advisory Boards (LABs) to validate issues raised in local stakeholder input process. Leadership Advisory Board serve as a conduit to local citizens and their needs. These boards are comprised of community opinion leaders charged with providing visioning and advocacy for the local Extension program. Additional citizens serve on program area committees, task forces, coalitions, and youth boards. These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent the counties in the state serviced by the Cooperative Extension and Research Programs.

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

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys
- Other (Meetings with various stakeholder groups)

Brief explanation.

AgriLife Extension and AgriLife Research

The basis for AgriLife Research and AgriLife Extension's relevance in the State of Texas is grassroots involvement. AgriLife Extension has utilized local community listening sessions and advisory board validation as part of the grassroots issue identification process. These sessions provide local clientele the opportunity to voice their opinion on issues of importance to their lives and the lives of others in their community. Local Leadership Advisory Boards (LABs) lead efforts to raise new and validate current issues being addressed in local communities. The process allows for flexibility in approaches based on community resources. Face-to-face meetings and an online data collection effort are part of the options offered. Approximately 2,500 individuals serve on Leadership Advisory Boards across the state. In addition, another 10,000 citizens serve on program area committees, task forces, coalitions, and youth boards. These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent all 254 counties in the state. 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 about their subject area. Data from these processes are used to develop programs to address issues. AgriLife Research has incorporated data from the AgriLife Extension's process, as well as other stakeholder input methods, for development of initiatives and programs.

Cooperative Extension Program and Cooperative Agricultural Research Center

Cooperative Extension used open listening sessions in 36 counties as a means of getting grassroots involvement in its program planning and data collection process. These sessions allow local clientele to give their opinion on issues of importance to their communities. Additionally, Leadership Advisory Boards and other program advisory committees and/or groups were used to provide input on program direction and implementation. Cooperative Extension staffs also meet with various commodity and interest groups that provided insight into issues facing the targeted audience.

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

1. Methods for collecting Stakeholder Input

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

Brief explanation.

AgriLife Extension and AgriLife Research

Both AgriLife Extension and AgriLife Research use multiple methods to reach stakeholder groups within the State of Texas. AgriLife Extension uses multiple sources of input from various stakeholders. These include local clientele, commodity/special interest groups, trend data monitored by specialists, various county committees, elected officials, and emerging issues. Teams of Extension and Research faculty meet to analyze these issues, which promote priority setting and development of programs to address the needs and issues raised by the various stakeholder groups and methods. Methods of data collection include surveys, focus group sessions, data collected as a result of program evaluations, expert panels, meetings with stakeholders, and open forum type meetings to solicit input. All data from all sources is considered when decisions are made regarding the future directions of Research and Extension efforts.

Cooperative Extension Program and Cooperative Agricultural Research Center

Data was collected via numerous methods from the stakeholders mentioned in the previous section including meeting with advisory committees, holding open forums with clientele and other groups and collected need assessment and/or surveys at educational programs across the state. Likewise, Extension staff members identify needs while conducting research and working with clientele.

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 (Strategic plans)

Brief explanation.

AgriLife Extension and AgriLife Research

Both AgriLife Research and AgriLife Extension use data from the various stakeholder input processes to direct programming efforts at the local, district, regional, and state level. Regional Teams meet to analyze current and emerging issues raised from various stakeholders. Information from these meetings will lead to the refinement of current programs and the development of new programs to address high priority issues. In addition, strategic plans and roadmaps for AgriLife Research and AgriLife Extension have been developed to guide our efforts. Priority areas of this plan have been used to guide the efforts of this POW.

Cooperative Extension Program and Cooperative Agricultural Research Center

The Cooperative Extension Program used various methods to reach stakeholder groups within the State of Texas. Extension used multiple sources of input from stakeholders including local clientele, commodity/special interest groups, emerging issues, various county committees and elected officials. Extension staff analyzed these issues, which led to the priority setting and development of programs to address the needs and issues identified by stakeholders. Extension also used Leadership Advisory Boards (LABs) to validate issues raised in the local stakeholder input process. Leadership Advisory Boards serve as a conduit to local citizens and their needs. These boards are comprised of community opinion leaders charged with providing long-term visioning and advocacy for the local Extension program. Additional citizens serve on program area committees, task forces, coalitions, and youth boards. These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent the counties in the state serviced by the Cooperative Extension Program.

Brief Explanation of what you learned from your Stakeholders

AgriLife Extension and AgriLife Research

Information from key stakeholder groups both informs and validates the strategic plans, and research and programming efforts for both AgriLife Research and AgriLife Extension. This information allows both agencies to remain relevant and accountable for the public funds entrusted via partnerships with local, state, and federal governments.

Cooperative Extension Program and Cooperative Agricultural Research Center

Health issues such as chronic diseases and childhood obesity are major concerns within the targeted audience. Family financial stability, community economics, sustainable agriculture, parenting education and youth development are also issues of high importance.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
13183693	4399907	8779505	5116915

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	6881511	3691894	9141790	4817088
Actual Matching	6881511	2256111	16134770	2573916
Actual All Other	56975873	0	37484523	0
Total Actual Expended	70738895	5948005	62761083	7391004

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	8340022	316267	3429928	1723962

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Economics and Management for Sustainable Agriculture
2	Livestock Production
3	Crop and Forage Production
4	Water Management
5	Range Management
6	Climate Change
7	Sustainable Energy
8	Community Resource and Economic Development
9	Chronic Disease, Health, and Wellness
10	Childhood Obesity
11	Food Safety
12	Global Food Security, Hunger, and Nutrition Education
13	Fostering Strong Families
14	Life Skills for Youth (includes Character Education and Leadership)
15	Adult Leadership and Volunteer Development

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Economics and Management for Sustainable Agriculture

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	0%	70%	0%	0%
602	Business Management, Finance, and Taxation	25%	10%	25%	0%
604	Marketing and Distribution Practices	25%	10%	25%	0%
605	Natural Resource and Environmental Economics	10%	0%	10%	0%
606	International Trade and Development Economics	10%	0%	10%	0%
608	Community Resource Planning and Development	5%	0%	5%	0%
610	Domestic Policy Analysis	25%	0%	25%	0%
903	Communication, Education, and Information Delivery	0%	10%	0%	0%
	Total	100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	11.0	10.0	0.0
Actual Paid	17.6	3.5	12.7	0.0
Actual Volunteer	0.0	20.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
230252	246126	487004	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
230252	150407	881725	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1906383	0	2102222	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension and AgriLife Research

Numerous activities, events and experiences were conducted to address the needs of producers and other clientele in the area of economics and management. These included but are not limited to workshops, one-on-one intervention, marketing clubs, cooperatives, popular press articles, extension publications, and other methods as needed. These educational approaches focus on the identified needs of those who participate in our programs.

Work of AgriLife Research and AgriLife Extension is conducted jointly where research-based information is generated and then transferred to clientele. This work was conducted primarily on campus with dissemination efforts both on campus and at various research and extension centers across the state.

Collaborative efforts are also an important part of this area. Work with various commodity groups and other agencies are routinely conducted by both AgriLife Research and AgriLife Extension faculty. Examples of this work include cooperating with Grain and Livestock organizations on risk management and Biofuels programming and the Texas FSA office on price forecasts for lending purposes for the coming year.

Cooperative Extension Program

Educational programs, trainings and workshops were conducted to assist agricultural producers in the areas of Farm Financial Management and Marketing. Additionally, one on one consultations and business planning sessions were provided to clientele.

2. Brief description of the target audience

AgriLife Extension and AgriLife Research

The target audience for the economics and management program includes all Texas producers. Specifically, commercially viable agricultural producers are targeted, but additional efforts are targeted to small scale operators, part-time producers, new/young landowners/producers, and commodity groups.

The target audiences are very diverse in knowledge, skills, attitudes, and aspirations to learn and adopt important strategies to be successful. Therefore, the methods used in this area vary depending on which audience is being addressed.

Cooperative Extension Program

Our programs assisted a diverse audience, with emphasis on the underserved, hard to reach, and have limited social and economic resources to improve their quality of life; this include farmers and ranchers, private land and forest owners, military veterans and their families.

3. How was eXtension used?

The Cooperatives Community of Practice for eXtension is supported by Texas AgriLife Extension personnel. It provides a resource to individuals and groups interested in cooperative agricultural business practices. A focus for the community of practice is youth leadership, with the intent of drawing talented youth to careers in cooperatives. Such careers are typically located in rural communities and help to strengthen rural economies. In addition, several faculty members answer the ask an expert questions that come in through eXtension.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	25786	97591	195	0

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

Patent Applications Submitted

Year: 2014
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	176	176

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year

Actual

2014 505

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	53

Output #3

Output Measure

- # of one-on-one technical assistance/consultations.

Year	Actual
2014	60

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of producers that report a savings in money or increased profit by best management practices adopted.
2	% of target audience that reports an increased knowledge of economics and management strategies.
3	Number of producers who conduct whole farm or ranch risk assessment evaluations.

Outcome #1

1. Outcome Measures

Percent of producers that report a savings in money or increased profit by best management practices adopted.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	84

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Producers attending in-depth workshops are learning the information needed to improve their risk management skills, and increase their economic returns. This improvement in risk management skills, and increased economic returns should improve the long-run viability of the agricultural sector, result in improved economic returns to related businesses and employment in the region as well.

What has been done

A 2.5 year post survey was mailed to participants of the 2012 Master Marketer program held in Plainview Texas, to determine knowledge gain, adoption of new practices, and economic impact. The survey was an in-depth 14-page survey that was followed up with reminder postcards and phone calls. The survey was done 2.5 years after the initial program to allow time for adoption of new practices and to identify economic impacts.

Results

Results from survey questions indicated; an increase in the use of a marketing plan from 29% pre-Master Marketer to 82% post-Master Marketer, an increase in determining production costs and incorporating those into the marketing plan from 50% pre-Master Marketer to 78% post-Master Marketer, an increase in using market fundamentals in developing their personal market outlook from 41% pre-Master Marketer to 82% post-Master Marketer, and knowing when to use forward cash contracting from 50% pre-Master Marketer to 100% post-Master Marketer. Master Marketer education had an average individual economic impact of \$39,884 or 3.4% of gross farm income for the Plainview class. At a Ranch Management University workshop, participants showed that there was a 104% increase in knowledge as a direct result of the workshop. In addition, 100% of respondents anticipate a positive economic benefit as a direct result of the

information presented at the workshop.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
610	Domestic Policy Analysis

Outcome #2

1. Outcome Measures

% of target audience that reports an increased knowledge of economics and management strategies.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Producers attending in-depth workshops are learning the information needed to improve their risk management skills. This improvement in risk management skills, and increased economic returns should improve the long-run viability of the agricultural sector, result in improved economic returns to related businesses and employment in the region as well.

Cooperative Extension Program:

For farmers in general and more specifically for small scale agricultural producers, obtaining adequate financing is a major concern in their operations. While a majority of these producers have access to land, there is a great need for farm equipment upgrades and for farm operating funds. In order to obtain the needed funds, the farmers need to obtain knowledge to keep basic farm records and the skills to apply for funds to operate their businesses.

What has been done

AgriLife Extension and Research:

Pre-test and post-test instruments and retrospective post-tests were used to determine knowledge gained at Master Marketer, Advanced Topics Series, Crops and Cattle Trails Conferences and workshops.

Cooperative Extension Program:

The Cooperative Extension Program conducted a series of educational programs focusing on business management, record keeping land loan assistance. Program provided producers with information about sources of funding including both grant and loan opportunities. Much of the focus on loans related to obtaining funding through the USDA - Farm Service Agency (FSA). In addition to the workshops, Extension staff members assist small scale agricultural producers with hands-on, one-on-one assistance in completing the loan applications which consisted of farm ownership and farm operating loans. A special focus was placed on assisting individuals to complete microloan and youth loan applications.

Results

AgriLife Extension and Research:

The 26th Master Marketer program (approximately 70 hours of classroom training over a six-week period of time) was conducted in Vernon, Texas during January-March 2014. Pre-test and post-test scores of subject matter knowledge level indicated a 30.43% improvement in participant's scores from the beginning of the Master Marketer program (average pretest score 57.50%) to the end of the Master Marketer program (average posttest score 75.00%). In an exit evaluation, participants suggested that they were much more confident in how and when to use various risk management/marketing tools. If this increase in knowledge levels and confidence translates to improved marketing performance similar to preceding Master Marketer graduates, then an increase in annual income of approximately \$35,267 per year, on average, can be expected for each of the 45 graduates of this year's program. If so, these returns would work out to over \$1.5 million per year for the graduates of the 2014 Master Marketer program in Vernon. At the Big Country Wheat Conference, evaluation results showed that understanding of the 2014 farm bill increased by 89%, and that 85% of producers had a better understanding of the decisions they will need to make as they sign up.

Cooperative Extension Program:

Educational programs and workshops focusing on sources of funding were held. Cooperative Extension Program agents and specialists assisted local farmers and youth in obtaining and developing applications for Farm Service Agency (FSA) microloans, FSA youth loans and Texas Department of Agriculture (TDSA) Young Farmer Grants.

In 2014 the CEP agents provided technical assistance in filling out traditional FSA loan requests for 60 applicants. Loans requests totaled \$7,759,650.00. The CEP staff assisted 20 small farmers to apply for the microloan through USDA for a total of \$700,000. Cooperative Extension staff assisted producers to apply for the TDA Young Farmer Grant program. To date, four applicants have been approved.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

- 604 Marketing and Distribution Practices
- 605 Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Number of producers who conduct whole farm or ranch risk assessment evaluations.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	105

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The FARM Assistance model (financial simulation strategic planning tool) was used to complete 105 analyses for producers, for demonstrations or agent planning purposes. Survey respondents showed that as a result of participating in FARM Assistance, 94% claim a better understanding of the financial aspects of their own operations, and 93% claim an improved ability to assess the financial risks and potential impacts of strategic decisions they make. A comparison of various scenarios analyzed showed that strategic planning tools can have economic benefits.

What has been done

Participants are able to analyze their own economic situation over a 10-year planning horizon using the FARM Assistance model. Producers were able to utilize their own financial, yield, and production information to analyze alternative strategic opportunities such as adding or reducing acreage, changing the crop/livestock mix, changing the machinery complement or purchase/lease arrangements, financing options, irrigation investments etc., to determine long run impacts on the operations financial situation for planning purposes.

Results

The outcome of client participation is measured through participant evaluations. Client assessments of the FARM Assistance program over the last year indicate a very positive impact on management ability. As a result of participating in the FARM Assistance program, 94% claim a better understanding of the financial aspects of their operation and 93% claim an improved ability to assess the financial risks and potential impacts of strategic decisions they make. One of

the objectives of the program is to help managers become more comfortable with formal financial analysis, and 86% indicated that they would be more likely to use formal financial analysis (like FARM Assistance) to help make decisions in the future. 93% of respondents indicated they would recommend FARM Assistance to another producer. Finally, in responding to anticipated economic value, respondents estimated an average \$24,659 annual benefit to their operation as a result of their FARM Assistance participation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
610	Domestic Policy Analysis

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

Budget reductions as a result of reduced state appropriations in 2011 resulted in a reduction in FTEs available to carry out educational activities during 2012, 2013, 2014 and into the future. While remaining faculty picked up additional responsibilities, some educational opportunities were missed due to reduced faculty numbers. In addition, the signing of a new Farm Bill that put responsibility for education on Extensions shoulders resulted in substantial redirection of educational program emphasis. While traditional risk management educational programs were still popular, significant faculty time and effort was redirected toward immediate clientele needs associated with Farm Bill education and training.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Clientele/participants involved in Master Marketer, Advanced Topic Series, Crops and Cattle Trails Conferences, and FARM Assistance are evaluated in several ways, depending on the length of the training activity, whether we are trying to identify short-term knowledge gains, or adoption/change of practices and economic impacts over time. Pre-tests and post-tests are used at the beginning and end of programs to better identify knowledge gains. Retrospective post evaluation surveys are used to identify adoption/change of practices and economic impacts over time. Results indicate that producers are learning, and adopting/changing practices, and these changes are producing economic benefits.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Livestock Production

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%	20%	10%	20%
302	Nutrient Utilization in Animals	25%	20%	15%	0%
303	Genetic Improvement of Animals	5%	0%	5%	0%
304	Animal Genome	0%	0%	10%	20%
305	Animal Physiological Processes	0%	0%	0%	30%
306	Environmental Stress in Animals	5%	0%	5%	0%
307	Animal Management Systems	20%	20%	20%	20%
308	Improved Animal Products (Before Harvest)	20%	0%	20%	0%
311	Animal Diseases	0%	20%	0%	0%
312	External Parasites and Pests of Animals	0%	10%	0%	0%
313	Internal Parasites in Animals	5%	10%	5%	10%
315	Animal Welfare/Well-Being and Protection	10%	0%	10%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	45.0	7.0	20.0	12.0
Actual Paid	37.4	3.5	29.8	9.0
Actual Volunteer	0.0	20.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
498879	246126	1552050	1494958
1862 Matching	1890 Matching	1862 Matching	1890 Matching
498879	150408	2505347	798801
1862 All Other	1890 All Other	1862 All Other	1890 All Other
4130495	0	3722763	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension and AgriLife Research

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

Cooperative Extension Program

Cooperative Extension

Conducted educational programs

Conducted subject matter workshops/field days/ tours

Provided one-on-one technical assistance/consultations

Conducted training programs

Assisted clients with development of farm plans

Held on-farm demonstrations

Cooperative Agricultural Research Center

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 paracrine mechanisms which regulate early embryonic growth, uterine receptivity and support conceptus growth, endometrial attachment and placentation.

b. Investigate factors involved in regulation of male fertility levels.

c. Utilize functional genomic approaches to understand the physiological mechanisms that influence reproduction, growth and efficiency of food producing animals.

d. Identify molecular markers for desirable traits, including milk production, diseases and stress resistance. Determine.

2. Brief description of the target audience

AgriLife Extension and AgriLife Research

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

Cooperative Extension Program

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

Cooperative Agricultural Research Center

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, especially Waller County 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.

3. How was eXtension used?

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

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	46257	866559	8734	0

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

Patent Applications Submitted

Year: 2014

Actual: 1

Patents listed

System and Method for Super-Intensive Shrimp Production Density Shrimp Production

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	417	417

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1550

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	131

Output #3

Output Measure

- # of one-on-one technical assistance/consultations.

Year	Actual
2014	130

Output #4

Output Measure

- # of graduate/undergraduate students involved in research projects.

Year	Actual
2014	12

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

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

Outcome #1

1. Outcome Measures

% of livestock owners/producers that adopt or plan to adopt best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	82

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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

What has been done

Programs conducted include TAMU Beef Cattle Short Course, Texas Beef Quality Producer, Beef and Pork 101, Beef 706, Grassfed Beef Conference, Retail Beef Boot Camps, Rebuilding Texas Herds, Retail Beef Boot Camps, Pasture Management Workshops, Bull Selection, Low-Stress Livestock Handling, Stockmanship schools, Southwest Dairy Conference, Livestock management during drought, Mare/Foal Workshop, Farriers Conference. Youth programs included the 42nd Annual Summer Horsemanship Schools, Lamb/Goat Camps and Judging camps for Beef Cattle, Horses, Sheep and Goats. In addition to specialist driven programs listed above Animal Science Extension faculty support producer education through delivery of educational programs at 210 county programs

Results

From measures including beef/dairy cattle, sheep/goats, horses and meats, 59% to 100% reported intent to adopt of at least one best management practice. 56% to 94% expected to increase income or profitability by adoption of best management practices. 64% to 84% of respondents indicated they would implement changes to their livestock and resource management practices as they rebuild their livestock inventories. 60% to 93% reported elimination of non-productive practices. 62% implemented financial plans, 76% hay analysis,

81% reported use of cost/lb of nutrient strategies for alternative feedstuffs and 92% use body condition scoring as a management tool.

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

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

Cooperative Extension & Agricultural Research Center:

Limited resource livestock producers have historically demonstrated a lack of understanding of how to properly develop and implement a herd health management program. This lack of understanding is reflected, not just in the overall health of their animals, but also in how it impacts them economically.

What has been done

AgriLife Extension and Research:

Programs conducted include TAMU Beef Cattle Short Course, Texas Beef Quality Producer, Beef and Pork 101, Beef 706, Grassfed Beef Conference, Retail Beef Boot Camps, Rebuilding Texas Herds, Retail Beef Boot Camps, Pasture Management Workshops, Bull Selection, Low-Stress Livestock Handling, Stockmanship schools, Southwest Dairy Conference, Livestock management during drought, Mare/Foal Workshop, Farriers Conference. Youth programs included the 42nd Annual Summer Horsemanship Schools, Lamb/Goat Camps and Judging camps for Beef Cattle, Horses, Sheep and Goats. In addition to specialist driven programs listed above Animal Science Extension faculty support producer education through delivery of educational programs at 210 county programs.

Cooperative Extension & Agricultural Research Center :

Extension personal conducted educational programs that provided small producers with the knowledge needed to maintain their livestock in a sufficient and sustainable way. A number of topics were covered, including (but not limited to) herd health, vaccination protocols, and parasite management. Specialists and other university resource personnel assisted in conducting the programs.

Results

AgriLife Extension and Research:

72% to 100% reported improved decision making ability. 70% to 100% reported increased confidence in management ability. 93% indicated knowledge gains of 56% to 88% for livestock management following extreme drought and loss of forage production potential, cattle handling, food safety control, environmental management, financial management during drought, livestock evaluation and general livestock and ranch management.

Cooperative Extension & Agricultural Research Center:

Small producers learned and developed skills necessary to create and implement herd health programs. These programs helped them to improve the overall quality of their livestock, thus allowing them to be more profitable and sustainable in the future. Some program examples include:

CEP personal implemented a hands-on livestock castration workshop, with 100% satisfaction on surveys returned.

