

2014 Tuskegee University Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

This Annual Report summarizes in detail the accomplishments and results achieved by the Tuskegee University Cooperative Extension (TUCE) during the period October 1, 2013 through September 30, 2014 (Fiscal Year 2014). The accomplishments and results reported herein result from implementation efforts targeting the five Planned Programs (highlighted below) specified in the TUCE 2014 Extension Plan of Work update, accepted by NIFA May 30, 2013. TUCE carried out this Extension Plan of Work in partnership with the Evans Allen Research Program, the Carver Integrative Sustainability Center (USDA 1890 Center of Excellence) and other research, teaching and outreach units at Tuskegee University. In addition, TUCE worked in close cooperation with numerous community groups and with the Alabama Cooperative Extension System (ACES), operated jointly by Alabama A&M and Auburn Universities.

TUCE continues to focus its major efforts in the Alabama Black Belt and adjacent counties, but also commits significant efforts to other counties such as Marshall County with the Cherokee Tribe of North East Alabama (CTNEAL) and other targeted Native and Hispanic populations. Because these named areas have many conditions related to underserved, underprivileged populations, TUCE has in cooperation with local advisory councils identified the priority areas addressed and incorporated them as Planned Program action items in the 2014 Extension Plan of Work. TUCE developed and carried out specific educational and other outreach programs to address these priority and other issues using appropriate population specific information. Most of TUCE's efforts are carried out through large and small group meetings, workshops, field demonstrations and fairs, and dissemination of printed products, as well as one-on-one consultations. In addition, delivery occurred through several camps held in various counties, and annual events such as the 2014 Youth Empowerment Summit, the 122nd Annual Farmers Conference and the 19th Annual Booker T. Washington Economic Development Summit held on campus, for close to overall 130,000 of direct and indirect adult and youth contacts. A summary of the implementation efforts are presented below along with accomplishment highlights for each of the five Planned Program areas.

Small Scale Farming and Food Security. The Small Scale Farming and Food Security program area mainly addressed issues related to sustainability of small-scale farmers and rural communities. These include strategies for increasing and maintaining profitability of small livestock and horticulture enterprises, marketing of produce to large outlets, forming and managing cooperatives, and community garden development. More than 2000 contacts were made with beef and goat producers, including 93 farmers attending a goat day event, and 65 at a workshop on improving pastures. Efforts have resulted in farmers improving beef cattle breeding stock, reducing annual beef cattle production cost by \$125 per head, and significant decreases in goat production costs. After receiving Good Agriculture Practices (GAP) training, ten farmers became certified to sell to commercial markets. Women farmers who became GAP-certified grossed \$16,000 selling greens to schools. Farmers now jointly market watermelons and peas to major retailers, others jointly market trailer loads of watermelons grossing \$75,000. Using plasticulture for the first time, farmers increased vegetable production by 30 to 35 percent compared to open row cultivation.

Youth Leadership, Science, and Technology Education. The Youth Leadership, Science and

Technology Education program engaged youth in experiential "hands-on" learning opportunities to increase knowledge of leadership and job readiness, with emphasis on stimulating interest in studying Science, Technology, Engineering, Agriculture and Mathematics. Leadership training led to students learning to prepare and deliver public speeches, and to practice giving impromptu talks. Students learned about the sciences involved in horticulture and nutrition while establishing and cultivating school vegetable gardens and preparing healthy meals from the produce. They also learned through developing projects for science fairs, and preparing and participating in goat shows.

Childhood and Family Obesity Prevention. The Childhood and Family Obesity Prevention program sought to provide citizens with convincing messages and demonstrations to generate a fuller understanding of the consequences of obesity and of effective means to prevent or reduce excess body weight and obesity. The program addresses general wellness through healthy diets and physical activity. Starting with Head Start centers, staffs are now incorporating healthy eating and physical exercise in Head Start curricula, and preparing healthier meals for youngsters, and influencing parents to also select healthier food and how to prepare them more healthily. Elementary school children learned to understand food package labels and pledged to help their parents to select healthier foods while grocery shopping. Workshops are empowering individuals to apply new knowledge and skills that will improve their health and the health of their families. Also through this program, senior citizens are learning how to improve and maintain good health through long term dietary practices and physical activity.