Specialist presented during program for small-scale producers, with 83-100% survey respondents expressing satisfaction with the program, and 100% anticipating positive economic impact from knowledge gained.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals

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

Outcome #3

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	64

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

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

What has been done

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

Results

55% to 100% of the participants in these programs indicated they would benefit economically through adoption of management practices outlined in these programs. Participants in the small landowner programs indicated an expected increase in income of \$13.50 per head. Participants in Quality Assurance programs indicated increased income from \$30 to \$100 per head. Of the Beef 706 participants 87% indicated they would benefit economically by an estimated \$44.00.

Reproductive management practices on beef and dairy operations indicated returns of \$40 to \$85 per head. Economic impact across the livestock sector is projected to be between and \$1.6 and \$24 million from adoption of management practices.

4. Associated Knowledge Areas

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Livestock ownership, production and use in Texas continue to be influenced by natural disasters. 2014 followed three tough production years for livestock production. 2011 was the driest year on record and the second hottest year on record. 2012 saw only regional and periodic relief to the devastation of the 2011 production year. Recovery in 2013 was limited to non-existent across most of Texas with only the eastern third of the state seeing measureable improvement. 2014 lead to more mitigation of soil moisture concerns but the Northern and Western areas of the state continue to lack adequate rainfall to result in collection of surface water to provide drinking water for livestock. Inadequate surface water continues to be the main limiting factor in recovery of the ruminant livestock production systems in Texas. Weather related challenges continue to alter program delivery and adoption of some management practices. Routine management of livestock has been influenced and significant need exists for education in emergency and alternative management plans. Production costs and incentives for livestock production, management, and use are influenced by economic changes. Input prices, agriculture valuation, and

health care costs are all factors. Public policy changes and government regulations challenge educators to provide up-to-date, neutral information that helps livestock participants make decisions. Population shifts and use of available land for productive and meaningful livestock production bring opportunities and challenges to livestock owners/producers/users and the associations/corporations/groups that make up this diverse industry.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

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

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Crop and Forage Production

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%	20%	10%	0%
202	Plant Genetic Resources	10%	10%	10%	0%
204	Plant Product Quality and Utility (Preharvest)	20%	20%	20%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	0%	10%	0%	0%
212	Diseases and Nematodes Affecting Plants	10%	0%	10%	0%
213	Weeds Affecting Plants	10%	20%	10%	0%
215	Biological Control of Pests Affecting Plants	10%	20%	10%	0%
216	Integrated Pest Management Systems	30%	0%	30%	0%
	Total	100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	75.0	5.0	85.0	0.0
Actual Paid	54.0	3.5	112.1	0.0
Actual Volunteer	0.0	20.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
726389	246126	3890864	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
726389	150407	7148707	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
6014183	0	12975168	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension and AgriLife Research

Provide training and program materials to County Extension Agents to conduct educational programs at the county level. Technical assistance was provided to agents by specialists in the area of result demonstrations and applied research. Provided multi-county, regional and statewide educational programs via specialist faculty to various stakeholders. Coordinate and collaborate with state and federal agencies in crop and forage activities.

The mid-1990s marked the beginning of an era when the first genetically modified cotton variety was developed. Since that time, biological advances in cotton seed have occurred at a rapid pace, making variety selection more difficult. The investment in the development of these traits and associated breeding programs has brought about a great change in the yield potential for cotton. With these investments in the development of cotton, we have the seen the seed market flooded with new varieties, most of which the farmer has had no experience. As the most important decision a grower makes is the selection of a cotton variety and transgenic traits AgriLife Extension responded to grower needs.

* This new era of rapidly changing seed technology called for an expanded and more intensive cotton variety testing effort. With funding support from Plains Cotton Growers and the Texas State Support Committee -Cotton Inc., the Texas A&M AgriLife Extension Service began conducting intensive replicated cotton variety trials in producer-cooperator fields in 2000.

* The partnership with industry -including funding, local leading producer-cooperators, and seed and technology companies provides added credibility to the large-plot variety evaluations. The testing results allow producers to compare production, quality and economic characteristics of selected varieties.

* Given the increasing number of varieties that are available -more than 110 in 2011 -these results are invaluable to growers in their variety-selection decisions.

Cooperative Extension Program

Programs conducted by The Cooperative Extension Program at Prairie View A&M University focused on vegetable and fruit crop production and were geared towards the needs of small scale and limited resource farmers in an effort to improve their income and place formal barren land back into production. Programs focused on assisting producers better manage risk associated with producing small scale horticulture crops, namely Production Risk, Marketing Risk and Financial Risk.

2. Brief description of the target audience

AgriLife Extension and AgriLife Research

The target audience for this program consists of agricultural producers who produce food, fiber, and forages in the state. Specific focus is on those commodities listed in the program overview. In addition, these programs are interpreted to the urban public through various methods.

Cooperative Extension Program

Our programs will assist a diverse audience, with emphasis on those who are underserved, hard to reach, and have limited social and economic resources to improve their quality of life; this will include farmers and ranchers, private land and forest owners, military veterans and their families.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	36548	2153642	1732	0

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

Patent Applications Submitted

Year: 2014
 Actual: 4

Patents listed

ATTX961014-1R/Y
 Clover, White, 'Neches'
 COMPOSITIONS, ORGANISMS, SYSTEMS, AND METHOD FOR EXPRESSING A GENE PRODUCT IN PLANTS USING SCBV EXPRESSION CONTROL SEQUENCES OPERABLE IN MONOCOTS AND DICOTS
 'Tamrun OL11' Peanut

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	948	948

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1701

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	213

Output #3

Output Measure

- # of one-on-one technical assistance/consultations.

Year	Actual
2014	600

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of crop and forage producers that adopt or plan to adopt best management practices to improved quality and profitability.
2	% of crop and forage producers that report increased knowledge of best management practices to improve quality and profitability.

Outcome #1

1. Outcome Measures

% of crop and forage producers that adopt or plan to adopt best management practices to improved quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	96

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Approximately 6 million acres of wheat is grown in Texas annually. It is produced for grain, grazing, or as a dual purpose (grazing/grain) crop, and has a major economic impact in the state. Local variety trials are important to test adaptation of new variety releases and compare them to established lines currently used by producers. New varieties can offer greater yield and more disease and insect resistance.

Cooperative Extension and Agricultural Research Center:

Texas 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.

What has been done

AgriLife Extension and Research:

The Small Grains Extension Program coordinated 32 uniform wheat variety trials statewide in 2014. These trials were used to provide unbiased yield comparisons among common available varieties and experimental lines. In addition, seven uniform forage variety trials were conducted to test superior small grains species and varieties for forage production. Results of this work were presented at 13 wheat educational meetings organized by county extension agents with 562

producers participating.

Cooperative Extension and Agricultural Research Center:

- * Established Farmer Markets in Bowie, Smith, Houston and Waller Counties. Assist local producers in establishing local food group and in developing a Farmers Market Grant.
- * Conducted grafted cucumber demonstration on campus and in Washington, Ft Bend, Smith, Bowie, and Waller Counties..
- * Conducted Asian Melon Trials on campus to identify adaptable varieties and assist in developing commercial market.
- * Conducted series of trainings on high tunnel construction and vegetable production with support of NRCS Equip cost share
- * Conducted a series of eight beekeeping classes.
- * Partnered with Texas AgriLife in conducting the Texas Strawberry Sustainability Initiative. One trial on campus as well as four producer trials.

Results

AgriLife Extension and Research:

Superior wheat varieties yielded up to 16 bushels per acre more that commonly grown varieties. On average, superior wheat varieties produced 9 bushels more per acre than the commonly grown varieties. Utilizing a \$6 per bushel wheat price, a 9 bushel yield enhancement represents an increased gross profit potential of \$26 million for producers in the Central Texas Region alone. Survey results from educational programs showed knowledge on crop management and production increased by 81.4%, and intention to utilize recommended varieties and adopt recommended practices was 96.2%.

Cooperative Extension and Agricultural Research Center:

Agents report the total sells of local produced vegetables and fruits market through Farmer Markets topped \$63,500.00. As a result on the Drafted Cucumber, Asian Melon, and Strawberry projects a total of 18 new producers brought previously uncultivated land into production. Many were ten acres or less, but the production on these high value products made it feasible to make a profit.

A total of 12 producers that attended our workshops have been approved for NRCS cost shares to purchase High Tunnels. CEP Extension orchestrated a program where 9 of the tunnels were shipped on one truck, saving each producer over \$ 800.00 in shipping cost.

Beekeeping Classes were conducted to bolster the number of local bees in the area. 40 new hives in a three county area were established as a result of the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Diseases and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

% of crop and forage producers that report increased knowledge of best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Crop (species) and cultivar selection are among the most important decisions a producer must make each year. Farmers rely on local and regional variety trials to identify the most adapted and productive plant materials for use in their production systems. Local trials demonstrate the adaptation of a cultivar for the specific growing conditions in the area. Regional assessments demonstrate the potential for particular cultivars to perform well across a much wider range of soil and environmental conditions. AgriLife coordinates variety trials for all the major agronomic crops in Texas and provides this information to growers to aid them in the selection process. These efforts help promote optimum yields and economic returns which will ensure long-term sustainability of production systems.

What has been done

In 2014, 28 on-farm cotton variety trials, known as RACE (Replicated Agronomic Cotton Evaluation) trials were conducted in South Texas, Blacklands, and Northern Rolling Plains. In addition, over 45 educational programs were conducted including regional, multi-county, and single-county events; designed to educate producers about the results of variety evaluations as well as important management practices that enhance crop quality and yields.

Results

Results for the RACE trials were compiled and made available at Cotton.tamu.edu, which typically gets over 250,000 site visits/year. The information is also available in a 40 page booklet that was distributed at producers meetings. Survey results from educational meetings showed producers knowledge about best management practices including variety selection, in-season management, and harvest aid management increased by 98%. Improved seed technology and variety testing efforts have led to significant improvements in both cotton lint quality and yields in the state. Since

2000, average yields per harvested acre have increased from 475 pounds to 670 pounds. The average annual benefit of improved technology and increased adoption by growers is estimated at over \$45 million annually in Texas, which has helped growers to partially offset sharp increases in production costs in recent years. For the ginning sector, the annual gain associated with varietal improvements, testing, and education supports approximately 2,100 jobs annually at cotton gins in the state. The value-added impacts associated with ginning the additional production were estimated at over \$150 million annually, and support 1,400+ jobs in ginning-related industries.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Diseases and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Drought conditions limited crop potential in some areas and may have impacted producer participation at some educational events. However, participation overall was consistent with historical activity and the total number of acres impacted was above average.

One of our most challenging problems continues to be addressing the diverse needs of our target audience and finding the resources to address these needs given our limited capacity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Survey results clearly demonstrate that the combination of applied research and educational program delivery have major impacts on production adoption of practices, and ultimately on economic outcomes. With over 86% of producers reporting intention to adopt practices, the cumulative statewide impact of programs in cotton, wheat, corn, and grain sorghum exceeds \$250MM annually.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Water Management

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	50%	0%	50%	50%
112	Watershed Protection and Management	50%	0%	50%	50%
	Total	100%	0%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	0.0	10.0	2.0
Actual Paid	30.1	0.0	27.6	3.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
394717	0	798142	498320
1862 Matching	1890 Matching	1862 Matching	1890 Matching
394717	0	1671328	266267
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3268084	0	3599130	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension, AgriLife Research and Cooperative Agricultural Research Center

Published research findings generated through evaluation of best management practices to efficiently

manage available water resources, to limit off-site contaminant transport from production, processing, and landscaping systems, to utilize alternative water sources and to remove contaminants from impaired/alternative water sources.

Developed and conducted research and educational programs utilizing direct and indirect educational methods to support efficient utilization and conservation of water resources, to develop alternative water supplies, to implement best management practices on agricultural production and landscapes to protect water resources from contaminants, to promote proper management of surface and ground water resources, to enhance rainwater harvesting and to remove contaminants from impaired water supplies.

The work of AgriLife Research and AgriLife Extension is conducted jointly where research-based information is generated and then transferred to clientele.

Continued development of educational resources such as articles, fact sheets, bulletins, curriculum materials, short course manuals and other teaching materials.

2. Brief description of the target audience

AgriLife Extension, AgriLife Research and Cooperative Agricultural Research Center

Programs focusing on the issue of water address target audiences including but not limited to producers, homeowners, landscape managers, industry practitioners, water resource managers, and others who identify themselves with this issue.

Research findings on water resources management were published to effectively manage the water resources and allocate water for irrigation. Research focused on urban, forested and agricultural watersheds to help water managers, forester, farmers and ranchers to manage water resource effectively with little or no impact on environment.

Research and educational programs were developed by utilizing direct and indirect educational methods such as trainings and seminars and/or instructional classes for effective water conservation and management to develop an awareness among stakeholders.

Development of educational resources such as articles, fact sheets, bulletins, curriculum materials, short course manuals and other teaching materials and in progress.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	101657	657271	92500	0

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

Patent Applications Submitted

Year: 2014

Actual: 2

Patents listed

System and Method for Super-Intenzice Shrimp Production

System and Method for Super-Intensive Shrimp Production Density Shrimp Production

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	245	245

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1452

Output #2

Output Measure

- # research-related projects.

Year	Actual
2014	64

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of participants who report an increased knowledge of best management practices related to water management.
2	% of participants who report the plan to or have adopted best management practices related to water management.

Outcome #1

1. Outcome Measures

% of participants who report an increased knowledge of best management practices related to water management.

2. Associated Institution Types

- 1862 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	94

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Urban streams in Texas have been deteriorating due to the increased imperviousness from development and channel modifications (straightening and lining) that have been done through the years for flood control and water supply. Instability in river banks has resulted in erosion and land loss, flooding (upstream and downstream of modifications) and water quality problems in receiving water bodies. The most prevailing restoration practices include gabions, concrete lining and riprap. There is a need for restoring streams using natural methods that accommodate urban development while keeping the stream stable and performing its natural function. One of the most negative environmental impacts resulting from urbanization is the pollution to our waters and the erosion of our streams as a result of increased urban stormwater. Urbanization causes increased volumes of stormwater, flow rates and contaminant loadings. Traditional stormwater management relies on moving the water as fast as possible to the nearest water body. Recent development in stormwater management involves low impact development (LID)/Green infrastructure(GI) approaches to stormwater management such as rain gardens, green roofs, rainwater harvesting, and porous pavements in urban areas that address water quality as well as water quantity.

Cooperative Ag. Research Center:

Agricultural water allocation/management and urban water management are major issues which impact both water quality and quantity in the State of Texas because fast growing populations in urban area is increasing contaminated runoff including stream erosion, use of pesticides and fertilizers in agriculture also increasing contamination both in surface and groundwater resources.

What has been done

AgriLife Extension and Research:

Two events were held during 2014 that reached 34 contacts resulting in 52 contact hours. In addition, an online course was developed and recorded and is currently in the final stages before it being released. Twenty-two events addressing stormwater management were presented in 2014 for audiences ranging from engineers, city officials, Master Naturalists, Master Gardeners, and the general public. These events reached 849 individuals through face-to-face contact resulting in 1277 contact hours.

Cooperative Ag. Research Center:

Two educational events were conducted among 60 participants of k-12 students from various schools and youths from various counties in the State of Texas.

Results

AgriLife Extension and Research:

A survey was conducted for a stream restoration and natural channel design events. 100% of the attendees of the 2-hour workshop responded to the survey. 95% reported that they will take action as a result of the workshop. 94% of participants identified themselves as having good or excellent knowledge for all topics after completion of the workshop. Survey results for a workshop on smart growth indicated 100% of participants were completely or mostly satisfied with the overall workshop, the quality of the course materials, the ease of understanding of the material presented, and the helpfulness of the information as it relates to the attendee situation. 51.2% reported anticipating benefiting economically.

Cooperative Ag. Research Center:

The goals of these educational events were to develop awareness among students and youths. No evaluation survey was conducted.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management

Outcome #2

1. Outcome Measures

% of participants who report the plan to or have adopted best management practices related to water management.

2. Associated Institution Types

- 1862 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	93

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Water quantity also is a concern with landscape irrigation being a primary consumer of municipal water supply, especially during summer months. By considering water conservation during the design, installation and operation of landscape irrigation systems, the amount of water needed to maintain landscapes can be significantly reduced. Target audiences include licensed irrigators, landscape contractors, and conservation directors of cities and public utilities. In rural areas, onsite wastewater treatment systems provide the wastewater infrastructure for about 25% of Texas's population; operation and maintenance of these systems is critical for protecting our water quality and environmental health.

Cooperative Ag. Research:

Research instrument setup at demonstration farm and lecture series to develop awareness among youths.

What has been done

AgriLife Extension and Research:

Fifteen irrigation short courses were conducted statewide in seven cities to 425 irrigators, irrigation technicians, irrigation inspectors and municipal water conservation staff addressing weather stations, irrigation scheduling, troubleshooting, computer aided design and smart irrigation, and related topics. Sixteen on-site system management trainings were conducted including 10 Introduction to Septic Systems programs at 7 locations and 6, six-hour Homeowner Maintenance of Aerobic Treatment Units programs delivered at five locations.

Cooperative Ag. Research:

Since water management research program started from FY 2013/2014, we did not reach yet on evaluation stage.

Results

AgriLife Extension and Research:

A retrospective pre-post evaluation survey was distributed at the conclusion of nine landscape irrigation programs to gain feedback on the course. 79% of the participants indicated a willingness to adopt the practice of pumping out their septic tank as necessary and 93% of the participants indicated a willingness to adopt the practice of performing operation and maintenance activities on their septic system. The Homeowner Maintenance of Aerobic Treatment Units programs were attended by 107 people generating 642 contact hours. Documentation of programming impact indicates a gain in knowledge by clients of 77-93%. Additionally, 64% of the participants indicated a willingness to limit the organic loading to the OSSF, maintain the disinfection component, and adopt the practice of performing operation and maintenance activities on their aerobic treatment unit.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Other (Other Program Areas)

Brief Explanation

Overall, these programs were highly successful with greater than anticipated participation and high levels of knowledge gain. Interest in stream restoration, stormwater management, irrigation management, and on-site septic system management is high in most communities. Economic factors in smaller communities may limit implementation of recommended stream restoration practices, which can be costly if damage already is severe. Likewise, repair/replacement of failed or failing septic systems may be limited by homeowner economics. Emphasis on economics and low cost alternatives will continue to be a focus in the future.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluation results for the different programs all clearly demonstrate a high level of client satisfaction, significant increases in knowledge gained, and most importantly, a high level of intention to adopt recommended practices. For example, 95% of participants at stream restoration and natural channel design educational events reported they will take action as a result of the information they were provided. Seventy-nine percent of septic system workshop participants indicated a willingness to adopt the practice of pumping out their septic tank as necessary and 80% of the participants indicated a willingness to adopt the practice of performing operation and maintenance activities on their septic system.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Range Management

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	40%	0%	40%	0%
121	Management of Range Resources	60%	0%	60%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	0.0	15.0	0.0
Actual Paid	19.8	0.0	26.3	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
261774	0	824743	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
261774	0	1342357	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2167375	0	3387383	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension and AgriLife Research

Primary activities in this program were focused on development and conducting of research and

educational programs to support proper management and restoration of native rangelands for clientele. Applied research and result demonstrations to support improved rangeland management were also conducted. Training and support for County Extension Agent and Specialist training was provided on appropriate and timely aspects of rangeland management. Emphasis was placed on continued development of appropriate publications, websites, online courses, and other teaching materials.

Work of AgriLife Research and AgriLife Extension is conducted jointly where research-based information is generated and transferred to clientele.

2. Brief description of the target audience

AgriLife Extension and AgriLife Research

The target audiences for this program include federal and state agencies, youth and adults. The adult audiences specifically include traditional landowners, operators, absentee landowners, and "new", novice landowners that either just bought land or have made a career off the land and has returned to it.

3. How was eXtension used?

We have two training courses on the eXtension moodle site and are active in the eXtension ask the expert community.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	44446	204523	13894	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	205	205

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1717

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	90

Output #3

Output Measure

- # of result demonstrations conducted.

Year	Actual
2014	229

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of Land Managers who report increased knowledge leading to better decision-making for wise pesticide use.
2	% of livestock producers who report increased knowledge of rangeland monitoring, watershed management, weed and brush control.

Outcome #1

1. Outcome Measures

% of Land Managers who report increased knowledge leading to better decision-making for wise pesticide use.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	57

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Brush management is a major landowner-concern in Texas to maintain pasture productivity and wildlife habitat. Brush Busters provides landowners with do-it-yourself methods for brush maintenance, including use of pesticides.

What has been done

Extension Ecosystem Science and Management (ESSM) Specialists provide support to County Programs in a variety of manners including applied research/demonstration support, problem solving and presentations at county educational events. During 2014, Unit personnel made 172 presentations supporting 257 county educational events with 8,764 clientele attending. Unit members conducted 15 group trainings involving 403 Extension-faculty and completed 12 Extension publications.

With continuing scattered drought across the state, grazing management is as important as ever for range recovery and ranching survival. The Texas A&M Beef Cattle Short Course Range Management Workshop: The Wonderful World of Grass was conducted. Four ESSM Extension Unit members made presentations featuring stocking rates, implications of weed presence, a virtual tour of healthy and unhealthy range examples, and prescribed burning and wildfire mitigation.

Results

One hundred seventy-three landowners participated in this workshop. A retrospective-post evaluation indicated an average increased understanding of eight teaching points of 64% (52 to 87%). Evaluation respondents represented 61 different Texas counties as well as Louisiana, Maine, and Mexico and reported owning or operating 444,467 acres. Ninety-seven percent of respondents indicated that information received would help make better management decisions.

Adoption of 4 management practices presented during the workshop ranged from 70 to 100%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #2

1. Outcome Measures

% of livestock producers who report increased knowledge of rangeland monitoring, watershed management, weed and brush control.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	69

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Brush management is a major landowner-concern in Texas to maintain pasture productivity and wildlife habitat. Brush Busters provides landowners with do-it-yourself methods for brush maintenance.

What has been done

The Texas A&M Beef Cattle Short Course Brush Buster Workshop was conducted. Six ESSM Extension Unit members demonstrated equipment needs and application methods for featured brush species.

Results

One-hundred seventeen landowners participated in this workshop. A retrospective-post evaluation indicated average increased- understanding of nine topics presented of 83% (47 to 111%). Participants represented 68 counties and reported owning or operating 380,160 acres for an average of about 4,937 acres per person. Total estimated acreage represented was 577,629. One-hundred percent of those returning the evaluation indicated that the information received would help make better management decisions. One-hundred percent of these participants

indicated that they planned to do some form of brush management in the near future.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

Brief Explanation

Drought conditions continue to exist in the state.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Fifteen educational events were evaluated using retrospective-post evaluations during 2014. Two examples of these evaluations are listed below.

For the Texas A&M Beef Cattle Short Course Range Management Workshop, average increased understanding of eight teaching points was 64% (52 to 87%). Ninety-seven percent of respondents indicated that information received would help make better management decisions. Adoption of 4 management practices presented during the workshop ranged from 70 to 100%.

For the Texas A&M Beef Cattle Short Course Brush Busters Workshop, average increased understanding of nine topics presented was 83% (47 to 111%). One-hundred percent of those returning the evaluation indicated that the information received would help make better management decisions. One-hundred percent of these participants indicated that they planned to do some form of brush management in the near future.

There was an estimated economic benefit to clientele of \$18.7 million through seven educational events that were evaluated and in which Unit personnel were involved.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Climate Change

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	0%	0%	20%	10%
103	Management of Saline and Sodic Soils and Salinity	0%	0%	0%	10%
104	Protect Soil from Harmful Effects of Natural Elements	0%	0%	0%	10%
112	Watershed Protection and Management	0%	0%	20%	10%
131	Alternative Uses of Land	0%	0%	0%	10%
132	Weather and Climate	100%	0%	0%	10%
133	Pollution Prevention and Mitigation	0%	0%	20%	10%
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	20%	10%
202	Plant Genetic Resources	0%	0%	0%	10%
206	Basic Plant Biology	0%	0%	20%	10%
	Total	100%	0%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	0.0	1.5	17.0
Actual Paid	14.0	0.0	4.8	8.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
191876	0	361185	1328852
1862 Matching	1890 Matching	1862 Matching	1890 Matching
191876	0	247935	710046
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1588652	0	426302	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Develop and conduct educational programs utilizing direct and indirect educational methods to increase knowledge of and support adoption of management practices capable of mitigating the effect of weather and climate change.

Drought has been the most destructive climatic event associated with climate change, and many AgriLife Extension faculty are involved in education on mitigation or remediation activities associated with drought.

Farmers and ranchers can enjoy huge savings on their fertilizer bills if they monitor plant nutrients during drought, as for the most part, producers applied plant nutrients with the expectation of a normal crop and, when drought severely limits crop production, significant quantities of nutrients remain in the soil for the next crop.

Managing Plant Nutrition during Drought

Texas and much of the Southwest have experienced devastating drought conditions over the last several years. Drought dramatically changes crop nutrient requirement and agricultural nutrient management strategies, particularly in forage crop production systems. Both rate and timing of fertilizer applications must be adjusted to optimize production while minimizing costs. AgriLife Extension delivered 14 educational programs to over 1017 producers focused on nutrient management during drought. Several key issues were addressed in fourteen educational programs including:

- * stand assessment to determine appropriate fertilizer rates for fields in a recovery mode
- * soil testing to evaluate residual nutrient status due to carryover from previous fertilizer applications that have not been fully utilized by the crop
- * soil profile sampling to evaluate deeper nutrients such as potassium in clayey subsoils and nitrogen that has migrated below the traditional six inch sampling zone
- * split applications not just of nitrogen, but also potassium to optimize uptake efficiency
- incorporation of legumes to reduce nitrogen fertilizer costs
- * transition to native species to reduce input costs and provide greater tolerance to extended dry conditions.

AgriLife Research

The research response to this pressing issue is to generate reliable, verifiable data regarding carbon sequestration, carbon cycling, and interrelationships of cropping systems, livestock production and climate change. An example of this effort is using carbon dioxide from coal fired power generation as a feedstock for algae production. Research is also ongoing to develop and add value to co-products from algae production.

Cooperative Agricultural Research Center

Biomass crops are viable alternative/supplemental sources of energy. However, public concern for confirmed experimental information on the probable soil degradation and the release of greenhouse gases (N₂O, CO, CO₂) by biomass crops led to the multi-disciplinary collaborative research between TAMU and PVAMU on the sustainable production of biomass sorghum across variable soil types and climates. The project also aimed to nurture cooperation between plant scientists, professors, and extension specialists by creating a gateway to research and educational development and enhancing new career opportunities for agriculture and engineering students.

Plant Systems research programs are supported by the CAHS strategic plan to broaden the gateway of opportunities for limited resource families through collaborative research between the scientists and CEP specialists on fruits, vegetables, and forages. Technical assistance is provided to CEP program by scientists in the areas of stakeholder educational workshop and learning laboratory demonstrations of applied research results to enhance agricultural biotechnology awareness for crop and forage production.

2. Brief description of the target audience

Research products and educational programs focusing on the issue of weather and climate change address target audiences including but not limited to producers, corporate businesses, landscape managers, water resource managers, decision makers, and others who identify themselves with this issue.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7631	1230428	2077	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total

Actual	0	23	23
---------------	---	----	----

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of educational programs conducted.

Year	Actual
2014	175

Output #2

Output Measure

- # of research related projects.

Year	Actual
2014	9

Output #3

Output Measure

- # of graduate/undergraduate students involved in research projects.

Year	Actual
2014	20

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of people reporting knowledge gained through participation in educational activities.
2	# of people reporting a willingness to adopt practices through participation in educational programs.

Outcome #1

1. Outcome Measures

of people reporting knowledge gained through participation in educational activities.

2. Associated Institution Types

- 1862 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	95

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Proper management of forage crops is critical to their survival during periods of drought. Reducing stocking rates, optimizing Peanut production and trade constitute at least \$4 billion industry in the US, with Texas ranking second to Georgia as the largest producer. But only mega-farmers indulge in this globally lucrative production of the best quality vegetable oil because limited resource farmers are unable to market their produce at the world market. Plant Systems research scientists therefore sought to create specialty peanuts with other nutritious added values that are beneficial to human health so that limited resource farmers could be trained to produce the peanuts. There are at least 6 million limited resource farmers in Texas.

Cooperative Agricultural Research Center:

Resveratrol is the anti-oxidative phytochemical nutritious constituent of peanut seeds. It has human health beneficial effects associated with long life extension; reduction of risks of inflammatory cancer and cardiovascular diseases; amelioration of cholesterol levels, diabetes, and neurological diseases. Ordinarily, peanut seeds have variable and very low (less than 25 microgram per gram) resveratrol contents which has prevented the marketing of high resveratrol peanut as a consistent added value dietary produce. There is no sustainable agricultural technology for field plot production of high resveratrol peanut. With the increasing popularity of boiled peanut and peanut-based products in restaurant chain menus, high resveratrol peanut may be a very attractive and convenient in-shell snack food dietary supplement of the phytochemical resveratrol compounds.

What has been done

AgriLife Extension and Research:

AgriLife Extension delivered multiple high intensity educational programs focused on forage crops production. The Winter Pasture Program covered 19 counties in east Texas and reach 603 producers. The Bennett Trust program provided 3 days of detailed information on land management to producers in the Edwards Plateau. Ranch Management University is a weeklong educational program for new/novice landowners that was delivered twice in 2014. In addition, five pasture and hay meadow programs were conducted and focused on drought management.

Cooperative Agricultural Research Center:

In the past decade, Prairie View A&M University (PVAMU) received funding from USDA/Evans-Allen Program for multi-disciplinary research studies that demonstrated the enhancement and doubling of the yields of several food crops including peanut, soy bean, black eye peas, corn, sweetpotato, and yam tuber through the application of basic and applied sciences and biotechnology in order to position the world to stave-off possible food crises, shortages and hunger, and increase food security for a rapidly increasing human population.

In the peanut resveratrol research project, Plant Systems scientists applied mixtures of chemically reacting ratios (1:1:2) of nitrate, potassium, and phosphorous to peanuts growing under controlled conditions and in the University's farm plots. The harvested seeds of the treated and untreated control peanuts were tested for resveratrol contents using HPLC (high performance liquid chromatography) method.

Results

AgriLife Extension and Research:

Survey results showed that producers attending the East Texas Winter Pasture Program had an average knowledge gain of 95.2%. Knowledge gained on drought recovery was over 81%. Surveys conducted for a 5-program series on pasture and hay management showed an average knowledge increase of 90.3%. Thirty-eight participants of the Ranch Management University workshop increased their knowledge scores from an average of 1.66 to 3.39 (scale 1-4).

Cooperative Agricultural Research Center:

The research outcome has been applied to train many (~25) agriculture, life sciences, and engineering students and research technicians. The treated peanuts contained 130 microgram resveratrol per gram, while the untreated control contained 9 microgram per gram, a 1444.0 % increase. This is the ultra-high resveratrol specialty peanut suitable for sustainable production by limited resource farmers and marketing by them in restaurant menus snack, and in whole food stores.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
132	Weather and Climate
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources

Outcome #2

1. Outcome Measures

of people reporting a willingness to adopt practices through participation in educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	85

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Drought drastically reduces crop yields and consequently nutrient uptake. Soil testing during and after a drought can significantly reduce input costs for producers by reducing supplemental fertilizer applications. Field research has shown that application rates can be reduced by 20 to 100% by sampling to depths of 24 inches. Based on current fertilizer prices, the economic impact can range from \$10 to \$125/acre. Water conservation is another key area of need to address climate change. Identification of more water efficient crops will reduce drawdown on critical groundwater resources.

Cooperative Agricultural Research Center:

There has been ongoing global and regional debate among environmental and agricultural scientists, environmental protection agencies, and policy makers about the severity and mitigation of greenhouse gas emission. Greenhouse gas emission is a subject that attracts the interest of everybody. A basic issue however was the absence of a scientific research model that is comprehensive enough but without intricate mix of variables, for obtaining and validating the natural facts about soil/plant/microbes/animal interactions relative to greenhouse gas cycles per climate-type.

What has been done

AgriLife Extension and Research:

AgriLife Extension delivered 35 educational programs to 2,214 producers focused on nutrient management during drought. Presentations also were delivered at 7 regional extension programs

to over 410 producers regarding management alternatives affecting water conservation, irrigation management, and varietal selection, and the related impacts on farm profitability and regional economic sustainability.

Cooperative Agricultural Research Center:

In view of the multiple disciplines involved in agricultural, environmental, and life sciences relevant to greenhouse gases, Texas A&M University took leadership and assembled the research team drawing scientists from Soil and Crop sciences, Agronomy, Hydrology, Analytical Chemistry, Chemical Engineering, Computer Programmatic Sciences, Biochemistry from Prairie View A&M University and other Institutions to formulate a single research model with a very broad knowledge base but pyramiding to the measurement of greenhouse gas cycles. The model multi-dimensional research proposal became funded by USDA NIFA, and has been implemented for 4 years.

Results

AgriLife Extension and Research:

Results of pre/post surveys showed that 85% of participants at row crop production meetings intended to adopt soil testing as a best management practices. An additional, 4% already were routinely testing their soil to determine appropriate fertilizer sources and rates of application. While fewer producers indicated an intention to implement deep soil sampling, there was a significant increase in interest compared to previous years. Eighty-eight to 90% of participants at intensive rangeland management workshops indicated an intention to adopt one or more recommended best management practices, including soil testing and nutrient management.

Cooperative Agricultural Research Center:

Research outcomes are being presented at major scientific conferences. Other research institutions and universities are applying the research module; students and scientists who have experienced the operation of the research approach are gaining new career employment as a consequence. Therefore, the research results are answering the scientific and policy questions related to the severity and mitigation of greenhouse gas emission.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Other (changing programming areas)

Brief Explanation

Rainfall levels were somewhat higher in 2014, although most parts of the state remain in moderate drought stage. Nevertheless, clientele requests and response to educational programs related to climate change and drought remained very high. In addition, both livestock and crop commodity prices fluctuated substantially in 2014, but demand for

information on management strategies to improve drought response continued to be present.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Survey results demonstrate that the information and educational programs being delivered by AgriLife Extension are have a major impact on clientele knowledge and actions. Attendees at events demonstrated up to 95% average increases in knowledge after participation in educational and training programs. More importantly, participants reported 84% or greater intentions to adopt recommended best management practices that will enhance climate change and drought preparedness, and thereby, increase both production economics and long-term sustainability of agricultural enterprises.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%	0%	10%	0%
111	Conservation and Efficient Use of Water	10%	0%	10%	0%
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	50%	0%
205	Plant Management Systems	40%	0%	10%	0%
402	Engineering Systems and Equipment	30%	0%	20%	0%
606	International Trade and Development Economics	10%	0%	0%	0%
Total		100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	1.0	0.0
Actual Paid	0.0	0.0	17.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	638406	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	1051091	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	2142307	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Agricultural producers and the energy industry have a keen interest in the role that agriculture will play in contributing to renewable energy for America, and are looking to AgriLife Extension to help define which second generation crops will fit this market and how they will be produced. Texas is a major livestock feeding state and faces a feed grain deficit at current production levels, making second generation crops the only practical feed stocks for bioenergy. AgriLife Extension has responded by applied and demonstrations of candidate oilseed and lignocellulosic feedstock crops; holding workshops and field days for agricultural producers, by meeting with commercial interests from the energy sector to interpret potential for a variety of plant based bioenergy options. As crop-based bioenergy other than the traditional ethanol from feed grains is still in its infancy, actual adoption of second generation bioenergy is limited. Research involved the development of cropping system BMPs, testing and development of novel dedicated oilseeds and lignocellulosic bioenergy crops, advanced plant breeding systems, micro- and macro-algae, logistics and conversion technologies. Our focus is on second generation oilseeds and lignocellulosic feed stocks rather than on corn, soybeans, and other crops that can be used for food and feed. Drought and salinity tolerance, adaptation to marginal growing conditions and wide hybridization are emphasized in research in order to increase adaptation and sustainability of alternative energy systems. Organic residuals at livestock production systems offer a concentrated source of feedstock for the bioenergy production. Demonstration of identification, selection, harvesting and transportation of quality organic residuals for entering bioenergy production is critical to ensuring a sufficient energy resource.

AgriLife Research

Research involved cropping systems, novel dedicated energy crops, advanced plant breeding systems, micro- and macro-algae, novel oilseeds, logistics and conversion technologies. Our focus is on lignocellulosic and unique plant oil feedstocks for liquid motor fuels rather than on corn, soybeans, and other crops that can be used for food and feed. Drought tolerance and wide hybridization were emphasized in breeding research in order to increase adaptation and sustainability of alternative energy systems. Best management practices are needed to identify, collect, separate, transport and process these organic residuals. Development of best management practices has helped to ensure availability of quality organic residuals for entering bioenergy production.

2. Brief description of the target audience

The target audience includes traditional petroleum and natural gas energy companies, farmers, seed companies, start-up companies in bioenergy, electric generating companies, and the general public.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	450	0	0	0

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

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	37	37

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of educational programs conducted.

Year	Actual
2014	8

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	13

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of people reporting knowledge gained through participation in educational activities.
2	# of people reporting a willingness to adopt practices through participation in educational programs.

Outcome #1

1. Outcome Measures

of people reporting knowledge gained through participation in educational activities.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	485

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

To meet the long-term needs of the U.S. for energy, new and sustainable sources of bioenergy will be essential. High tonnage sorghums developed specifically for biomass for bioenergy offer great potential, as well as other lignocellulosic feedstocks such as energy canes and hybrid sweet sorghum. Economically sustainable oilseed crops for biodiesel and bioproducts production include jatropha, castor, cottonseed, and sunflower.

What has been done

Research was conducted by Texas A&M AgriLife to evaluate yield and potential bioenergy production potentials of various crops including high-tonnage sorghum, guar, canola, etc. Studies focused on incorporating bioenergy crops into comprehensive cropping systems. Primary emphasis was placed on production economics, sustainability, and protection of soil and water resources.

Results

Multi-county and regional conferences, workshops, and field days were delivered to educate over 450 agricultural producers and allied industry regarding the use of agricultural crops for bioenergy production. Fifty individuals participated in a workshop in Corpus Christi, Texas focused on the use of oilseed crops for biodiesel production. In addition, seven workshops and regional educational programs were conducted across the state focused on crops such as canola and other oilseeds. A major regional workshop also was conducted in South West Texas focused on guar production with 36 agricultural producers in attendance.

4. Associated Knowledge Areas

KA Code	Knowledge Area
----------------	-----------------------

111	Conservation and Efficient Use of Water
201	Plant Genome, Genetics, and Genetic Mechanisms
402	Engineering Systems and Equipment

Outcome #2

1. Outcome Measures

of people reporting a willingness to adopt practices through participation in educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	449

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Bioenergy sources will be essential to meet the long-term energy needs of the U.S. High-tonnage sorghum and other crops developed specifically for biomass for bioenergy offer great potential. Other lignocellulosic feedstocks include energy canes and hybrid sweet sorghum. Economically sustainable oilseed crops for biodiesel and bioproducts production include jatropha, castor, cottonseed, and sunflower. Due to its very high oil content, microalgae has potential for production of jet fuels and other bioproducts.

What has been done

Texas A&M AgriLife conducted research to evaluate yield/bioenergy production potentials of various high-tonnage sorghums. Studies measured yields as well as greenhouse gases from biofuel production scenarios to help quantify the carbon footprint of a bioenergy cropping system and evaluate compliance with federally mandated reduction goals. Outreach education programs were conducted to educate and assist agricultural producers with the selection and management of adapted crops.

Results

A total of 8 multi-county and regional conferences, workshops, and field days were delivered to educate agricultural producers and allied industry regarding the use of agricultural crops for bioenergy production. Fifty individuals participated in a workshop in Corpus Christi, Texas focused on the use of oilseed crops for biodiesel production. A regional workshop conducted in South West Texas and focused on guar production was attended by 36 individual. Multiple field

days were conducted focused on bioenergy crop options, management systems, sustainability, and marketing. Pre-Post surveys indicated that 92.3% of attendees planned to adopt recommended production practices as a result of participation in the educational programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
201	Plant Genome, Genetics, and Genetic Mechanisms
402	Engineering Systems and Equipment

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes

Brief Explanation

Dramatic increases in oil production spurred by the development and refinement of horizontal drilling and fracturing substantially reduced overall opportunity for bioenergy crops. As a result, the demand for research and education programs was limited in the early portion of 2014. However, with marked reduction in barrel prices at the close of 2014 and in early 2015, there may be increased interest in 2015. Base programs will be continued for bioenergy sorghum and several key oilseed crops.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Pre- and/or Pre-Post surveys were used to evaluate producer understanding production practices, management considerations, and economic opportunities. Results indicated that approximately 99% of participants gained knowledge regarding effective selection and management of bioenergy crops. In addition, results showed that over 90% of attendees planned to adopt recommended production practices as a result of participation in the educational programs. Overall, all programs were very well received and future programs were discussed and planned to provide additional information and specifics on crop selection and management for key production regions in Texas.

Key Items of Evaluation

Producers expressed concerns about consistency of markets and future growth for of the bioenergy industry. Identification of specialty/optional markets to provide market outlet assurance was a key issue.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Community Resource and Economic Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
504	Home and Commercial Food Service	5%	0%	0%	0%
602	Business Management, Finance, and Taxation	10%	60%	0%	0%
608	Community Resource Planning and Development	50%	30%	0%	0%
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	30%	0%	0%	0%
806	Youth Development	5%	0%	0%	0%
903	Communication, Education, and Information Delivery	0%	10%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	40.0	7.0	0.0	0.0
Actual Paid	32.4	5.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
422128	351609	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
422128	214868	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3495035	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Provide training and curriculum materials to County Extension Agents and volunteers for the purpose of conducting educational programs on community leadership, workforce preparedness, adult and youth entrepreneurship, emergency management, and nature based tourism at the county level. Specialists will provide in-depth educational programs to targeted audiences relative to community and economic development strategies, based on local needs. Provide multi-county, regional and statewide educational programs on various topics to business owners and community stakeholders utilizing specialist faculty and other government and private sector partners. Coordinate and collaborate with state and federal agencies in rural development activities as well as work with regional rural development centers in curriculum and professional development. Provide technical assistance to communities in analysis of various socioeconomic databases or surveys. Continue to foster working relationships with rural community colleges to obtain support and follow-up for local educational activities. Expand web-based information delivery relative to community resource and economic development topics.

Cooperative Extension Program

The Community and Economic Development Unit serves as a resource and assistance center for limited resource families and individuals in pursuit of increasing their standard of living through entrepreneurship, community program participation, homeownership, and government assistance programs. Primarily the Community & Economic Development (CED) staff offers professional consultation and technical assistance for entrepreneurs and community organizations looking to start or expand their operations. CED staff provides insight on the local business climate and feasibility of the proposed business idea or expansion and provide local government and community analysis of critical economic development issues. In 2014 the CED staff provided one on one consulting to 127 individuals. Over \$2,080,000 in new loan applications were assisted with by CED staff across the State. Approximately 8,503 entrepreneurs and community members attended CED programs across the State in one of 178 trainings held. During the implementation of home ownership programs, over 38 (thirty eight) families applied to USDA home ownership or rehabilitation funding totaling over \$2.5 million in USDA 502 new home loan request. 1 (one) home were refinanced resulting in avoiding foreclosure and reduced monthly mortgage; also 4 homes were rehabilitated and upgraded with an estimated total of \$140,000 (One Hundred Forty Thousand). Additionally the CED Unit executed its pilot Energy Auditing Certification and Entrepreneurship Program. As a part of the program, participants are trained and certified to become Building Analysis Professionals capable of conducting energy audit reports and simple repairs that address air loss, duct leakages, heat exchange, and potential building safety hazards. Participants are taught how to assess air pressures in the home, identify air leakages, measure carbon monoxide levels, determine insulation requirements, suggest lighting types and make appliance recommendations. PVAMU and its partners designed the program to

include prep-courses and a rigorous 6-day, 48 Hour training in preparation for their Building Analysis Professional written and field exams, recognized nationally by Energy providers and the Energy Audit Industry. An astonishing 9 of 15 individuals passed their exams on the 1st try exceeding the BPI testing national average. One participant has received a \$100,000 contract and is looking to get more and another has tripled her energy audit business since finishing the course.