Community Resources and Economic Development. The Community Resources and Economic Development program worked with schools and other community organizations to provide training in community leadership, financial management, business development and youth entrepreneurship. TUCE conducted a series of sessions designed to identify and develop leaders and teach various topics including organizational issues and grant acquisition processes. Business development classes were also conducted with additional emphases on such topics as financial management and niche markets. An annual four-day Alabama Youth Entrepreneur Summer Camp was held, providing thirty students opportunities to learn real-world business skills through interactive curricula and field trips. Two eight-week programs were conducted targeting family financial management and credit matters enabling participants to obtain loans for home purchases and improvements. TUCE assisted start-up businesses that involve processing and bottling spring water, producing energy by gasifying biomass and fashion design.

Renewable Resources and Sustainable Energy. The Renewable Resources and Sustainable Energy program seeks to enhance the quality of drinking water in rural areas and small communities and increase the awareness of sustainable natural resource and energy use. Water quality was highlighted by a full day water festival that included many related demonstrations of processes and technologies, and training of residents on means to protect well heads, in addition to means to curb agricultural pollution. Energy audit awareness training led to farmers ordering energy audits, which in turn led to farmers deploying solar energy systems and energy efficient improvements to their farms. A forestry workshop assisted small landowners in making better decisions about managing their forestlands for more sustainable income and conservation. TUCE continues to aid in developing new natural resources professionals through a week-long Forestry Camp which exposed students in grades 9 through 12 to forestry and natural resource work, leading many to study related sciences in college.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	26.0	0.0	0.0
Actual	0.0	24.0	0.0	0.0

II. Merit Review Process

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

- Internal University Panel
- External University Panel
- Expert Peer Review
- Other (Local Advisory Councils and State Advisory Council)

2. Brief Explanation

The Merit Review Process Committee (still merged with the State Advisory Council) followed the guidelines outlined in the TUCE Advisory Council handbook as well as reports and recommendations from key programs and meetings. The State Advisory Council held its annual meeting in February at the Annual Farmers Conference and an additional follow up meeting at the September Booker T. Washington Economic Development Conference for input from local county advisory councils and input from stakeholders as related to program relevance and impacts.

III. Stakeholder Input

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

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

Brief explanation.

Stakeholders from our service area were encouraged to participate in all Extension activities through giving them ownership of the county advisory committee and State Advisory Council, and showcasing the knowledge and skills they could gain. Also, knowledge gained and skills learned from participating in Extension educational activities could help them to transform their communities, improve their leadership abilities and skills, and to improve their quality of life. More importantly, stakeholders are given opportunities at major conferences and meetings to serve as advocates for the Extension program and contribute to accountability. With input from stakeholders guiding our program planning, priority is given to areas with the greatest need.

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

Brief explanation.

Several methods were utilized for identifying individuals and groups such as the use of local and state advisory councils, listening sessions, and other needs assessments. Methods vary according to Program Areas. In Small-Scale Farming and Global Food Security, the methods were identified by interest levels, e.g., those interested in vegetable production participated in vegetable production; those interested in beef cattle production participated in the same; those interested in forestry participated in forestry. Some individuals and groups (professional leaders, elected officials, producers, and landowners) were tasked to serve on extension leadership teams, because they were aware of extension program goals and objectives and could provide quality input. Some individuals were targeted at the place where they transact business--producers at the farmers market--and their inputs were sought. Some demographic data on population were utilized to make contacts with new stakeholders and their input was sought. Collaborations with local, state and federal agencies such as FSA, NRCS, RC&D Councils, and other farm organizations as well as community-based organizations were used to identify new stakeholders and their input was sought. Additionally, agents, specialists, and administrative team worked together to identify individuals and groups that would add quality input into Extension programming, as they sought to improve program quality and development.