2. Brief description of the target audience

AgriLife Extension

Primary target audiences for the program consist of residents, elected and appointed officials, community leaders/potential leaders (including youth), individuals with specific workforce training needs, and existing and potential business owner/managers in and around the over 1,200 communities in all 254 counties of the state of Texas.

Cooperative Extension Program

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

3. How was eXtension used?

The Cooperatives Community of Practice for eXtension is supported by Texas AgriLife Extension personnel. It provides a resource to individuals and groups interested in cooperative agricultural business practices. A focus for the community of practice is youth leadership, with the intent of drawing talented youth to careers in cooperatives. Such careers are typically located in rural communities and help to strengthen rural economies. In addition, an increasing number of faculty members answer the ask an expert questions that come in through eXtension.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	40505	356577	6592	0

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

Patent Applications Submitted

Year: 2014
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total

Actual	0	0	0
---------------	---	---	---

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1910

Output #2

Output Measure

- # of state or regional leadership conferences held for county officials or industry groups.

Year	Actual
2014	6

Output #3

Output Measure

- # of one-on-one technical assistance/consultations.

Year	Actual
2014	127

Output #4

Output Measure

- # of loans assisted/packaged

Year	Actual
2014	44

Output #5

Output Measure

- # of homes saved from foreclosure

Year	Actual
2014	1

Output #6

Output Measure

- # of New Homeowners

Year	Actual
2014	32

Output #7

Output Measure

- # of Homes refinanced

Year	Actual
2014	1

Output #8

Output Measure

- # of IDA Participants
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of targeted counties conducting educational programs and activities related to strategies for community resource and economic development
2	Percent of landowners/managers participating in group educational meetings on effectively evaluating nature-based tourism resources that increased their knowledge.
3	Percent of participants of in-depth leadership educational programs who increase knowledge of community and individual leadership principles.
4	Number of participants in workforce development or continuing education training activities conducted who increase knowledge to support their current employment needs.

Outcome #1

1. Outcome Measures

Percent of targeted counties conducting educational programs and activities related to strategies for community resource and economic development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	70

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Issue identification activities continue to show that economic growth, jobs, income, and quality of life are concerns of communities. Community leaders, elected officials, and local business people want their area to survive and thrive in order to maintain an economic base to grow their population and provide opportunities for you rural areas.

Cooperative Extension Program:

Limited exposure to knowledge and resources that can assist entrepreneurs has been one of the prevailing reasons why generations of minority business owners have been lacking what it takes to be successful in business. The lack of training and network is one of the reasons why there are Minority owned businesses generating minimal income and failing at a much more alarming rate than those businesses owned by the traditional entrepreneurs. Non-traditional skills sets and education are needed to allow a paradigm shift that improves economic outcomes. Minority agricultural producers, agri-businesses, and startup micro-businesses, the majority of whom are first generation entrepreneurs, continue to suffer from a lack of qualified technical assistance, financial record-keeping, and access to capital. The unemployment rate for minorities continues to be significantly higher than unemployment in the majority population (exceeding 20% in some communities). Pervasive layoffs and continuing high unemployment numbers have forced a new wave of aspiring entrepreneurs who are ill-equipped to survive in an already tough marketplace flooded with displaced public and private sector individuals attempting to earn a living as business owners.

Equally important in addressing economic development disparities among underserved communities is the need for and accessibility to affordable housing. Home buying has always been a means of building wealth and increasing assets, but as a result of the economy and lack

of home purchasing knowledge more people are hesitant to purchase a home. Limited resource clientele specifically find it difficult apply and purchase a home and find it easier to purchase a depreciating asset like a new expense vehicle than a home.

What has been done

AgriLife Extension:

The imperative of the Texas CRED program is the development of individual abilities and community support for creating and growing businesses, jobs, wealth, and income. Programs such as rural entrepreneurship, community leadership, nature tourism, workforce training and certifications, Texas friendly hospitality, and community-based planning address priority issues facing rural Texas.

Cooperative Extension Program:

Community & Economic Development staff has provided one-on-one technical assistance to home owners, first time home buyers, business owners and aspiring entrepreneurs through small business workshops, general consultation, business planning assistance, efficient business management, business opportunities, and loan package development with emphasis placed in working with economically depressed communities.

Results

AgriLife Extension:

Some 177 of the total 254 counties have reported educational programming addressing issues of community resources and economic development. Key programs were entrepreneurship, leadership, workforce preparedness, nature-based tourism, and disaster preparedness. Throughout the year specialists delivered 777 educational programs in Community Resources and Economic Development topics to 791,991 residents. Examples of program topics included Entrepreneurship as a Tool for Economic Development, Business, Stronger Economies Together, Supporting and Developing Local Economies, Community Capacity, Emergency Management and Disaster Preparedness, And County Judges and Commissioners programs. Target audiences included CEAs, economic developers, city and county officials, rural business and agribusiness owners and youth.

Cooperative Extension Program:

Participants in programs and one-on-one consultations reported an increase in knowledge, skills, and small business improvement through sustainability, increased capacity, job retention or expansion, and profitable business practices. Our housing clientele has also seen increase in home ownership, foreclosure prevention, and affordable mortgage refinancing.

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2

1. Outcome Measures

Percent of landowners/managers participating in group educational meetings on effectively evaluating nature-based tourism resources that increased their knowledge.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Natural resources owners are looking for ways to generate additional income to maintain the economic viability of their enterprises. Entrepreneurs are looking to diversification or nature tourism has strategies to expand nontraditional or other activities for economic development. Entrepreneurs want information on what other successful operations are doing, and communities want to support local business.

Cooperative Extension Program:

Community members throughout the State and specifically in poverty stricken rural areas are plagued with minimal resources and in most cases surroundings filled with dilapidated properties that perpetuate the hopelessness often felt throughout these communities. Leadership and direction among community members coupled with local resources are necessary to change the economic conditions, community beautification, and activity available to youth and adults.

What has been done

AgriLife Extension:

Educational activities made up of workshops, webinars, and tours were conducted statewide for natural resource owners, entrepreneurs, and community leaders. Technical assistance was provided to individual business owners relative to either nature tourism offer to lease or other business counseling. Web access to information increased.

Cooperative Extension Program:

Community & Economic Development staff has organized local committees including community leaders and county officials to organize tourism initiatives and beautification projects involving volunteers and patrons from surrounding counties.

Results

AgriLife Extension:

With Texas A&M AgriLife Extension Service assistance ChaRT now has an active Nature Tourism web site, Facebook page and Blog, highlighting nature and wildlife based activities and sites in Chambers County including hunting, fishing, birdwatching, paddling, agritourism and special events. The client has succeeded in their goals of increasing visitation to their web site and Facebook page to over 1000 visitors per month, have created Blog articles and Facebook postings for the site along with the production of 30 informational videos about parks and outdoor attractions in Chambers County that are featured on the Chamberswild web site and Chamberswild youtube channel. This effort has also lead to increased funding for ChaRT from Chambers County. Training programs have been developed to meet the needs of clientele. The annual Best Practices in Ecotourism and Agritourism Field Course was again completed. This 9 day program gives Texans and others the opportunity to learn through first-hand experience how internationally successful operations are managed. A group of 14 people that included Texas landowners, international consultants, community representatives and County Extension Agents visited operations throughout Costa Rica, and participated in instructional discussions on nature tourism management and issues. Evaluations indicated 100% of participants gained useful were very pleased with the content and that they plan to implement new practices.

Cooperative Extension Program:

Staff in El Paso County has organized and executed an Annual Chili festival that provide an opportunity to small businesses and community members throughout the area to showcase and sell their hot pepper and Chili products. People from all over the City as well as neighboring counties come to experience the culture, sample the Chilies, and purchase the products sold by local vendors. The economic impact not only to the vendors but also the surround area is enormous and is looked forward to every year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development

Outcome #3

1. Outcome Measures

Percent of participants of in-depth leadership educational programs who increase knowledge of community and individual leadership principles.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Issues identification processes at the local level continue to emphasize the importance of leadership to foster sustainable and vibrant communities. Community stakeholders must be prepared to build on local strengths through leadership and partner with others to create support for economic development and quality of life. This is particularly true given the importance of regionalism to development.

Cooperative Extension Program:

Youth and adults lack the leadership and training necessary to cause effective change in their local community. As a result, communities lack the services and community programs that are accessible to thriving and urban areas. Non-profit service providers and community leaders need training on how to be effective leaders, best management practices, and use those skills to create and influence change through non-profit initiatives and the learning of new practices that effect their quality of life.

What has been done

AgriLife Extension:

Building Connections: Community Leadership, is an in-depth curriculum to assist participants in determining their individual leadership traits and in developing strategies for effectively leading organizations/communities. Developing Critical Thinking Leaders, Texas Agricultural Life Leadership, Texas Event Leadership Program, and the Commissioners Court Leadership Academy are other curriculum-based programs that help develop leadership in various areas of Texas organizations and communities.

Cooperative Extension Program:

CED Staff initiated financial literacy centered programs that test the limits of the youth in Texas communities by training youth in leadership, financing, accounting, marketing, and industry.

Results

AgriLife Extension:

Through the V. G. Young Institute of County Government conducted educational schools, providing training related to the duties and responsibilities of the county officials. In FY 2013, 1,137 individuals took part at four major schools. The Texas Rural Leadership Program (TRLP) has worked with AgriLife Extension agents and community leaders in seven target counties to provide leadership training. The target communities are currently working on putting together projects that benefit their communities while using leadership training skills. The Texas Event Leadership Program (TELP) workshops served registrants representing tourism managers from Texas municipalities. Texas Friendly Instructor Training workshops trained professional tourism managers, enlisting community leaders as Extension volunteers that will have a positive impact within their community. Evaluation indicated an 80% increase in knowledge, and 93% agreed the customer service training will provide confidence to change their level of commitment in creating positive customer service experiences.

Cooperative Extension Program:

Programs such as our TASTE project (Teaching, Agricultural, Sustainability, Through, Economics), Youth Entrepreneurship Day, Agriculture Literacy Day, Youth Pecan Orchard Sales/Distribution, Financial Friday, and Individual Development Account Training focus on training youth financial awareness, and how to be successful in operating a small business.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #4

1. Outcome Measures

Number of participants in workforce development or continuing education training activities conducted who increase knowledge to support their current employment needs.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	125819

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Local community leaders, resource owners, and other businesses need a well-trained workforce and the ability to provide greater knowledge and tools to potential employees to meet the challenges of increased globalization, increased international trade, and an increasingly competitive business environment. Communities are concerned about individual, community and regional economic viability, maintenance/improvement of quality of life, and sustainability/growth. Providing the existing labor force with the tools and training to remain competitive in today's ever more competitive labor environment, and providing job opportunities that will attract rule and youth back to the community are of major importance.

Cooperative Extension Program:

Low-income families and individuals are unaware of community programs and resources that can assist them in asset development and wealth building means that can increase their standard of living. Often limited resource clientele are uninformed in the areas of community protection and safety, senior programs, credit building, saving, investing, debt management and budgeting which has an overall effect on their decision making and the lifestyle they live.

What has been done

AgriLife Extension:

Educational activities made up of workshops, webinars, and online training materials were conducted/provided statewide for training new and existing labor force participants, to increase knowledge, to improve workforce skills, and to enhance/expand job opportunities. These efforts should increase job opportunities, earning potential and provide employers with a more efficient/competitive workforce.

Cooperative Extension Program:

Cooperative extension program staff has conducted community workshops on disaster preparedness for individuals, small businesses, and community organizations. Approximately 8503 individuals have been trained in areas that promote credit improvements, better budgeting and debt management, opportunities to increase their assets and program development within community organizations.

Results

AgriLife Extension:

County Extension agents and their community partners conducted 31 child care conferences reaching over 3,225 child care providers and directors. Over 19,800 clock hours of training were provided to these professionals. Evaluation results indicate that over 90% of participants acquired new information, 99% plan to utilize the information to improve their programs, 99%, consider themselves better equipped to work with children, and 98% consider the trainings to be very cost effective. In addition, from January-August, 116,017 (182,585 clock hours) online child care courses have been completed by child care professionals. Food Protection Management Programs in Texas are targeted at food managers and front-line food service workers. Over 774 food service employees completed the manager program. More than 5803 individuals completed the food handlers course, face-to-face or online.

Cooperative Extension Program:

Participants in the program reported an increase in knowledge on asset and capacity building procedures. Staff has received positive feedback from participants.

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Budget reductions as a result of reduced state appropriations in 2010 and 2011, resulted in a reduction in FTEs available to carry out educational activities in 2012, 2013 and 2014. While remaining faculty picked up additional responsibilities, some educational opportunities were missed due to reduced faculty numbers. The record-breaking drought of 2011 continued to cause problems in 2014, and major responsibility for New Farm Bill education during 2014 resulted in some realignment of educational priorities. While traditional Community Resource Economic Development programs were still popular, an increased amount of faculty time and effort was redirected toward immediate clientele needs associated with the impacts of drought, water problems, which included emergency and disaster preparedness programs.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Clientele/participants involved in Community Resource Economic Development programs are evaluated in several ways, depending on the length of the training activity, whether we are trying to identify short-term knowledge gains, or adoption/change of practices and economic impacts over time. Pre-tests and post-tests are used at the beginning and end of programs to better identify knowledge gains. Retrospective post evaluation surveys are used to identify adoption/change of practices and potential economic impacts over time. Results indicate that participants are learning, and adopting/changing practices, and these changes are producing potential economic benefits.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Chronic Disease, Health, and Wellness

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
723	Hazards to Human Health and Safety	35%	0%	0%	0%
724	Healthy Lifestyle	65%	100%	100%	0%
	Total	100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	28.0	2.5	2.4	0.0
Actual Paid	35.3	2.5	29.7	0.0
Actual Volunteer	0.0	35.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
460503	175805	185024	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
460503	107434	809878	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3812765	0	7526809	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension and Cooperative Extension Program
Diabetes Programs

Partner with local health care professionals to provide a 5 classes with 9-lesson nutrition and self-care education classes using the Do Well, Be Well with Diabetes curriculum and 4 class series using the Cooking Well with Diabetes cooking school series.

Partner with leaders in Hispanic communities such as priests, preachers, promotoras, and other Hispanic organizations to provide 6 classes each with novelas (Spanish), ¡Si, Yo Puedo Controlar Mí Diabetes! curriculum with lessons, handouts, food cards, recipes in Spanish with nutritive value of each recipe. After the pilot testing of the Hispanic class series for low-literacy, ¡Si, Yo Puedo Controlar Mí Diabetes! is being offered in additional counties.

In addition, an adaptation for other low-literacy populations such as a segment of the African-American population will be created, pilot-tested and adapted for future use. Partner with leaders in African American communities with faith-based organizations, sororities, preachers, health professionals, and other African American organizations to provide 6 classes each with videotaped stories, curriculum with 6 lessons, handouts, recipes including ethnic adaptation with nutritive value of each recipe.

Exercise and Wellness Programs

A local coalition will recruit participants and provide leadership to implement Walk Across Texas! Teams of eight or classes of children at schools will be recruited to walk for eight weeks. Teams and classes are challenged to walk regularly for eight weeks, reporting their mileage on <http://walkacrosstexas.tamu.edu>, to achieve the goal of walking the approximate 830 miles across Texas on a map that allows comparisons of teams and class progress. Participants are personally recruited as well as groups like worksites, schools, churches and clubs using free media time.

Cancer Prevention Programs

County agents will work with local volunteers, regional cancer prevention program specialists, and patient navigators to implement Friend to Friend, an evidence based program, to increase the number of women in rural, frontier, and border counties who find breast and cervical cancer earlier, when treatments are most effective. Once a year, a Friend to Friend event will be provided in 49 selected counties. Each event will include a presentation by a local physician, a chance to meet and make appointments with nearby clinical sources of mammograms and Pap tests, and a discussion group for networking support and finding solutions for problems like cost and transportation. Funding will be provided by the Cancer Prevention and Research Institute of Texas for transportation and clinical services to women needing assistance.

2. Brief description of the target audience

AgriLife Extension and Cooperative Extension Program

Diabetes Programs

The target audience is all people with type 2 Diabetes who need training to learn nutrition and self-care management skills such as eating more healthfully (limiting carbohydrate intake, cutting fat and sodium and increasing fiber in meal plan), increasing physical activity, taking prescribed medications, checking their blood glucose levels, and regularly visiting their health care providers. Through eating more fruits and vegetables plus more whole grain breads and cereals, these groups will also be increasing their dietary fiber. Now more Texas fruits and vegetables may be available at farmer's markets along with suggestions for healthy food preparation.

Exercise and Wellness Programs

Walk Across Texas! is open to anyone wanting to increase their physical activity level if they live in a community with a AgriLife Extension educator.

Cancer Prevention Programs

Under-served rural residents of Texans who are at risk for breast and cervical cancer.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	19758	146305	15973	0

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

Patent Applications Submitted

Year: 2014

Actual: 3

Patents listed

Composition and Methods for the Enterosorption and Management of Toxins Comprising a Calcium Aluminosilicate Clay

Inhibitors of Mycobacterium Tuberculosis Malate Synthase Methods of Making and Uses Thereof

Use of Diindolylmethane (DIM) Compounds and Derivatives Neuroprotective Agents

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	16	16

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	1558

Output #2

Output Measure

- # participating in educational efforts.
Not reporting on this Output for this Annual Report

Output #3

Output Measure

- # research-related projects.

Year	Actual
2014	16

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of participants who report improved before meals blood glucose levels after attending 4 of the 5 Do Well, Be Well with Diabetes classes; 3 of 4 Cooking Well with Diabetes classes; and 5 of 6 ¡Si, Yo Puedo Controlar Mí Diabetes¡.
2	Increased number of miles walked per week at week one compared to week eight.
3	# of people reporting knowledge gained through participation in cancer prevention educational activities.
4	# of people reporting a willingness to adopt practices through participation in cancer prevention educational programs.

Outcome #1

1. Outcome Measures

of participants who report improved before meals blood glucose levels after attending 4 of the 5 Do Well, Be Well with Diabetes classes; 3 of 4 Cooking Well with Diabetes classes; and 5 of 6 ¡Si, Yo Puedo Controlar Mí Diabetes¡.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

Based on improved blood glucose after attending one of these class series, potential economic benefits are estimated at \$53.2 million.

Cooperative Extension Program:

Chronic health conditions including diabetes and cardiovascular disease are leading costs within the Texas economy. Risk factors associated with these health issues include high blood pressure, high cholesterol, obesity, and lack of physical activity. Diabetes is the sixth leading cause of death in the state and the fourth leading cause of death among Hispanics and African Americans. It is projected that there will be a minimum of 15% increase of the population with diabetes in certain Texas counties. Health and wellness programs conducted by the Cooperative Extension Program with limited resource populations increase their awareness and knowledge of risk factors, especially for preventable diseases.

What has been done

AgriLife Extension and Research:

County Extension agents are provided an annual training, curriculum and other materials to implement Do Well, Be Well with Diabetes, Walk Across Texas, Si Yo Puedo Controlar Mi Diabetes, and Wisdom Power Control. Each organizes a local coalition that includes medical providers. Coalition and agent work together to deliver series to people with diabetes.

The Cooperative Extension Program health coordinator and extension agents attended a diabetes education training program (DEEP) to become certified in conducting a series of education programs. Extension agents conducted over 150 education workshops on diabetes and

other chronic illnesses reaching more than 1400 participants who are at a high risk of these chronic illnesses.

Results

AgriLife Extension and Research:

Do Well, Be Well with Diabetes, Walk Across Texas, Si Yo Puedo Controlar Mi Diabetes, and Wisdom Power Control had in excess of 6,500 educational contacts. At the beginning of Do Well, Be Well with Diabetes classes, the average blood glucose before meals reported by participants was 143 mg/dL, decreasing to 132 mg/dL at 5 weeks. A1c decreased from 8.7% in class 1 to 7.5% in class 5.

Based on improved blood glucose after attending one of these class series, potential economic benefits are estimated at \$53.2 million.

Cooperative Extension Program:

Pre and Post surveys were administered to participants. Results indicated that 90% of the 1400 participants stated they are drinking more water and 45% stated they eliminated sodas from their diet. 78% are eating more fruits and vegetables while 70% stated they are motivated to change their behavior and 54% are engaging in physical activities with their family. One participant stated. I learned about portions and servings, about hamburgers, fries, and processed foods. Other participants stated that learning how smoking contributed to diabetes complications was extremely useful and they are able to look for the warning signs of diabetes such as frequent urination, blurred vision, and excessive urination.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Increased number of miles walked per week at week one compared to week eight.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Regular, moderate physical activity reduces the incidence as well as the number and severity of complications of costly chronic diseases like type 2 diabetes. Including the cost of lost wages, the total potential collective economic impact for the 2014 adult participants is approximately \$95 million.

What has been done

Adult participants showed a mean increase of 4.85 miles per person from week 1 to week 8. During the probable remaining years of life, adult participants are collectively likely to save an estimated \$95 million dollars.

Results

Adult participants showed a mean increase of 4.85 miles per person from week 1 to week 8. During the probable remaining years of life, adult participants are collectively likely to save an estimated \$95 million dollars.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

of people reporting knowledge gained through participation in cancer prevention educational activities.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

of people reporting a willingness to adopt practices through participation in cancer prevention educational programs.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	883

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Women living in rural areas have lower screening rates for breast and cervical cancer. As a result, cancer is often found at later stages. Of the 883 women asking for help, the project paid for 638 breast screenings and 532 cervical screenings. In addition 155 breast diagnostics and 48 cervical diagnostics were paid for by the project.

What has been done

Annual Friend to Friend events are organized in the 49 participating rural counties. Extension agents and project personnel organize a coalition to plan and implement an event; over 4,500 volunteers assisted with events. A local physician presents at the event, urging women to get screened. For those requesting help, project personnel make appointments and help them navigate local health care systems to obtain needed screenings at one of our contracted clinical facilities.

Results

Of the 883 women asking for help, the project paid for 638 breast screenings and 532 cervical screenings. In addition 155 breast diagnostics and 48 cervical diagnostics were paid for by the project.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Goals were met.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Adult participants in Walk Across Texas showed a mean increase of 4.85 miles per person from week 1 to week 8. Projection was to increase by 4.75 miles per week. Goal was exceeded.

Diabetes programs were attended by 771 people. 300 were projected. Goal was exceeded.

Friend to Friend cancer program was attended by 2,201 rural women. 883 asked for help to obtain screenings. Projected 2,000 women and 800 would ask for help. Goal was exceeded.

Key Items of Evaluation

DWBW, ¡Si, Yo Puedo Controlar Mí Diabetes¡, and Wisdom, Power and Control are diabetes education programs that improve self-management skills of people with type 2 diabetes.

Walk Across Texas is a low cost program which improves physical activity levels for participants of all ages.

Friend to Friend events are an effective way to recruit underserved, uninsured rural women to get screened for breast and cervical cancer.

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Childhood Obesity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	50%	100%	0%	0%
724	Healthy Lifestyle	50%	0%	100%	0%
Total		100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	7.0	1.0	0.0
Actual Paid	3.2	7.0	0.0	0.0
Actual Volunteer	0.0	35.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
34264	597735	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
34264	365275	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
283688	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension
Balancing Food & Play

Third grade students in Texas schools are the primary target audience with their families as a secondary target audience. The curriculum contains three elements: 20 lesson plans, 8 take-home reading assignments, and 41-page student journals. Pre/post survey instruments capture changes in knowledge and self-reported behaviors. The Balancing Food & Play curriculum was designed to improve knowledge and behaviors related to:

- * snacking on fruits and vegetables,
- * drinking milk with meals and water with snacks,
- * encouraging at least 60 minutes of physical activity each day, and
- * limiting screen time to two hours or less per day.

Extension OnLine Nutrition Education

Childcare providers, community nutrition educators, parents and other interested adults are the targeted audiences. Online education courses, generally one-hour in length, include learning objectives, subject matter content, supporting handouts, application activities, and references. Pre/post knowledge survey is part of each course; learners must correctly answer 80% of the post knowledge survey to complete the course. Course offerings are developed to enhance educator and caregiver knowledge and skills related to nutrition and best practice behaviors associated with healthful weight.

Evidence-based best practice behaviors associated with healthy weight are:

- Make half your plate fruits and vegetables
- Limit sugar sweetened beverages
- Decrease TV to no more than 2 hours each day
- Be physically active at least 1 hour each day
- Prepare more meals at home rather than eating out
- Eat at the table as a family at least 5 times a week
- Eat a healthy breakfast each day
- Involve the whole family in lifestyle changes
- Allow the child to decide how much food to eat and do not totally restrict certain foods
- Get enough sleep each night

WAT Youth Component

The mainstay of exercise and wellness programming is Walk Across Texas! Walk Across Texas! is an eight week program to help people of all ages support one another to establish the habit of regular physical activity. Three options are offered to participants: walk in teams of eight, classes at schools, or individually. Participants log miles and use programs on <http://walkacrosstexas.tamu.edu>. Walk Across Texas! is a best practice type physical activity program as described by the Centers for Disease Control at <http://www.thecommunityguide.org/>. It was recognized as a best program by the Texas Department of State Health Services in 2006.

A local coalition will recruit participants and provide leadership to implement Walk Across Texas! Teams of eight or classes of children at schools will be recruited to walk for eight weeks. Teams and classes are challenged to walk regularly for eight weeks, reporting their mileage on <http://walkacrosstexas.tamu.edu>, to achieve the goal of walking the approximate 830 miles across Texas on a map that allows comparisons of teams and class progress.

Youth in Texas Schools is the target audience. Evaluation strategies include surveys, observation, and recording of behaviors (such as miles walked).

AgriLife Research

Research is conducted in collaboration with State and Federal Women, Infant and Children Program leaders to provide data and programs to improve dietary habits of children and their parents or care givers.

Research also involves native American populations and the school lunch program.

Cooperative Extension Program

Choose Health: Food, Fun, and Fitness

Choose Health: Food, Fun, and Fitness is aimed at 8-12 year olds and targets those behaviors research shows to be most important for preventing childhood obesity and chronic diseases such as heart disease and cancer.

The curriculum also supports key messages of the 2010 Dietary Guidelines for Americans as summarized by USDA in their new MyPlate initiative to help Americans build healthier diets:

- Drink water instead of sugary drinks.
- Switch to fat-free or low-fat (1%) milk.
- Make half your plate fruits and vegetables.
- Make at least half your grains whole grains.
- Enjoy your food, but eat less.
- Avoid oversized portions.

Step Up and Scale Down

Step Up & Scale Down is a 12 lesson program developed to provide nutrition information to people who want to live healthier lifestyles. The program focuses on weekly motivation, support, hands on learning and accountability to assist them achieve their goals.

Balance Living

Balance Living is a series of five lessons focusing on time management, stress management, mindful eating, physical activity, and sleep are the major components addressed in this curriculum because these areas tend to be overlooked when life gets hectic or out of control. The goal of this series is for participants to gain knowledge and skills to live a more balanced life.

2. Brief description of the target audience

AgriLife Extension

Balancing Food & Play

Third grade students in Texas Schools

WAT Youth Component

Youth in Texas Schools

AgriLife Research

Parents and others who care for children, school lunch program administrators, and native Americans.

Cooperative Extension Program

Minority families and individuals

Senior adults

Single parents

Persons coping with and at risk for chronic illnesses

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	193	1874	9724	0

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

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	5	0	5

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # youth participating in WAT Program.
 Not reporting on this Output for this Annual Report

Output #2

Output Measure

- # youth participating in Balancing Food and Play Program.
 Not reporting on this Output for this Annual Report

Output #3

Output Measure

- # of classes/workshops addressing nutrition and health.

Year	Actual
2014	2398

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	The percent of youth that reported engaging daily in 60 minutes or more of physical activity. (National Indicator Outcome 2,1d)
2	Percentage decrease the number of children reporting decreased sweetened beverage intake.
3	The percent of youth that reported increasing their physical activity and/or reducing sedentary (National Indicator Outcome 2,1c)
4	# of participants who understand and use My Plate in meal buying and preparation, become aware of diet related diseases, understand the connection between diet and exercise, increase consumption of fruits and vegetables.
5	# of participants modify recipes to decrease amount of calorie and adopt healthy eating habits.

Outcome #1

1. Outcome Measures

The percent of youth that reported engaging daily in 60 minutes or more of physical activity.
(National Indicator Outcome 2,1d)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	77

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Children in particular are vulnerable to the deleterious consequences of excessive weight and the adoption of poor behaviors. Obesity and overweight often track into adulthood as do poor behavior choices learned or reinforced during childhood. As overweight or obese adults, these children will face higher healthcare costs and lower quality of life than their healthful weight peers. Therefore, educating children on nutrition and physical activity with the intent to reinforce positive lifestyles and the adoption of healthy behaviors can help prevent or slow the tendency toward unwanted weight gain.

What has been done

The Balancing Food & Play curriculum was designed to improve knowledge and behaviors related to:

- * snacking on fruits and vegetables,
- * drinking milk with meals and water with snacks,
- * encouraging at least 60 minutes of physical activity each day, and
- * limiting screen time to two hours or less per day.

Results

At the completion of Balancing Food & Play, students were more likely to correctly identify food and physical activity best practice recommendations.

Self-reported student behaviors related to physical activity, soda consumption, and screen time, all of which are associated with obesity improved during the time that Balancing Food & Play was taught. The percentage of students who reported:

* getting at least 60 minutes of physical activity increased from 56 percent to 77 percent

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #2

1. Outcome Measures

Percentage decrease the number of children reporting decreased sweetened beverage intake.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	20

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Children in particular are vulnerable to the deleterious consequences of excessive weight and the adoption of poor behaviors. Obesity and overweight often track into adulthood as do poor behavior choices learned or reinforced during childhood. As overweight or obese adults, these children will face higher healthcare costs and lower quality of life than their healthful weight peers. Therefore, educating children on nutrition and physical activity with the intent to reinforce positive lifestyles and the adoption of healthy behaviors can help prevent or slow the tendency toward unwanted weight gain.

What has been done

The Balancing Food & Play curriculum was designed to improve knowledge and behaviors related to:

- * snacking on fruits and vegetables,
- * drinking milk with meals and water with snacks,
- * encouraging at least 60 minutes of physical activity each day, and
- * limiting screen time to two hours or less per day.

Results

At the completion of Balancing Food & Play, students were more likely to correctly identify food and physical activity best practice recommendations. Self-reported student behaviors related to physical activity, soda consumption, and screen time, all of which are associated with obesity improved during the time that Balancing Food & Play was taught. The percentage of students who reported:

* drinking soda almost never or never increased from 32 percent to 40 percent.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

The percent of youth that reported increasing their physical activity and/or reducing sedentary (National Indicator Outcome 2,1c)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	91

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Children in particular are vulnerable to the deleterious consequences of excessive weight and the adoption of poor behaviors. Obesity and overweight often track into adulthood as do poor behavior choices learned or reinforced during childhood. As overweight or obese adults, these children will face higher healthcare costs and lower quality of life than their healthful weight peers. Therefore, educating children on nutrition and physical activity with the intent to reinforce positive lifestyles and the adoption of healthy behaviors can help prevent or slow the tendency toward unwanted weight gain.

What has been done

The Balancing Food & Play curriculum was designed to improve knowledge and behaviors related to:

- * snacking on fruits and vegetables,
- * drinking milk with meals and water with snacks,
- * encouraging at least 60 minutes of physical activity each day, and
- * limiting screen time to two hours or less per day.

Results

At the completion of Balancing Food & Play, students were more likely to correctly identify food and physical activity best practice recommendations.

Self-reported student behaviors related to physical activity, soda consumption, and screen time, all of which are associated with obesity improved during the time that Balancing Food & Play was taught. The percentage of students who reported:

- * limiting screen time to 2 hours or less increased from 81 percent to 91 percent.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #4

1. Outcome Measures

of participants who understand and use My Plate in meal buying and preparation, become aware of diet related diseases, understand the connection between diet and exercise, increase consumption of fruits and vegetables.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Texas citizens, living in rural or urban areas, are socially disadvantaged or low income and are experiencing problems with diet related illnesses such as diabetes, hypertension and elevated cholesterol levels. Children living in food deserts are lacking access to retail venues in their communities to purchase healthy foods; such as supermarkets, has been associated with a lower quality diet and increased risk of obesity. Having a balance diet to include fruits, vegetables, and

controlling portion sizes are steps to preventing and managing obesity related diseases including diabetes, hypertension, cancer and heart disease. Unfortunately, nearly two out of three (64.5%) of U.S. adults are overweight or obese. Overweight and obese individuals are at increased risk for the healthcare issues previously mentioned.

What has been done

The Cooperative Extension Program and the Cooperative Agricultural Research Center have been working collaboratively to introduce medicinal vegetables into the diets of limited resource citizens. Home and community gardens are being introduced to families in an effort to combat health disparities while educating participants on culturally relevant nutrition education. As a pilot project approximately 50 families from Waller County were introduced to juicing vegetables, using the pulp to bake with and make a soup. Other demonstrations included using the savory Indian Melon instead of starchy potatoes for the processing of individuals who are diabetic. Instead of taking over the counter appetite suppressants, Bottle Gourd and Bitter Melon (*Momordica charantia* L) was introduced as a method of juicing. While Extension employees demonstrated new recipes, the Research team provided background information on the value of medicinal plant consumption.

Results

Presentations have been made to families which exposed them to alternative vegetables. After using these products, one family has lost over 60 lbs., they have reduced their diabetes and hypertension medication. Instead of skipping meals, 20 families are now juicing rich green leafy vegetables, and colorful fruit as a nutritious way of balancing their diet.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

of participants modify recipes to decrease amount of calorie and adopt healthy eating habits.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Efforts targeting nutrition health and wellness engaged in activities focusing on chronic disease prevention targeting obesity and obesity related diseases. 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. Preventable illnesses make up approximately 80 percent of the burden of illness and 90 percent of all U.S. health care costs. Over the past three decades, childhood obesity rates in America have tripled, and today, nearly one in three children in America are overweight or obese. The numbers are even higher in African American and Hispanic communities, where nearly 40% of the children are overweight or obese. Obesity has important consequences on our nation's health and economy. Among adults, the medical costs associated with obesity are estimated at 147 billion dollars (Finkelstein, 2009). Many American communities are characterized by unhealthy options when it comes to diet and physical activity.

What has been done

A minimum of 60 minutes of exercise is recommended for individuals to live a healthy lifestyle. In addition to an increase in knowledge and change in behavior, there is a goal to increase physical activity. Extension agents incorporate exercise within their programming to show the importance of being active. Physical activity includes walking, Zumba, Line Dancing and other movement exercise. Outreach activities with limited resource participants were conducted at community centers, senior activity centers, state, city, and county agencies, faith based institutions, and a hospital. A series of MyPlate messages are sent out monthly from the Program Specialists to agents so that that can relay this message to their local clientele and partners.

Messages include adding fruits and vegetables to their daily diet, reducing the intake of sodium, consuming less sugars and fats, and increasing the amount of vegetables and fruits on their plate and lessening the amount of consumed starches. The use of Face Book has allowed for various ideas in infusing water to reduce sweetened beverage consumption and increase fruit and vegetable intake by juicing.

A series of 6 one hour educational sessions consisting of classes that promoted health eating, weight management, diabetes education, awareness and prevention, and complications of chronic illnesses. Along with the educational monthly sessions, newsletters and informational materials focusing on diabetes information, health/wellness, and youth nutrition were distributed monthly to participants.

Results

A total of 532 students participated in these educational programs. Upon completion of these classes, 87% stated that they now understand that junk food or unhealthy snacks should be limited and eaten in moderation, 69% understand that drinking soda or high sugared beverages can cause weight gain and 97% stated that they now understand the warning signs of diabetes therefore, they are able to make behavioral changes with will make a positive impact on their overall health.

Step Up & Scale Down is a 12 lesson program developed to provide nutrition information to people who want to live healthier lifestyles. The program focuses on weekly motivation, support, hands on learning and accountability to assist them achieve their goals. Over 700 individuals completed the 12 lessons series. Approximately 97 % of the individuals reported that they adopted healthy lifestyles choices by increasing their physical activity to 3 or more days, 66% of participants checked calorie information when dining out, 89% of participants plan their family meals and snacks after completing the series of lessons. One participant stated 'I can lose weight and enjoy it! I am also reading the labels before making my purchase.'

A 90 day follow-up evaluation was conducted and one individual stated ?Before the class my weight was 175 and after adjusting my diet to the lifestyle taught in this class my weight is not 162. I am so pleased with the class and continue to use the tings taught in this class and I feel so much better. My cholesterol was 165 and is down to 100.

While participating in nutrition education classes, a participant was able to lose 40 lbs. in one year and motivated her sister to begin exercising.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Any of a number of factors could affect the implementation, and subsequent number of participants, of the three programs such as changes in politics, priorities, and/or policy. For example, the Texas legislature cut funding for the Texas A&M AgriLife Extension Service; this could result in fewer county educators to provide leadership at the local level. Likewise a change in either national, state or administrative priorities or policy could divert resources from child obesity programming.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

During 2014, Texas A&M AgriLife Extension Service agents in 13 counties recruited local third grade classroom teachers to participate in this program. They received permission to implement this school-enrichment program, and 832 students completed the curriculum. To date, 4,817 teacher manuals and 2,726 student journal masters have been downloaded from the website (<http://balance.tamu.edu>).

At the completion of Balancing Food & Play, students were more likely to correctly identify food and physical activity best practice recommendations.

Self-reported student behaviors related to physical activity, soda consumption, and screen time - all of which are associated with obesity - improved during the time that Balancing Food & Play was taught. The percentage of students who reported:

getting at least 60 minutes of physical activity increased from 56 percent to 77 percent; drinking soda almost never or never increased from 32 percent to 40 percent; and

limiting screen time to 2 hours or less increased from 81 percent to 91 percent.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	0%	0%	0%	10%
502	New and Improved Food Products	0%	0%	0%	10%
503	Quality Maintenance in Storing and Marketing Food Products	0%	0%	0%	10%
701	Nutrient Composition of Food	0%	0%	0%	10%
702	Requirements and Function of Nutrients and Other Food Components	0%	0%	0%	20%
703	Nutrition Education and Behavior	0%	50%	0%	10%
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	0%	0%	0%	20%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	100%	50%	100%	10%
Total		100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	7.0	3.0	17.0
Actual Paid	6.5	2.0	7.7	13.0
Actual Volunteer	0.0	224.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
76751	140644	319244	1494958
1862 Matching	1890 Matching	1862 Matching	1890 Matching
76751	85947	412515	798802
1862 All Other	1890 All Other	1862 All Other	1890 All Other
635461	0	1334841	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Ten additional County Extension Agents were trained to become instructors for the Food Protection Management Program, which includes a certified food manager (CFM) program as well as a food handler (FH) program. Additional training was provided/identified so current instructors could maintain their instructor qualification status per Agency guidelines. Program materials were available in both English and Spanish. For our online food handler's course, a Mandarin language version was recently added to expand our audience outreach.

The Certified Food Manager (CFM) course was evaluated by assessing the pass rate on the CFM exam. The food handler's course was also offered by qualified instructors (CEA-FCS) in both English and Spanish and via the use of distance education (on-line). Pre and post knowledge surveys were used to evaluate the course (change in knowledge).

Cooperative Extension Program and Cooperative Agricultural Research Center

The Cooperative Extension Program county agents target limited resource adults and youth and provided presentations on food safety. Limited resource clientele learned proper food handling procedures, personal hygiene while preparing produce and meat products to prevent cross contamination, how to prepare and store food properly.

Agents and specialist within the Cooperative Extension Program were ServSafe trained and received certification. Three CEP agents took the Certified Food Manager Course and were certified. Educational trainings were conducted with restaurants, schools, and churches teaching staff members how to properly handle food.

Educational methods used to conduct trainings included one-on-one consultations, on-site food demonstrations, train-the-trainer, educational programs and classes, taught a series of food safety classes to special interest groups, and educational displays at various sites.

The Cooperative Agricultural Research Center (CARC) provided information to the Cooperative Extension Program regarding Conducting research based food quality and food products. CARC examined ways to supplement caprine products with polyunsaturated fatty acids (PUFA). Ongoing development of value added caprine products (both meat and dairy).

Evaluated strategies for minimizing transfer of microbial pathogens during food handling. Food selection was improved by optimal evaluation of transfer of nutrition knowledge. CARC worked with CEP-FCS Specialist to develop, FACT Sheets, social media, and other resources pertaining to food safety.

2. Brief description of the target audience

AgriLife Extension

Individuals who are employed in the retail food service industry. This includes cooks, managers, and

owners who are affiliated with foodservice establishments including restaurants, school food service, bed and breakfasts, prisons, and other establishments that prepare and serve food to individuals.

Cooperative Extension Program

Minority families and individuals

Senior adults

Single parents

Persons coping with and at risk for chronic illnesses

Youth

Cooperative Agricultural Research Center

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.

3. How was eXtension used?

eXtension was used to market our online food handler course.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	6220	47593	374	0

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

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	56	56

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	347

Output #2

Output Measure

- # of research-related projects.

Year	Actual
2014	26

Output #3

Output Measure

- # of on site demonstrations for adults and youth.

Year	Actual
2014	350

Output #4

Output Measure

- # of research workshops/presentations.

Year	Actual
2014	7

Output #5

Output Measure

- # of graduate/undergraduate students involved in research projects.

Year	Actual
2014	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage increase in knowledge as a result of completing the food handler's course.
2	# of 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.
3	FPM Pass/Fail Rate - percentage of participants who pass the DSHS Certified Food Manager exam on the first attempt. (National Indicator Outcome 3,2)
4	# of new and different value-added caprine products added to the food base and accepted by the target audience.

Outcome #1

1. Outcome Measures

Percentage increase in knowledge as a result of completing the food handler's course.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Centers for Disease Control and Prevention (CDC) estimate that foodborne diseases cause nearly 48 million illnesses, 128,000 hospitalizations, and 3,000 deaths each year. Populations most at risk to foodborne disease include pregnant women, the elderly, the very young, and individuals with a chronic disease as well as those with weakened immune systems.

More than half of all foodborne illnesses are linked to improper handling of food prepared away from home. Since nearly 50% of our food dollars is spent on food prepared outside the home, food safety is a top concern among consumers. Food safety education is a critical prevention component for reducing the risk for foodborne diseases.

What has been done

FPM was implemented in 76 counties across the state. In addition, the food handler's program was offered in an online format.

Results

In 2014, 4,022 individuals participated in the Food Protection Management Program (809 CFM and 3213 FH). Of the 3213 participants who completed the food handlers program, 1303 (40%) did so online.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

of 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.

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

FPM Pass/Fail Rate - percentage of participants who pass the DSHS Certified Food Manager exam on the first attempt. (National Indicator Outcome 3,2)

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension and Research:

A minimum score on the CFM must be met in order for participants to earn the credential of Certified Food Manager. In Texas, most Counties require that retail food establishments have a CFM on site to assure that food is prepared, served, and stored properly in order to prevent the risk of foodborne illness.

Cooperative Extension Program:

Each year, an estimated 1 in 6 people become ill from the food they eat. Common symptoms of foodborne disease include nausea, vomiting, diarrhea, abdominal cramping, fever, and headache. While some people may view this as a mere case of "food poisoning" foodborne illness has serious health and economic consequences. In fact, foodborne illnesses from five pathogens alone (Campylobacter, Salmonella, Listeria monocytogenes, E. coli O157:H7, and E. coli non-O157:H7 STEC) cost more than \$6.9 billion in medical expenses, lost productivity, and even death. All of us are at risk for foodborne illness, but older adults, pregnant women, young children, individuals with chronic disease, and those with a compromised immune system are at

an increased risk. Because nearly half of our food dollars are spent on foods eaten away from home, it is imperative that employees who work in retail food service handle food safely.