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

1. Methods for collecting Stakeholder Input

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

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

Brief explanation.

The methods mentioned above were utilized by the TUCE team to collect stakeholders' input. The meetings and surveys with traditional groups and individuals are necessary to maintain current program support and to make program modifications, if necessary. Meetings with the general public at conferences such as the Annual Farmers' Conference, the Annual Booker T. Washington Economic Development Summit, the Youth Empowerment Summit, and the Annual Professional Agricultural Workers Conference give participants the opportunity to inquire and receive information about TUCE. These conferences present challenges and opportunities for program development. TUCE is reviewing the need to employ again a full-time Community Resource Specialist to provide assistance and coordinate planning in conducting entrepreneurial initiatives that address needs of the Cherokee Tribe of Northeast Alabama, other Native Americans, and Hispanic groups in South Central Alabama. Similar efforts are underway to budget for a program planning and reporting staff person.

3. A statement of how the input will be considered

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

Brief explanation.

TUCE continues to be well received and considered a vital part of the communities in which it serves. The communities in which TUCE serves support programs that meet needs and improve the quality of life. Stakeholders report sustainability and other outcomes from their involvement in Extension. TUCE learned of the need to support and fund programs that lead to higher yields in vegetable and fruit production, more efficient and effective budget and record keeping, reduction in the use of pesticides, implementing more of the best farm management practices, forest resource management practices, enhanced economic development practices, as well as the need to re-allocate some resources to impact producing programs in youth obesity prevention, own-staff needs, food safety, and alternative energy use and technologies. Some stakeholders want more effective and efficient parenting educational activities, including early prevention of childhood obesity in their communities.

Brief Explanation of what you learned from your Stakeholders

N/A

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	2165112	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	0	2010397	0	0
Actual Matching	0	1192979	0	0
Actual All Other	0	0	0	0
Total Actual Expended	0	3203376	0	0

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

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Small-Scale Farming and Food Security
2	Youth Leadership, Science, and Technology Education
3	Childhood and Family Obesity Prevention
4	Community Resources and Economic Development
5	Renewable Resources and Sustainable Energy

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Small-Scale Farming and Food Security

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%		
111	Conservation and Efficient Use of Water		10%		
123	Management and Sustainability of Forest Resources		10%		
131	Alternative Uses of Land		15%		
211	Insects, Mites, and Other Arthropods Affecting Plants		10%		
301	Reproductive Performance of Animals		10%		
501	New and Improved Food Processing Technologies		15%		
601	Economics of Agricultural Production and Farm Management		20%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	10.0	0.0	0.0
Actual Paid	0.0	9.0	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
0	730805	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	433663	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

This program was carried out through a variety of ongoing delivery means, namely small group meetings, workshops and training sessions, demonstrations, large group meetings and conferences, mailings, newsletters, brochures and fliers, website visits and blogs, and farm visits where technical assistance and follow-up were provided. In addition, farmers and landowners were served via telephone calls and individual mailings. Another effective mean was via on-farm research and demonstration sites that are continuing to be established on cooperating farms. Some specific activities are summarized below.

Two thousand two hundred (2,200) contacts were made with small scale livestock producers and landowners during the past year via many of the above named means. Additional contacts were made with goat, and fruit and vegetable producers.

A Livestock Program web page was developed on the Tuskegee University website (http://www.tuskegee.edu/about_us/outreach/cooperative_extension/livestock_program.aspx) and information on educational materials and programs are posted on this web page.

The annual Tuskegee University Goat Day was held again this year with 93 participants. Morning lecture sessions presented information on topics related to dairy goat production such as guidelines for beginning a commercial dairy, disease control regulations, and a roundtable discussion on the challenges and future outlook of the industry. The afternoon field portion of the program featured several activities; including milking, cheese making, and pasture management demonstrations.