What has been done

AgriLife Extension and Research:

Participants who completed the CFM program challenged the exam. For our CFM program, we utilize two national exams (Prometric and ServeSafe).

Cooperative Extension Program:

The Health Coordinator and Extension agents became certified and in Food Protection Management courses to educate limited resource clientele and business on proper food safety. Education programs were conducted throughout 17 Texas counties with youth and adults. Education programs were conducted in schools, churches, schools, restaurants, day cares, and with community outreach organizations.

Results

AgriLife Extension and Research:

Based on the minimum score required by Prometric and ServeSave, 65% of our participants successfully passed the exam on the first attempt.

Cooperative Extension Program:

Over 1,700 individuals participated in Food Safety workshops. Participants received valuable information on food storage, cross contamination, proper handling of food to prevent food borne illness, washing hands, and food storage during evacuation. 150 of 328 (46%) of participants stated that they would more often follow the recommended practices of not allowing meat and dairy foods to sit out for more than two hours. while 111 of 328 (34%) stated they would always follow the recommended practice. 200 or 333 (60%) stated they would more often follow the recommended practices of not thawing foods at room temperature while 43 of 333 (13%) stated they would always follow the recommended practice.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #4

1. Outcome Measures

of new and different value-added caprine products added to the food base and accepted by the target audience.

2. Associated Institution Types

- 1890 Extension
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Due to the increase of chronic illness within the American population, consumers are becoming more health conscious with their meat products. Added to this fact, food products, particularly meats, are more appealing when available in either ready-to-eat, or easy to prepare forms. Caprine products are shown to have significantly less total fat, saturated fat and cholesterol than pork, lamb and chicken. However, the average American citizen does not consume caprine for a variety of reasons. The most prevalent reason is that this choice of meat has not been a part of their diet consumption. Therefore incorporating caprine products into easy to prepare products that are healthy and aesthetically pleasing may increase consumer acceptance.

What has been done

The Cooperative Extension Program conducted a pilot survey within 7 Texas counties to evaluate the acceptance of caprine products in the African American and Hispanic communities. Some survey participants indicated that they have never tasted goat meat, or they do not like the flavor of goat meat, don't know how to prepare it, the cost is too high, or they do not have an interest. The Cooperative Agricultural Research Center scientists introduced caprine product in the form of a sausage to 45 individuals who had not consumed caprine.

Results

Of the 45 sample group, 39 stated they would purchase this product because the taste was palatable; the product was appealing to the eye and the expressed benefits of consuming this product instead of pork due to health reasons.

4. Associated Knowledge Areas

KA Code	Knowledge Area
502	New and Improved 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 Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Government Regulations
- Competing Public priorities

Brief Explanation

Change in knowledge among food handler participants is consistent with previous years. Our pass rate for the CFM exam is lower than previously reported but this is likely due to the implementation of a new exam by ServeSafe (National Restaurant Association), the education background of our participants (44% had a high school degree or less), previous food safety training (75% of our CFM participants had not received any food safety training in the previous 12 months), and whether or not participants had completed the CFM in the past (60% had never completed a CFM program). As we do every year, we are reviewing our program materials to confirm that they are current with the FDA Food Code as well as Texas Department of Health food safety guidelines.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

For participants who completed the CFM program, the overall pass rate on the exam was used as the primary method of evaluation. Participant satisfaction also was measured. Overall pass rate for the CFM exam was 65% which was lower than previously reported. Change in knowledge among participants who completed the food handler's program was assessed by a pre and post survey. Analysis of the food handler pre and post surveys found a statistically significant increase in knowledge from 70 (pre) to 86 (post). With respect to program satisfaction, participants rated the FPM program an average of 1.3 out of a possible score of 5 (a score of 1 = completely satisfied; a score of 5 = not at all satisfied).

Key Items of Evaluation

For participants who completed the CFM program, the overall pass rate on the exam was used as the primary method of evaluation. Participant satisfaction also was measured. Overall pass rate for the CFM exam was 65% which was lower than previously reported. Change in knowledge among participants who completed the food handler's program was assessed by a pre and post survey. Analysis of the food handler pre and post surveys found a statistically significant increase in knowledge from 70 (pre) to 86 (post). With respect to program satisfaction, participants rated the FPM program an average of 1.3 out of a possible score of 5 (a score of 1 = completely satisfied; a score of 5 = not at all satisfied).

During 2014, 46 people in Maverick County participated in the FPM program and completed the food handler program. Change in knowledge (pre vs post) was used to evaluate the food handler program. In addition, client (customer) satisfaction surveys were collected from participants. The food handlers program was successful in helping participants (foodservice employees) increase their knowledge about food safety as it pertains to the retail setting.

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Global Food Security, Hunger, and Nutrition Education

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	40%	0%	0%	0%
704	Nutrition and Hunger in the Population	20%	0%	100%	0%
801	Individual and Family Resource Management	40%	0%	0%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	30.0	0.0	0.0	0.0
Actual Paid	40.6	0.0	2.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
541366	0	85128	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
541366	0	63887	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
4482268	0	267598	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Nutrition education was conducted using a variety of methods including group, individual, media, and newsletters. Group methods were single education events that focus on a very specific concept/behavior (e.g. washing fresh produce to reduce the risk of a foodborne illness) as well as a series of lessons that focused on broader concepts such as label reading or food resource management. Networking with agencies and organizations audiences also occurred to expand outreach, identify new audiences, and leverage resources.

AgriLife Research

Research was conducted in Africa, Latin America and the Middle East in cooperation with the Gates Foundation, Howard G. Buffett Foundation, local extension services, local universities, Texas Department of Agriculture, Department of Defense and USAID. Examples of successful research include the development of sorghum varieties and processing methods for improved diets in impoverished populations in South Africa as well as new varieties of cowpeas that contribute to sustainable cropping systems.

2. Brief description of the target audience

AgriLife Extension

The target audience for the Better Living for Texans program continues to be SNAP recipients and those eligible for program benefits. These groups includes women receiving WIC benefits, children attending schools in which 50% or more of the children receive free or reduce meals; children and parents in Head Start programs; individuals receiving food at a food bank or food pantry; children who participate in the Summer Food Service Program; and individuals living in census tracks where 50% or more of the population is at 130% of the poverty level or below.

AgriLife Research

Target audiences include the United Nations, governments and non-governmenatal organizations in Africa, Latin America and the Middle East.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	102028	257306	112162	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	30	30

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	9102

Output #2

Output Measure

- # research-related projects.

Year	Actual
2014	10

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	BLT participants who enroll in Walk Across Texas will increase the number of miles walked by 15% at the end of the 8 week program.
2	Amount of monthly out-of-pocket food expenses reported saved by program participants.
3	The percentage of participants who use the food label to determine the amount of food to eat either "always," "almost always," or "sometimes" will increase.
4	The percentage of participants who shop with a list "always" or "sometimes" will increase.
5	# of producers adopting best management practices on sustainable agriculture.

Outcome #1

1. Outcome Measures

BLT participants who enroll in Walk Across Texas will increase the number of miles walked by 15% at the end of the 8 week program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	11

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

More than half of adults and nearly 70% of children are not meeting national recommendations for physical activity. Studies consistently show that regular physical activity is linked to improved physical and mental health and can reduce the risk for targeted chronic diseases. Helping people adopt and increase their physical activity can help reduce/alleviate chronic disease and save health care dollars.

What has been done

Participants enrolled in the Better Living for Texans program were also encouraged to participate in the Walk Across Texas program. This program helps individuals adopt the habit of regular physical activity over an 8 week period using a team approach.

Results

Over the 8-week period, participants walked (or performed other types of physical activity) and logged their miles on the Walk Across Texas database. At the beginning of the program, participants were walking an average of 26.7 miles per week. Upon conclusion of the 8 week series, average weekly mileage per person had increased to 29.9 (p < 0.05).

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #2

1. Outcome Measures

Amount of monthly out-of-pocket food expenses reported saved by program participants.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	16

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Food security is a term used to describe a household that has consistent, dependable access to enough food for active, healthy living. When absent, the term food insecurity is often used. Nationally, an estimated 15% of households faced food insecurity in 2013. In Texas, however, that percentage is estimated at 18%. Previous surveys of BLT participants show that as many as 1 in 5 had received emergency food benefits (i.e. food pantry/food bank) within a previous 30-day period. Helping participants improve food resource management so they are able to improve their food security status can reduce the need for emergency food assistance.

What has been done

The Better Living for Texans program is offered to low-income audiences who currently receive or who are eligible for SNAP benefits. This program aims to help participants adopt targeted behaviors that help them plan and prepare healthy meals and improve their food security.

Results

BLT was implemented in 197 counties across the state, generating more than 1.3 million educational contacts. Programs emphasized planning and preparing healthy meals and stretching food resources. Amount of monthly out-of-pocket food expenses reported saved by program participants was \$16.38.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #3

1. Outcome Measures

The percentage of participants who use the food label to determine the amount of food to eat either "always," "almost always," or "sometimes" will increase.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	73

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

More than 2/3 of adults in Texas are overweight or obese. Because food portions have been shown to be exceedingly large (thus contributing to excessive weight gain in the absence of physical activity), helping participants choose healthier food portions can be a successful strategy in maintaining a healthy weight.

What has been done

Basic food buying skills enable clients to consider more healthful food choices when shopping. Get the Facts, a three-lesson series on the Nutrition Facts food label, was developed by Texas A&M AgriLife Extension Service nutrition specialists to enhance participant skills necessary for positive dietary behavior change. The skills-building series focused on comparing serving size, fat and sodium information when selecting food choices. These three items were specifically selected as they relate to obesity, heart disease and hypertension.

Results

More than 2800 adults completed the Get the Facts program series which focused on label reading. In this series, participants learned how to use the nutrition facts panel on food labels to determine how much of a particular food to eat (serving size). Fat and sodium also was addressed.

Upon entry in the program, 24% of the participants reported using the serving size information on the nutrition label always or almost always to determine the amount of food they ate. Immediately after the program ended, 71% were using that information always or almost always. Thirty days after the program ended, that percentage rose slightly to 73%.

4. Associated Knowledge Areas

KA Code **Knowledge Area**
703 Nutrition Education and Behavior

Outcome #4

1. Outcome Measures

The percentage of participants who shop with a list "always" or "sometimes" will increase.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	93

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

An estimated 1 in 6 households in Texas face food insecurity each year. Research shows that helping low-income families at risk for food insecurity improve their food resource and financial management skills may help improve food security status. When shopping for food, a number of strategies can be adopted to avoid overspending. These strategies include shopping with a list (to avoid impulse buys), comparing prices, and using unit pricing to identify the most economical purchases.

What has been done

BLT participants completed the Back to Basics program series which emphasizes food resource management, basic food safety, and healthy meal preparation. Participants are encouraged to adopt targeted food resource management behaviors which including shopping for food with a list in hand.

Results

A survey of 944 participants who completed the pre, post and follow-up surveys found that at the beginning of the program, 79% were shopping with a list always or almost always. Immediately after the program ended, 98% reported intent to adopt this behavior and 93% were doing so 30 days later.

4. Associated Knowledge Areas

KA Code **Knowledge Area**
703 Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

of producers adopting best management practices on sustainable agriculture.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

No external factors to report.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Individuals who enrolled in a program series were invited to complete a survey which assessed the extent to which the targeted behavior (shopping with a list) was being followed upon entry, their intent to follow the behavior immediately after the program ended and the extent to which the behavior was being followed 30 days after the program ended.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Fostering Strong Families

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	8.5	0.0	0.0
Actual Paid	15.1	7.0	0.0	0.0
Actual Volunteer	0.0	400.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
193247	492253	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
193247	300815	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1600000	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

Parenting and Dependent Care Programs

AgriLife Extension's Family Development and Resource Management Unit is committed to providing educational programs to support and strengthen Texas families. In the areas of parenting, child care, and dependent care, Extension offers a wide range of programs and resources to citizens across the state. Programs and resources include train-the-trainer workshops for professionals and volunteers, multi-session parent education workshops, 1-2 hour lectures, distance education workshops, self-study child care training guides, internet resources (e.g., online child care courses, fact sheets, research briefs, trend data, links to websites), and newsletters.

Family Financial Management Programs

Implement the Money Smart Financial Education Curriculum.

Implement the Wi\$e Financial Planning for Generation X and Y Curriculum

Implement the Welcome to the Real World Financial Simulation Activity

Cooperative Extension Program

Parenting is without question a critical influence on a child's mental health, development, and positive family environment, yet less than 1% of parents have evidence to parent education programs. Evidence-based parenting programs have numerous benefits including decreases in parental depression; increase parental confidence; and decrease in social, emotional, and behavioral problems in children. Parent education classes benefit parents by teaching child development and child management skills. They learn to create environments that can lead to the development of more positive behaviors in their children. Parenting education teaches parents how to be a positive role model who develops strong values and beliefs in their children. Cooperative Extension Program agents work in collaboration with Texas A&M AgriLife agents in certain counties conducting parenting and dependent care programs

AgriLife Extension and Cooperative Extension Program

Passenger Safety Programs

County Extension agents and law enforcement officers trained and certified as child passenger safety technicians will conduct child safety seat checkup events in under-served rural areas of Texas. In addition, child safety seat fitting stations have been established at county Extension offices and fire/EMS departments to allow families additional access to certified technicians. When needed, a replacement seat is issued at no charge to parents and caregivers at checkup events and fitting stations.

2. Brief description of the target audience

AgriLife Extension

Parenting and Dependent Care Programs

Target audiences for child care programming include adults and teens providing care for preschool and school-age children in family, center and school-aged settings. Target dependent care audiences include adults and teens providing care for adults and children who are unable to provide some portion of care for themselves due to illness or age-related disabilities. Programs and resources are accessible to target audiences regardless of gender, marital status, family status, race/ethnicity, income level, or educational level. It is estimated that 70% of this audience falls under the category of "low-income."

Family Financial Management Programs

Money Smart: unbanked, less financially-sophisticated consumers.

Wi\$eUp: Generations X and Y, with emphasis on women ages 22-35.

Cooperative Extension Program

Minority families and individuals

Senior adults

Single parents

Limited resource families
 College students
 Individuals who have experienced job loss
 Teen parents

AgriLife Extension and Cooperative Extension Program

Passenger Safety Programs

Under-served residents of rural areas in Texas.

3. How was eXtension used?

Relevant resources from eXtension have been used to prepare news releases and contribute to the eXtension database of FAQs in family financial security.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	70917	228904	13246	0

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

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational methods conducted.

Year	Actual
2014	1153

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of child care providers who increase their knowledge of child care best practices as a result of participating in child care provider trainings.
2	% of dependent care providers who increase their knowledge of dependent care best practices as a result of participating in depend care trainings.
3	% of parents who increase their knowledge of parenting practices as a result of attending parenting trainings.
4	% of fathers (father-figures) who increase the amount of time spent reading to their children.
5	# of participants who increase knowledge on financial management.
6	# of participants who reduced debt and increased savings.
7	# of car seats inspected.

Outcome #1

1. Outcome Measures

% of child care providers who increase their knowledge of child care best practices as a result of participating in child care provider trainings.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

67% of children under age 5 receive some form of child care on a regular basis from persons other than their parents (U.S. Census Bureau, 2013). Researchers have found that quality matters when it comes to child care. Children who receive high-quality care develop better language, math, and social skills; exhibit fewer behavior problems; and tend to be better prepared for entrance into school (Vandell et al., 2010). Evidence indicates that professional preparation (i.e., more formal education and content-specific training in child development) is linked to higher quality care environments for children (Zaslow, Tout, Maxwell, & Clifford, 2004).

What has been done

In 2014, Agrilife Extension and Cooperative Extension county agents and their community partners conducted 27 child care provider training conferences throughout the state of Texas for 2,885 child care providers and directors who provide care for more than 51,800 children enrolled in 747 child care centers or family day homes. Over 16,100 clock hours of training were provided to child care professionals. In addition to the face-to-face conferences, early childhood educators in the U.S. completed 174,097 online courses in 2014 (277,419 clock hours).

Results

Results from a 2014 evaluation study with over 2,700 participants indicate that over 90% of participants acquired new information (98%), plan to utilize the information to improve their programs (99%), and consider themselves better equipped to work with children (99%). Evaluation data collected from over 14,300 online participants indicate that they are very satisfied with the quality of the courses. Over 99% rated the online courses as Good, Very good, or Excellent. Ninety-six percent of respondents stated that they learned new information from the courses, and 99% would recommend the online courses to others.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #2

1. Outcome Measures

% of dependent care providers who increase their knowledge of dependent care best practices as a result of participating in depend care trainings.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	96

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

More than 11% of the population in Texas is over age 65. The fastest-growing segment of this population within Texas and across the U.S. is adults over age 85. Falling continues to be one of the leading causes of accidental death in the U.S. among older adults. Families provide an estimated 80% of care to older adults, with the remaining 20% provided by formal community agencies and institutional facilities. Estimates show that Texas has approximately 2.1 million caregivers, who provide more than 2.2 billion hours of care valued at more than \$22 billion.

What has been done

AgriLife Extension:

In 2014, AgriLife Extension eldercare programs reached more than 1,705 educational contacts, providing more than 2,400 contact hours. Programs for dependent care providers include improving health literacy, grandparents raising grandchildren, fall prevention in the home, and supporting military caregivers. AgriLife Extension provided primary leadership and/or speaker support for conferences on aging that targeted professionals. Conferences exist on a county or multi-county basis, often offering continuing education units to attendees.

Cooperative Extension Program:

Cooperative Extension Program conducted a grandparents raising grandchildren conference in collaboration with AgriLife and community partners in Harris and Nueces counties.

Results

AgriLife Extension:

In an evaluation study conducted in 2013 with 250 eldercare conference attendees, 72% reported that the conference was Better or Much Better than conferences previously attended. Ninety-six percent of respondents indicated that the information received would help them improve the quality of their work. As an added component to our in-person offerings, AgriLife Extension has begun making webinars and online courses available for professional training. Of the numbers listed above, almost 700 contacts, more than 750 contact hours, were online-only.

Cooperative Extension Program:

More than 450 grandparents attended this conference and for the second year, a local legislator spoke on the importance of grandparents.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #3

1. Outcome Measures

% of parents who increase their knowledge of parenting practices as a result of attending parenting trainings.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Parents contributions to their children's development are unparalleled, especially during their early childhood years. Research indicates that children who grow up with actively involved and nurturing parents reap numerous benefits, including better school performance, increased self-esteem, healthier relationships with peers, and greater access to financial resources. High quality parent education programs, according to researchers, can help young parents develop the skills

they need to effectively raise their children (CDC, 2009).

Cooperative Extension Program:

Parenting:

Texas ranked as one of the six states having the highest rates of children living with low income working parents. Within Texas, there are over 2 million children living within households with incomes less than 200 percent of the federal poverty level, as defined by the U.S. Office of Management and Budget. Child abuse and neglect occurs across all social, economic and ethnic groups. However, a much larger percentage of children identified as neglected or abused come from lower socioeconomic families (Ammerman & Hersen, 1990). This may be due to the larger number of low-income families in the social service system, which may put them at higher risk of being scrutinized. The basic purpose of parenting has not changed throughout history. We can state it like this: The purpose of parenting is to protect and prepare our children to survive and thrive in the kind of society in which they live.

The Active Parenting series are parenting curriculum that use interactive methodologies to reach parents via videos and discussions. Partnerships and collaborations were established with the counties, Area Agency on Aging, Legislator El Franco Lee Harris County Precinct One, Neighborhood Centers, Sheldon and Alief Independent School Districts, Salvation Army, Bethany Baptist Church and Riverside General Hospital received interactive presentations and materials including handouts to help facilitate successful parenting programs that proved to be effective for parenting.

Bullying:

Conflicts among youth and bullying have been increasing. School districts have been mandated by the Texas Legislature through two bills (House Bill 212 and 283) to adopt and implement a dating violence policy and a discipline management policy. Both bills require training for teachers/staff as well as training/curriculum for youth to address these issues. Currently, there is no standard curriculum being utilized by school districts. Stop Bullying Now is a program that addresses bullying issues for youth, educators and school administrators.

Teen Pregnancy:

According to the Center for Disease Control and Prevention teen birth rates have been falling for the last two decades, more than 365,000 teens, ages 15-19, gave birth in 2010. Teen pregnancy and childbearing can carry high health, emotional, social, and financial costs for both teen mothers and their children. Teen mothers want to do their best for their own health and that of their child, but some can become overwhelmed by life as a parent.

What has been done

AgriLife Extension:

The Texas A&M AgriLife Extension Service provides Texas parents with a wide variety of research-based information and resources to assist them in their efforts to raise healthy children. In addition to newsletters, fact sheets, and single-session parenting seminars, AgriLife Extension offers parents, grandparents, and other caregivers the opportunity to participate in county AgriLife Extension agent and volunteer led parenting programs designed to increase participants' knowledge of key parenting concepts and to improve parenting practices.

Cooperative Extension Program:

Partnerships and collaborations were established with the counties to deliver research based information to parents, teenagers, and family care givers. Participants received handouts to help facilitate successful parenting programs that proved to be effective for parents. Upon completing the series of lessons, parents were given a certificate of completion.

Results

AgriLife Extension:

Results from a recent evaluation study with over 300 parents who participated in the Parenting Connections series indicated that the program had a very positive impact on specific parenting practices. Statistically significant attitudinal and behavioral changes from pre to post occurred in the following areas: parent-child communication, parental self-efficacy (i.e., confidence in parenting skills), parental involvement, and use of positive disciplinary practices. In addition, parents reported a significant improvement in their children's behavior after participating in the program.

Cooperative Extension Program:

Parenting

This year over 3,500 parents participated in a minimum of one and up to six classes of the Active Parenting education series. 86% of the parents stated that they are now using the skills learned in the parenting workshops to more effectively communicate with their children, properly discipline their children, and promote power, courage and self-esteem within their family.

Bullying

Two hundred and sixty individuals participated in the Stop Bullying Now Program in Maverick County. Individuals learned to identify bullying behaviors, consequences for bullying to the victim, bully and bystander, forms of cyber bullying, peaceful conflict resolution strategies and ways to address and report bullying at school and in their community.

Teen Pregnancy

In one county more than 1366 contacts were reached through parenting education, and child passenger safety events. Teens that have graduated through the Nutritional Guidance Program for Pregnant Teens have shown an increase in knowledge through reviews and pre and post evaluations. Many of these teens are breastfeeding their infants and are making sure their child is being transported safely, as a result of this program. A hand selected number of participants noted that they had an excellent understanding about nutrition during pregnancy, and the importance of prenatal care and checkups. A hand selected number of participants noted that they now know how to reduce stressors during their pregnancy. Through an oral review many of the participants were able to provide feedback and information regarding food, growth, weight gain for infants, childbearing teens, the fetus, and the importance of self-care after delivery

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

% of fathers (father-figures) who increase the amount of time spent reading to their children.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Reading aloud to children is a simple, yet powerful, activity that has been shown to improve children's literacy development across a variety of domains. In a recent survey of fathers' involvement in their children's learning conducted by the National Center for Fathering and the National Parent Teacher Association, researchers discovered that 39% of fathers never read to their children. It is well established that fathers play a critical role in their children's development. Fathers who find time to read with their children are taking advantage of one of the best opportunities to care for, connect with, and contribute to their children's future.

What has been done

Fathers Reading Every Day (FRED) is a family literacy program designed by the Texas A&M AgriLife Extension Service to increase parental involvement in children's early literacy development, with a specific focus on fathers. During the FRED program, fathers and father-figures of young children are presented with research-based information to help them begin daily reading activities with their children. FRED programs are held at public libraries, Head Start centers, elementary schools, churches, child care centers, and AgriLife Extension centers.

Results

Results from an evaluation study involving more than 700 FRED participants show fathers averaged more than 9 hours of reading time with their children and read over 41 books together. Statistically significant differences from pre to post were noted in a number of areas, including the amount of time fathers spent reading to their children, number of books read during a typical week, level of involvement in their children's education, quality of time spent with their children, and level of satisfaction with the father-child relationship.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #5

1. Outcome Measures

of participants who increase knowledge on financial management.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Many families face the constant challenge of managing limited resources to meet everyday expenses. The increasing complexity of the financial system and the lack of formal financial literacy education further burdens families who are trying to make ends meet, particularly low-income families. The recent recession and slow recovery have heightened consumer awareness of the need for financial literacy education. Growing unemployment, foreclosures, and credit delinquencies have contributed to increased interest among consumers in budgeting, saving, and cutting back on spending.

In today's world, financial education is crucial; however, many young people are leaving high school lacking the basic fundamentals of financial literacy. According to a survey from the Hartford Financial Services Group, less than one-quarter of students, about 24%, and only 20% of parents say students are prepared to deal with the financial challenges awaiting them in the adult world. More than three-quarters of students report that they wish they had more help preparing for managing their personal finances. Only 21% of students between the ages of 16 and 22 report having taken a personal finance course at school.

Cooperative Extension Program:

All individuals, whether living in rural or urban communities are confronted with multifaceted issues that include declining workforce preparedness, job loss, lack of resources, and increased poverty. Unemployment and children living in poverty is an issue in most areas of the United States and Texas is included. The ability to manage one's money is a valuable life skill. Learning through trial and error can be very stressful and expensive. Losing your job, being laid off, or having your family income decrease is traumatic. It is not just a loss of income, but also of the security and way of life. The effects of less income can be managed by economizing. Keeping a

positive attitude and adopting several economizing skills will help improve financial situations.

What has been done

AgriLife Extension:

143 Money Smart programs in 9 Texas counties were delivered resulting in 1239 educational contacts. Classes were conducted for clients in a variety of community organizations, including IDA participants, Catholic Family Services, adult probationers, Volunteers for America, and Goodwill Industries.

Cooperative Extension Program:

The Cooperative Extension Program conducted Welcome to the Real World with over 800 Youth (middle school-college) pretend they are 25 years old and independent from parents. After choosing a career, they are given a monthly salary to spend on real world expenses.

Money Matters curriculum was taught to 129 participants in one county.

797 Welcome to the Real World simulation evaluations were returned from 15 simulations in 9 counties in Texas. Additional simulations were held but evaluations were not completed.

Results

AgriLife Extension:

Participants have reported adoption of several recommended financial management practices and improvement in their attitudes toward money over the 5-10 week series, including improvement in the frequency with which bills are paid on time, increased savings, opening of savings and checking accounts, and developing a plan for spending.

Welcome to the Real World youth participants had:

- * 35.7% increase in knowledge of how to create and follow a spending plan (70% plan to create and follow a budget)
- * 34% increase in knowledge of how to track spending in a register (59% plan to keep a register of transactions)
- * 32% increase in knowledge of the effects of student loan debt on their future budget.

Cooperative Extension Program:

Real World participants stated completed the evaluation and 82% of the participants stated that they would complete their education so that they can reach their career goals, 65% stated that they would definitely make regular deposits in their account, 42% stated they would use a register to keep track of transactions, 71% stated they would open a savings account and 58% stated that they would create and follow a spending plan

Participants who completed the Money Matters training stated that they would make changes by: paying bills on time, be careful about the amount of interest paid, keep an envelope system and a more in-depth budget, track spending, put more in savings, make steps for financial goals, and pay more on than the minimum payment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #6

1. Outcome Measures

of participants who reduced debt and increased savings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	56

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Today's economic situation has increased the need to raise financially literate young people, but research studies and surveys point to a serious lack of financial preparedness including putting money into savings.

Carrying a heavy debt load precludes saving for the future. It also impacts personal credit history making future borrowing more expensive. The increase in college debt has accelerated with college debt having a larger share of overall household debt than credit card debt. Retirement readiness will be challenged by households unable to save for the future.

What has been done

The Welcome to the Real World simulation has built in a savings component. Youth participants are encouraged to put money into savings before they begin paying their monthly expenses.

In 2014, a Texas A&M University graduate student analyzed a sub-set of Wi\$eUp data for her M.S. thesis. Her research examined the differences between participants who took the debt module or workshop with those who took the savings module or workshop and those who took or attended both.

Results

Welcome to the Real World youth participants

* 52% increased their knowledge of pay yourself first

* 56% of the students plan to open a savings account, with an additional 30% of the students reported that they already had a savings account.

Debt behavior in the sub-sample participants changed significantly with participation in the Wi\$eUp module on debt. The highest average healthy scores overall for debt come from the

groups that took both modules (module on debt and the module on savings) followed by participants who had taken the debt module only. This may be tentative evidence of the efficaciousness of debt education at producing measurable changes in behavior.

A three-month post-assessment of the Wi\$eUp program showed that 77% of participants in programs conducted by Extension educators reported reducing their debt since taking the Wi\$eUp course, compared to 61% of the participants who were not in a program conducted by an Extension educator.

The three-month post-assessment showed that 57% of Extension participants reported increasing their savings or investments for retirement or other purposes, compared to 51% for non-Extension participants. Overall, 86% of all participants made at least one positive change in savings habits.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #7

1. Outcome Measures

of car seats inspected.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	1852

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The proper use of child safety seats reduces the risk of injury and death, leading to reduced medical costs, avoidance of lost future earnings, and improved quality of life.

What has been done

Working with Extension agents across the state at child safety seat checkup events and fitting stations, project-trained technicians educate parents one-on-one about the correct installation and usage of their child safety seat as well as deliver educational programs on child passenger safety.

Results

These economic benefits are an estimated \$2,238 per child age 0 to 4 and \$2,663 per child age 4 to 7 for new seats distributed, and \$634 per child for seat misuse corrected with an assumed 75% continued use. Based on this formula, the total economic impact for the 1,852 inspections conducted in 2014 is \$2,526,198.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

In 2014, the Texas A&M AgriLife Extension Service did not meet the goal of increasing the amount of time fathers spend reading to their children. The program (Fathers Reading Every Day) designed to increase father involvement in children's early literacy development is no longer implemented in a wide number of Texas counties. Instead, an adapted version that targets families, not just fathers, is more widely utilized. The amount of data collected from fathers who participate in the program is not sufficient to make meaningful estimates on increased time spent reading.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Child Care: Evaluation data, particularly for child care programs, continues to show outstanding results. In 2014, AgriLife Extension reached over 2,800 child care providers and directors with research-based, best practice professional development training through 27 conferences held across Texas. Moreover, providers and directors completed over 174,000 online courses (277,419 clock hours). Providers in both the face-to-face and online trainings rate the quality of the trainings very highly. The vast majority of participants indicate that they learned new information, believe the information will improve the care they offer to children, and plan to implement the practices in their programs.

Financial management: For several years, participant evaluations have been analyzed to determine knowledge gained, skills learned, and intent to change financial management behaviors. Results consistently show a statistically significant increase in participants' knowledge of the program's concepts after the class compared to their knowledge before the class.

A pre- and post-survey are used to determine any changes in participants' financial management practices and attitudes toward money as a result of participating in Money Smart classes. Participants have reported adoption of several recommended financial management practices and improvement in their attitudes toward money over the 5-10 week series, including improvement in the frequency with which bills are paid on time, increased savings, opening of savings and checking accounts, and developing a plan for spending.

Child passenger safety:

1,852 Inspections

1,267 New seats distributed

The proper use of child safety seats reduces the risk of injury and death, leading to reduced medical costs, avoidance of lost future earnings, and improved quality of life. These economic benefits are an estimated \$2,238 per child age 0 to 4 and \$2,663 per child age 4 to 7 for new seats distributed, and \$634 per child for seat misuse corrected with an assumed 75% continued use. Based on this formula, the total economic impact for the 1,852 inspections conducted in 2014 is \$2,526,198.

Key Items of Evaluation

In 2014, county Extension agents and their community partners conducted 27 child care provider training conferences throughout the state of Texas for 2,885 child care providers and directors who provide care for more than 51,800 children enrolled in 747 child care centers or family day homes. Over 16,100 clock hours of training were provided to child care professionals. In addition to the face-to-face conferences, early childhood educators in the U.S. completed 174,097 online courses in 2014 (277,419 clock hours).

Results from a 2014 evaluation study with over 2,700 participants indicate that over 90% of participants acquired new information (98%), plan to utilize the information to improve their programs (99%), and consider themselves better equipped to work with children (99%). Evaluation data collected from over 14,300 online participants indicate that they are very satisfied with the quality of the courses. Over 99% rated the online courses as "Good," "Very good," or "Excellent." Ninety-six percent of respondents stated that they learned new information from the courses, and 99% would recommend the online courses to others.

Ordinances approved by various city councils in Texas regarding regulation of payday and auto title loan lenders in Texas may increase the demand for consumer information regarding these products, producing a "teachable" moment and providing an opportunity to analyze pre and post program financial behavior.

Ordinances approved by various city councils in Texas regarding regulation of payday and auto title loan lenders in Texas may increase the demand for consumer information regarding these products, producing a "teachable" moment and providing an opportunity to analyze pre and post program financial behavior.

The proper use of child safety seats reduces the risk of injury and death, leading to reduced medical costs, avoidance of lost future earnings, and improved quality of life.

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Life Skills for Youth (includes Character Education and Leadership)

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	0%	40%	0%	0%
806	Youth Development	100%	60%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	65.0	10.0	0.0	0.0
Actual Paid	191.0	9.0	0.0	0.0
Actual Volunteer	0.0	100.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2598555	632896	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2598555	386762	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
21514889	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

This program is based on five learning experiences, of a minimum of 30 minutes each, tied to the work of the project for which they participate. Each project is experientially focused. Examples of activities include workshops, demonstrations, and hands-on experiences.

Numerous materials and support is provided by the Texas 4-H faculty to agents and specialists. These items are used for implementation of projects and for professional development of staff. Use of volunteers is significant in enhancing and extending efforts to reach and provide youth with positive experiences.

Cooperative Extension Program

4-H Youth development takes place in 36 Texas counties facilitated by Extension Agents with the Cooperative Extension Program in partnership with community volunteers and agencies. There are outreach activities such as speeches, presentations, experiments on wind energy and water conservation as well as literature dissemination at local health fairs and other community events. There are demonstrations and educational enrichment provided to youth in schools and afterschool programs in life skills, healthy living, workforce development, and science exploration and discovery. There are community clubs that develop and promote life leadership skills and service to others in a context with caring adults. There are special interest project clubs in areas such as gardening and robotics. Youth maintain record books and practice in order to participate in contests such as food shows, soil judging, public speaking, and livestock shows on the county, district, state, and national levels. Special events like camps, conferences, and project-oriented days are also sponsored. Local Extension websites, blogs, and Facebook will be used to promote and highlight program successes.

2. Brief description of the target audience

AgriLife Extension

All youth of 4-H age are targeted for programs depending on location, issues identified by the local communities, and programs of interest.

Cooperative Extension Program

Limited-resource youth, ages 5-19, and caring adults in urban and rural communities of 36 Texas counties throughout the State 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.

3. How was eXtension used?

eXtension was not used per say. We do offer some volunteer development trainings on this topic and some introduction 4-H Youth Development Program overviews on the site. Specifically, the South Region 4-H Leaders have placed some information on this site for new employees and volunteers on the following topics:

- Overview of 4-H Youth Development
- Ages and Stages of Youth Development
- Volunteer Management
- Youth Protection Standards

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	120943	2855830	377658	0

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

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Actual
2014	20589

Output #2

Output Measure

- # of youth that participate in educational activities and programs.

Year	Actual
2014	86030

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of youth who increase knowledge of life skills concepts and practices.
2	% of youth who report they have adopted life skills concepts and practices.
3	% of youth who plan to pursue higher education interest or career interest as a result of their project work.
4	% of youth who report abilities (skills) changed as a result of participation in character education programs.
5	% of youth who plan to adopt character practices as a result of participation in character education programs.
6	% of youth who report an increased knowledge of character education principles.
7	% of 4-H club participants increasing knowledge of leadership skills.
8	% of 4-H club participants applying leadership skills.
9	increase competencies in job skills among limited resource youth.
10	% increase awareness of or interest to pursue entrepreneurship, green jobs, and/or STEM careers among limited resource youth.
11	% improvement in STEM skills or climate change mitigation practices among limited resource youth.
12	% increase in adoption/plans to adopt healthy living practices.
13	% increase in application of life, leadership, and job skills.

Outcome #1

1. Outcome Measures

% of youth who increase knowledge of life skills concepts and practices.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Life skill development is the cornerstone of 4-H. In today's world, it is critically important that youth have the opportunity to learn critical life skills so that they can be better citizens in the county, state, country, and world. The ones we specifically aim to address through 4-H are responsibility, decision making, public speaking, respectfulness, team work, and others.

Cooperative Extension Program:

Life skills are central to CEP 4-H programming as they have been identified as a key resource for positive, productive development of youth because it addresses what they must have to function well in society as they find it. Life skills enable young people to navigate the societal challenges encountered in everyday living and deal adequately with developmental tasks. More and more youth have to deal with bullying. The 2009 National Youth Risk Behavior and Indicators of School Crime and Safety found that 20-33% of teens and nearly 50% of middle school students had been bullied at school in the last year. The issue is so critical in Texas that through two bills state legislatures mandated school districts to train students and school personnel in bullying prevention as well as implement a dating violence and discipline management policies.

What has been done

AgriLife Extension:

4-H programs during the year, aim to teach life skills. Some strategies include 4-H club work, project work, district events, regional programs, summer camps, and statewide impact programs and camps.

Texas 4-H Youth Development includes over 58,000 youth in over 2400 clubs in Texas. Through this experience, youth learn leadership, citizenship, and life skills through club meetings and

project experiences.

Cooperative Extension Program:

There were 4,768 youth and 175 adults in six counties provided five lessons from the Take a Stand curriculum on the subject of bullying, totaling 193 educational sessions. Youth were taught how to positively resolve conflict and stand up against bullying. Parents were taught how to recognize signs of bullying in their children. Teachers, volunteer leaders, and after school providers were trained how to implement the curriculum.

Results

AgriLife Extension:

Outcomes are measured at the county, district, regional, and state level. A snapshot of state results is below.

- * 82% of participants described their understanding of TeamWork as Excellent after the program
- * After the program 96% of participants felt like they understood what it takes to be a good leader
- * 100% of participants ranked their understanding of the responsibilities of a leader as above average
- * 100% of participants understood the importance of cooperation in being a good leader
- * 87.5% said what they learned in the program provided them with the ability to make better leadership decisions.
- * 62% said they are more comfortable serving in a leadership role (being a leader) because of participating in the Leadership Program.

Cooperative Extension Program:

Of the 851 survey respondents, 75% could recognize signs of anger in themselves, 73% can identify ways people are alike and different, and 72% could understand the consequences of violence after the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

% of youth who report they have adopted life skills concepts and practices.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Life skill development is the cornerstone of 4-H. In today's world, it is critically important that youth have the opportunity to learn critical life skills so that they can be better citizens in the county, state, country, and world. The ones we specifically aim to address through 4-H are responsibility, decision making, public speaking, respectfulness, team work, and others.

Cooperative Extension Program:

Life skills are central to CEP 4-H programming as they have been identified as a key resource for positive, productive development of youth because it addresses what they must have to function well in society as they find it. Life skills enable young people to navigate the societal challenges encountered in everyday living and deal adequately with developmental tasks. More and more youth have to deal with bullying. The 2009 National Youth Risk Behavior and Indicators of School Crime and Safety found that 20-33% of teens and nearly 50% of middle school students had been bullied at school in the last year. The issue is so critical in Texas that through two bills state legislatures mandated school districts to train students and school personnel in bullying prevention as well as implement a dating violence and discipline management policies.

What has been done

AgriLife Extension:

4-H programs during the year, aim to teach life skills. Some strategies include 4-H club work, project work, district events, regional programs, summer camps, and statewide impact programs and camps.

Cooperative Extension Program:

There were 4,768 youth and 175 adults in six counties provided five lessons from the Take a Stand curriculum on the subject of bullying, totaling 193 educational sessions. Youth were taught how to positively resolve conflict and stand up against bullying. Parents were taught how to recognize signs of bullying in their children. Teachers, volunteer leaders, and after school providers were trained how to implement the curriculum.

Results

AgriLife Extension:

- * 97.5% believe that what they learned has given them the ability to make better leadership decisions.
- * 97.5% are more confident in serving in a leadership role.
- * 95% of participants indicate that their ability to speak in front of others increased because of their participation
- * 95% of participants feel like their self-confidence has increased
- * Half of participating youth say programs assisted them with making future career choices
- * 90.0% know how to be an effective communicator and good listener.
- * 82.5% have set personal goals to help them fulfill their personal vision.
- * 80.0% have a personal vision.

Cooperative Extension Program:

Of the 851 survey respondents, many of the respondents changed their behavior or took action. After the program, 75% could control anger, 72% could accept the consequences of violence, 73% can explain their point of view to others, 69% can listen to other points of view, 64% can compromise to solve a conflict, 80% can respect others, 73% can practice good manners, 75% are good team members, 71% can work with others to make decisions, and 75% can respect the customs and traditions of others.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. Outcome Measures

% of youth who plan to pursue higher education interest or career interest as a result of their project work.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Career development and workforce development have been a significant priority for the Texas 4-H Youth Development Program. Over the last few years, this has become more of a priority for the program. Specifically, several grants have been received to focus on career development.

Cooperative Extension Program:

The United States continues to face a critical shortage of well-trained professionals for research and other careers in food and agricultural sciences. According to the national census, the demographics of America are evolving toward a new minority majority. Despite this trend, there currently exists underrepresentation of limited-resource and minority individuals in Science, Technology, Engineering, Agriculture, and Math (STEAM) careers. According to research by Dr.

Ann Stiles of Project Grad Houston, pre-college programs facilitated by universities play a critical role in predicting college attendance and increasing a young person's likelihood to be career ready.

What has been done

AgriLife Extension:

Career development and workforce development have been a significant priority for the Texas 4-H Youth Development Program. Over the last few years, this has become more of a priority for the program. Specifically, several grants have been received to focus on career development.

Cooperative Extension Program:

There were 209 participants from more than sixteen counties involved in residential college preparatory programs on campus. These youth and their adult leaders were exposed to career pathways in agriculture or completed apprenticeships in research and extension. Apprentices took field trips, attended workshops, toured farm, had recreation, and networked. Other participants received admissions and scholarship information, engaged in outdoor exploration and environmental education, created an educational plan, and participated in hands-on STEM activities.

Results

AgriLife Extension:

- * 87.5 said they have a better appreciation of those in youth education as a result of participating in Ag Day.
- * 100% said they are more comfortable working in a team as a result of the Leadership Program and teaching at Ag Day.
- * 86.5% strongly agree or agree that they are more aware of career opportunities in the health/medical field.
- * 86.5% strongly agree or agree that they are more aware of the diverse career opportunities in health/medicine.
- * 81.6% strongly agree or agree that they are more interested in a health/medical related major now more than ever.
- * 78.4% strongly agree or agree that they are aware of degree programs offered related to health, medicine, and first response.
- * 78.4% strongly agree or agree that they were exposed to aspects of health/medicine that they could not have found anywhere else in the Texas 4-H Program.
- * 75.7% strongly agree or agree that they have considered what career they want to pursue after college.

Cooperative Extension Program:

As a result of attending the pre-college programs, 64% of apprentices and 92% other participants are more likely to pursue enrollment in post-secondary education.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #4

1. Outcome Measures

% of youth who report abilities (skills) changed as a result of participation in character education programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	40

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

How others are treated, character education, ethical decisions, and anti-bullying are all significant programs in Texas 4-H Youth Development. Currently, this topic is one of the three most important educational content areas the Texas 4-H Program addresses.

What has been done

Character education is a significant part of our youth livestock program. A statewide assessment is conducted on every 4-Her and FFAer that participates in the program. Over 30,000 youth participate in Quality Counts Education annually. Quality Counts is the character education program ALL youth who show livestock at major shows must complete.

Results

In 2014, the Quality Counts test (measuring knowledge and skills of ethics and character) has been passed by 30,000 youth (4-Hers and FFAers).

* Quality Counts - 4-H Juniors ? 90% testing score on questions regarding knowledge of six pillars of character, decision making, and helping others.

* Quality Counts 4-H Seniors - 80% testing score on questions regarding knowledge of six pillars of character, decision making, and helping others.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #5

1. Outcome Measures

% of youth who plan to adopt character practices as a result of participation in character education programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

How others are treated, character education, ethical decisions, and anti-bullying are all significant programs in Texas 4-H Youth Development. Currently, this topic is one of the three most important educational content areas the Texas 4-H Program addresses.

What has been done

Character education is a significant part of our youth livestock program. A statewide assessment is conducted on every 4-Her and FFAer that participates in the program. Over 30,000 youth participate in Quality Counts Education annually. Quality Counts is the character education program ALL youth who show livestock at major shows must complete. Moreover, annually 4-Hers participate in statewide livestock clinics to learn about best practices associated with quality assurance and character education.

Results

* 85.8% participants indicated they learned new skills to help show their animal better. - 45 participants (10.1%) indicated they already do this.

* 65.8% participants indicated they will practice showing their animal at least three times per week. - 119 participants (26.8%) indicated they already do this.

* 65.8% participants indicated they would be a good sport both in and out of the show ring. - 147 participants (33.1%) indicated they already do this.

* 56.3% participants indicated they will feed their animals at the same time every day. - 164 participants (36.9%) indicated they already do this.

4. Associated Knowledge Areas

KA Code	Knowledge Area
----------------	-----------------------

806 Youth Development

Outcome #6

1. Outcome Measures

% of youth who report an increased knowledge of character education principles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

How others are treated, character education, ethical decisions, and anti-bullying are all significant programs in Texas 4-H Youth Development. Currently, this topic is one of the three most important educational content areas the Texas 4-H Program addresses.

What has been done

Character education is significant part of our youth livestock program. A statewide assessment is conducted on every 4-Her and FFAer that participates in the program. In addition, 'Character Education' is taught through many camps.

Results

Quality Counts

- * will respect others in the show ring - 100%
- * will follow all the rules - 99%
- * will set personal goals for me and my project - 99%

Various Camps

- * 92.5% have developed or improved their teamwork skills.
- * 91.3% are more comfortable working in a team.
- * 88.3% are more comfortable speaking with others.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #7

1. Outcome Measures

% of 4-H club participants increasing knowledge of leadership skills.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	20

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Leadership development happens best locally. Youth leadership programs that are conducted and evaluated locally provide the most meaningful outcomes because this development is happening on-going throughout the year vs one shot camps and statewide programs.

Cooperative Extension program:

Since its inception, 4-H has placed emphasis on the importance of young people being engaged, well-informed citizens. The core areas of citizenship are civic engagement, service, civic education, and leadership. Youth voice and self-determination are essential elements of positive youth development. Civic engagement provides a foundation that helps youth understand the big picture of life and find purpose and meaning. By connecting to their communities and community leaders, youth understand their role in civic affairs and expand their role in decision making processes.

What has been done

AgriLife Extension:

To best ascertain leadership development, a statewide leadership evaluation was submitted in June at the end of the 4-H year to 4-H youth participating in clubs and also attending at least one district based leadership program. For clubs, 4-Hers attend 4-H club meetings and learn leadership through decision making, parliamentary procedure, and team work.

Cooperative Extension Program:

There were 237 teens commissioned as healthy living ambassadors in 12 counties. Six of these youth attended the National Youth Summit on Healthy Living. Another six of these youth attended Citizenship Washington Focus. All of the programs focus on teen leaders, with the

support of adult mentors, spearheading healthy living campaigns or service learning projects in their communities.

Results

AgriLife Extension:

- * A mean change of 23.7% was noted for teamwork knowledge
- * A mean change of 24.0% was noted for strategies to be a public speaker
- * A mean change of 29.0% was noted for learning personal strengths in leadership tools.
- * A mean change of 22.7% was noted for learning the responsibilities of being a leader.
- * A mean change of 19.0% was noted for strategies to cooperate with others.

Cooperative Extension Program:

There were 237 healthy living common measures were collected for teen leaders. One Citizenship Washington Focus participant remarked, "CWF impacted me by opening my eyes to different things in and outside of my community and my city that I can take back to my neighborhood to better it, to make it more like the CWF experience I had. I am truly appreciative for the opportunity to go to the CWF, it changed my life completely."

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #8

1. Outcome Measures

% of 4-H club participants applying leadership skills.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

AgriLife Extension:

Leadership development happens best locally. Youth leadership programs that are conducted and evaluated locally provide the most meaningful outcomes because this development is

happening throughout the year vs one shot camps and statewide programs.

Cooperative Extension Program:

Since its inception, 4-H has placed emphasis on the importance of young people being engaged, well-informed citizens. The core areas of citizenship are civic engagement, service, civic education, and leadership. Youth voice and self-determination are essential elements of positive youth development. Civic engagement provides a foundation that helps youth understand the "big picture" of life and find purpose and meaning. By connecting to their communities and community leaders, youth understand their role in civic affairs and expand their role in decision making processes.

What has been done

AgriLife Extension:

To best ascertain leadership development, a statewide leadership evaluation was submitted in June at the end of the 4-H year to 4-H youth participating in clubs and also attending at least one district based leadership program. For clubs, 4-Hers attend 4-H club meetings and learn leadership through decision making, parliamentary procedure, and team work.

Cooperative Extension Program:

There were 237 teens from 12 counties were trained as healthy living ambassadors. Twelve of these youth attended national conferences for additional leadership training at the National Youth Summit on Healthy Living and Citizenship Washington Focus. There were also 209 youth participants who attended the annual Youth Leadership Laboratory and Research Extension Apprenticeship Program (REAP).

Results

AgriLife Extension:

- * 90.0% said they are now more comfortable working in Teams
- * 88.5% said they were more confident in their abilities as a leader.
- * 88.1% said they were more comfortable in making decisions.
- * 87.1% said they were more comfortable public speaking
- * 77.5% said they were confident with public speaking

Cooperative Extension Program:

As a result of the program, REAP (79%) and Youth Leadership Lab (89%) participants increased their ability to apply leadership skills.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #9

1. Outcome Measures

increase competencies in job skills among limited resource youth.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	315

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Employment trends in the 21st century are in Science, Technology, Engineering, and Math (STEM) careers and green jobs as indicated by the Workforce Investment Act. Unfortunately, findings from the first report of the STEM Workforce Data Project confirm that there have persistently not been enough people to fill these positions in the United States, called the skill gap or broken worker pipeline. So even though unemployment is extremely high, these positions remain vacant.

What has been done

The Cooperative Extension Program in Harris County (Houston, TX) conducted workforce preparation and youth development training with 315 participants offering strategies for employability that includes six lessons. They cover the use of The Workforce solutions One Stop Web site that provides employment, business, education, legislative, and financial information for all Texas residents. All youth are provided an employment hunting kit to aid them in learning how to properly prepare an application (paper and electronic) as well as write a cover letter and resume. Last participants participate in mock interviews and dress for success workshops.

Results

Of the 200 adult participants, 100 (50%) students were placed and currently hold employment in the fields of dental technicians and medical assistance according to the placement director.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #10

1. Outcome Measures

% increase awareness of or interest to pursue entrepreneurship, green jobs, and/or STEM careers among limited resource youth.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	23

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Employment trends in the 21st century are in Science, Technology, Engineering, and Math (STEM) careers and green jobs as indicated by the Workforce Investment Act. Unfortunately, findings from the first report of the STEM Workforce Data Project confirm that there have persistently not been enough people to fill these positions in the United States, called the skill gap or broken worker pipeline. So even though unemployment is extremely high, these positions remain vacant.

What has been done

There were 7,365 youth and 4,369 adults from more than sixteen counties reached with hands-on STEM activities, totaling 571 educational sessions. Project and program areas include gardening, robotics, photography, livestock, and water education (including water stream trailer). In addition, there were pre-college programs that focused on careers in Agriculture and STEM-related disciplines.

Results

Of the 267 responses on pre and posttests from the robotics program indicate that 23% of participants increased their understanding of the scientific concept. A teacher is quoted as saying, Our students now have a sense of the importance of STEM education at the lower levels. The robotics program has conditioned our students to think at a higher level and to become problem solvers too. They have learned how to be leaders, but to also follow when needed. Most of all though, it's strengthening their cognitive skills. As a result of the pre-college programs, 84% of the 209 respondents increased their familiarity with agriculture majors and careers and 54% are more likely to major in and or pursue careers in agriculture and related science disciplines.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #11

1. Outcome Measures

% improvement in STEM skills or climate change mitigation practices among limited resource youth.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	82

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The nation is facing declining proficiencies in science, engineering, and technology (SET) as well as significant workforce shortages in these critical fields. The Nation's Report Card revealed that only 18% of US high school seniors were deemed proficient in science in 2005, representing a 0% proficiency growth since 2000. Statistics for minority students show an even more dramatic disparity. Too many of our nation's young people do not have the science, engineering and technology skills needed for careers in the 21st century. Informal community based education programs can be utilized to address the emerging issues of youth science literacy crisis.

What has been done

There were 7,365 youth and 4,369 adults from more than sixteen counties reached with hands-on STEM activities, totaling 571 educational sessions. Areas include gardening, robotics, photography, livestock, and water education (including water stream trailer).

Results

Of the 267 responses on pre and post tests from the robotics program indicate that 60% of participants increased their interest in a science career. There were also 78% and 82% increases respectively in their ability to question things using the scientific method and to develop a hypothesis to test a theory or idea.

4. Associated Knowledge Areas

KA Code	Knowledge Area
----------------	-----------------------

802 Human Development and Family Well-Being
806 Youth Development

Outcome #12

1. Outcome Measures

% increase in adoption/plans to adopt healthy living practices.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	90

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

According to Feeding America, data from 2011 indicate that Texas (at 18.5%) is among the top three food insecure states in the nation. Twenty-two percent of Texas children under age eighteen are food insecure?the highest rate of any state in the country. Texas is also ranked seventh in the nation with a child obesity rate of 20.4 percent. According to the 2011 Youth Risk Behavior Survey, conducted by the Centers for Disease Control and Prevention, Texas youth continue to engage in behaviors that do not contribute to a healthy lifestyle.

What has been done

The Youth Voice: Youth Choice healthy living programs mobilized underserved youth and their adult leaders provide leadership and take action around nutritional deficiencies, healthy food choices, and physical activity in twelve counties. All the programs were focused on mobilizing 237 youth ambassadors, with the support to of adult mentors, to spearhead campaigns or service learning in their communities. Educational outreach through fairs and community events were important methods. In addition, in-school enrichment for elementary age children using the Choose Health Food Fun and Fitness and classes for adults using the Step UP and Scale Down curriculum were conducted. In total, there were 14,913 youth and 8,089 adults reached through 809 educational sessions.

Results

There were 1240 Healthy Living Common Measure surveys administered as part of the Youth Voice: Youth Choice Healthy Living programs. Those results have not yet been tabulated, but will be entered into a national database. There were additional 12 surveys collected for Step Up and Scale Down. Common measure results from respondents in grades 4 through 7 indicated over

90% could make healthier food choices. Participants also changed behaviors to drink more water (90%), eat more fruits/ vegetables and whole grains (81% and 76.3% respectively), and consume less junk food (81%). Results from the Step Up and Scale Down surveys indicate 100% increased their physical activity to 3 or more days per week as well as their consumption of fruit and veggies.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #13

1. Outcome Measures

% increase in application of life, leadership, and job skills.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	82

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In The Jacobs Foundation Guideline on Monitoring and Evaluating Life Skills for Youth Development (2011), life skills is presented as a set of core adaptive and positive attitudes, knowledge, and behaviors that enable young people to navigate the societal challenges encountered in everyday living and deal adequately with developmental tasks. According to UNICEF (2002), they can be applied to actions directed at the self, other people, or the local environment. So they are important for helping youth shape the world and not just cope with it. They empower youth to take steps that promote health, positive social relationships, and contribute to society. The core areas of life skills are social and interpersonal skills, cognitive skills, emotional coping skills, life leadership skills, technical skills, livelihood skills, civic engagement, and service.

What has been done

The 4-H and Youth Development unit reached 86,030 educational contacts with youth and their adult leaders in 20 Texas counties. Youth ages 5 to 19 and adult leaders in limited-resource communities benefited from receiving 54,124 hours of research-based information and non-formal

education via 1588 sessions. Educational outcome programs were conducted throughout the state to promote the development of life, leadership, and livelihood skills in the areas of science, healthy living, and citizenship for youth participants who were also encouraged to apply outside of the 4-H context.

Results

On average, 82% of 1249 respondents improved healthy living practices at home and in school. There was an average increase of 80% science skills from 267 respondents in the school context. Based on 851, 73% of 851 respondents practiced prosocial behaviors and life skills at home and at school as a result of programs. The average placement rate to apply job skills was 50% based on 200 participants. Last, 84% of pre-college participants were able to apply leadership skills outside of 4-H contexts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

All intended objectives and goals were met.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The results offered in this document are pulled from county, district, and statewide evaluations and aggregated as best possible to answer these questions. The focus agency wide is outcome measures (knowledge, skills, behaviors) as indicated in this document.

Key Items of Evaluation

Youth Leadership, life skill development, career workforce development

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Adult Leadership and Volunteer Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	40%	40%	0%	0%
806	Youth Development	60%	60%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	35.0	11.0	0.0	0.0
Actual Paid	19.2	8.0	0.0	0.0
Actual Volunteer	0.0	100.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
250810	562574	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
250810	343788	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2076595	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

AgriLife Extension

The following activities will be used to implement this program:

*Provide training for Extension professionals on the ISOTURE volunteer management model and key concepts related to volunteer administration.

*Provide training and guidance to Extension specialists in the role and support of program development related to volunteerism.

*Provide orientation and training directly to volunteers in preparation for their service resulting in a positive experience.

Cooperative Extension Program

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

2. Brief description of the target audience

AgriLife Extension

The following groups are included in the target audience for this program:

- * Youth and adult volunteers who have a need or interest in a Texas Extension program.
- * Extension educators
- * Youth and adults who have an interest in community development and partnerships.

Cooperative Extension Program

The target audience includes partnering with underserved youth, families, and community organizations to recruit and train volunteers. One recent challenge posed by NIFA's Director of Youth & 4-H has been to combine professional and volunteer development. Additional audiences that will be targeted include Extension faculty, young professionals, students, and the unemployed who may be limited-resourced or commit to serve those who are.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	94431	1357599	13906	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # group educational sessions conducted.

Year	Actual
2014	4246

Output #2

Output Measure

- # of volunteers and staff that participate in professional /volunteer leadership development and service-learning.

Year	Actual
2014	68

Output #3

Output Measure

- # of community service and service-learning hours provided by volunteers and participants.

Year	Actual
2014	1127

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	% of participants who report an increased knowledge of leadership development practices.
2	% of participants who plan to or adopt leadership development practices.
3	# of counties who implement a volunteer management plan.
4	% increase of readiness by participants for the world of work.
5	% increase in value for service for participants.
6	% of participants who apply citizenship, leadership, and job skills.

Outcome #1

1. Outcome Measures

% of participants who report an increased knowledge of leadership development practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Leadership in rural counties was identified as a significant issue through long-term strategic planning. This was an issue for both youth and adults. It is important for young people to develop and gain leadership life skills in order to grow into successful, contributing members of society in adulthood.

What has been done

In 2014, there were more than 4,000 contacts through leadership development programs for youth and adults. Youth leadership programs were focused on youth developing knowledge skills to serve in leadership roles through traditional 4-H program experiences and through Leaders 4 Life program. Adult leadership development programs were held for community members to learn about leadership, gain skills needed to serve in community leadership positions and acquire knowledge of community and economic development.

Results

For adults involved in the leadership development program, evaluations indicated that 100% of the program participants indicated they gained knowledge of leadership development and practices.

Evaluation of youth involved in leadership programs, such as Leaders 4 Life, indicated 98% believe what they learned has given them the ability to make better leadership decisions, including being an effective communicator and good listener. Additionally, 96% have developed or improved their teamwork skills, and 95% are more confident in serving in a leadership role.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2

1. Outcome Measures

% of participants who plan to or adopt leadership development practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a strong need to develop and maintain sustainable communities using appropriate community and economic development tools and programs. One educational response is to develop adults and youth in counties to be leaders of tomorrow. It is the responsibility of AgriLife Extension and the 4-H Youth Development Program to provide volunteers with high-quality, educational opportunities and resources so they are best equipped to lead programs.

What has been done

Leadership development programs have been implemented in a variety of ways for youth and adults. The youth leadership programs were focused on youth developing knowledge skills to serve in leadership roles through traditional 4-H program experiences and through Leaders 4 Life program. Adult leadership development programs were held for community members and Extension volunteers to learn about leadership, gain skills needed to serve in community leadership positions and acquire knowledge of community and economic development.

Results

As a result of participating in leadership development programs, 98% of participants indicated they believe what they learned gives them the ability to lead more effectively and are equipped with information and resources to use as a leader. Additionally, 97% of volunteers that participated in training specific to their volunteer role indicated that what they learned provides them with the knowledge and ability to be a better volunteer leader.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #3

1. Outcome Measures

of counties who implement a volunteer management plan.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The Texas 4-H Youth Development Program has over 25,000 adult volunteers that help lead the program. However, as an agency and as a 4-H Program, we are not taking full advantage of their skill set to grow the 4-H Program. In addition, County Extension Agents are not being rewarded for leading programs that target volunteers and their impact (there are few outcome, now in-depth programs, in this area). Therefore, the Texas 4-H Youth Development Program's Volunteer Mobilization Plan is designed to emphasize the utility of volunteers to help increase youth enrollment. For the Texas 4-H Youth Development Program to grow (and the agency as well), there needs to be greater emphasis on volunteer mobilization and actually measuring the impact they are having versus measuring the impact of one program on one youth audience.

What has been done

The volunteer mobilization plans provide a foundation for the type of programs with emphasis on volunteers as the target audience. The approach includes trainings, volunteer resources, evaluation tools and in-depth program plans. These plans were made in all individual counties in Texas with implementation beginning in calendar year 2015.

Results

No measurable results are available at this point. However, volunteer mobilization results are anticipated after calendar year 2015. The volunteer mobilization plan approach was outlined, as well as a timeline template developed. Evaluation tools have also been developed and provided

to Regional Program Leaders and County Extension Agents, aimed at capturing results related to volunteers reach (# of youth), project areas volunteers led, observed changes in youth, as well as personal changes as a leader, and needs of volunteers to be a more effective leader.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #4

1. Outcome Measures

% increase of readiness by participants for the world of work.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	134

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The 4-H program empowers youth to reach their full potential, working and learning in partnership with caring adult adults. Traditionally, parent involvement has been a critical component for program success. Reaching new and underserved audiences will require that additional volunteer bases be engaged to address the needs of local youth.

What has been done

The Cooperative Extension Program 4-H program recruited, screened and trained 200 adult volunteers. Three grants were secured to support developing teens as volunteers.

Results

According to survey responses, 67% of adult volunteers state the professional and adult leadership development they received better prepared them for work.

4. Associated Knowledge Areas

KA Code	Knowledge Area
----------------	-----------------------

803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #5

1. Outcome Measures

% increase in value for service for participants.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	190

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The opportunity to value and practice service has been identified as one of the eight essential elements of positive youth development. It is also a critical component for successful volunteer recruitment and retention. Giving back to others in meaningful ways helps youth and adult leaders learn about themselves as well as gain exposure to the larger community.

What has been done

Teen volunteers and adult leaders have been able to serve others as project leaders, contest judges/coaches/mentors, club managers, ambassadors, and committee members. Additional service opportunities have included cleaning cemeteries, donating shoes to school children, providing care boxes to soldiers, cleaning cages at animal shelters, serving the homeless dinner, providing science lessons at a museum, rebuilding playgrounds, etc.

Results

According to survey responses, 95% of adult volunteers state the professional and adult leadership development they received better prepared them for work.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #6

1. Outcome Measures

% of participants who apply citizenship, leadership, and job skills.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	91

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The 4-H National Framework for Volunteerism states the organization relies on the strong ethic of volunteerism. The active preparation, training, and involvement of volunteers improve the credibility and integrity of the 4-H program. It is important that once additional knowledge is gained, volunteers apply skills inside the 4-H setting.

What has been done

Teen volunteers and adult leaders have been trained with science-related job skills (robotics and equine management) and developed citizen leadership around healthy living. Some others have been recruited to serve on committees and manage clubs.

Results

According to survey responses, 91% of adult volunteers state they have been able to apply citizenship, leadership, and/or job skills in or outside the 4-H context.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

No external factors reported

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Various evaluations are conducted for individual volunteer and leadership development programs facilitated by the Texas A&M AgriLife Extension Service. Evaluation results specific to these programs are summarized and included in each program report. The evaluations include after only, retrospective post and before-after.

Key Items of Evaluation

VI. National Outcomes and Indicators

1. NIFA Selected Outcomes and Indicators

Childhood Obesity (Outcome 1, Indicator 1.c)	
0	Number of children and youth who reported eating more of healthy foods.
Climate Change (Outcome 1, Indicator 4)	
0	Number of new crop varieties, animal breeds, and genotypes with climate adaptive traits.
Global Food Security and Hunger (Outcome 1, Indicator 4.a)	
0	Number of participants adopting best practices and technologies resulting in increased yield, reduced inputs, increased efficiency, increased economic return, and/or conservation of resources.
Global Food Security and Hunger (Outcome 2, Indicator 1)	
0	Number of new or improved innovations developed for food enterprises.
Food Safety (Outcome 1, Indicator 1)	
0	Number of viable technologies developed or modified for the detection and
Sustainable Energy (Outcome 3, Indicator 2)	
0	Number of farmers who adopted a dedicated bioenergy crop
Sustainable Energy (Outcome 3, Indicator 4)	
0	Tons of feedstocks delivered.