The sixth year of the Master Goat Producers Certification Program trained 50 individuals from four states. The first part of the training was a comprehensive three-day intensive course (lecture and hands-on) in meat goat production, followed by an exam. The second part consisted of follow-up visits to farms of those who advanced to upper training levels. The third part included a workshop concerning grants available from the Southern SARE program.

A Small Ruminant Year-Round Pasture Production and Management seminar was held for the Sheep and Goat Producers Commodity Group at the annual meeting of the Alabama Federation of Farmers. The seminar was attended by over 65 people who were informed about the benefits of year-round forage production and its benefits for producing low-cost and healthy meats.

2. Brief description of the target audience

The targeted audience will consist of small-scale producers and landowners in the 12 Black Belt and surrounding counties in Alabama.

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	8515	1266	8326	826

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	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- The output target will consist of training, technical assistance, and service in Horticulture, Plasticulture, Organic Farming, Food Processing, Cooperatives, Markets, Enterprise Budgeting and Economic Analysis, Forest Management, Animal Management and Marketing involving farmers, landowners, homeowners, senior citizens, youth farmer organizations, federal and state agencies and private industry.

Year **Actual**
 2014 0

Output #2

Output Measure

- Number of target audience adopting new ways of doing things

Year	Actual
2014	1260

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	The output target will consist of training in Integrated Pest Management, Plasticulture, Organic Farming, Forest Management, Animal Management and Marketing involving farmers, landowners, homeowners, senior citizens, youth farmer organizations, federal and state agencies and private industry.

Outcome #1

1. Outcome Measures

The output target will consist of training in Integrated Pest Management, Plasticulture, Organic Farming, Forest Management, Animal Management and Marketing involving farmers, landowners, homeowners, senior citizens, youth farmer organizations, federal and state agencies and private industry.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

This program addresses many of the challenges small-scale producers, their families and communities face in efforts to maintain profitable and sustainable farms, and related agribusinesses. Many of the challenges concern the lack of sufficient knowledge of the changing nature of agricultural production strategies and technologies, marketing strategies and capital acquisition, particularly for small-scale operations. Included and specifically are the lack of sufficient knowledge of sustainable production methods, governmental assistance programs, cooperatives, value added and safe food processing, marketing, and other aspects of sustainable and profitable farming. Other challenges in many rural communities are related to landownership losses, food deserts, and agricultural pollution.

What has been done

As part of Tuskegee University's research based educational programs, the Extension staff made more than 1,200 contacts with small scale livestock producers during the year through workshops, farm demonstrations, group meetings, farm and home visits, office visits, newsletters, and professional conferences. Other livestock related programs included a goat day training conference with 93 participants, and a small ruminant year-round pasture production and management seminar with more than 65 participants. Pasture and grazing management field days, training workshops, and sessions were also conducted. Monthly Farm Peer workshop sessions for beginning farmers were held in Barbour County. More than twenty-eight farmers attended the tri-county 16th Annual Small Farmers Area Work Conference where topics of interest to farmers were discussed. In addition, the 122nd Farmers Conference was attended by more than 300 farmers where they were exposed to various valuable subjects. Extension also held 40 meetings that trained farmers in Food Safety regulations for Good Agricultural Practices certification, and conducted training for Master Goat Producer and Vegetable Gardener

Certification, the latter leading to volunteers helping to establish new Community Gardens in four counties. Vegetable farmers were trained in assembling hoop and tunnel houses, associated drip irrigation systems, integrated pest management, and other technologies. Also, youth were trained in maintaining school gardens and livestock showmanship, leading them to participating in goat and cattle shows.

Results

Cattle producers improved breeding stock by selecting purebred and high quality replacement bulls and heifers. One producer with 40-50 heads of cattle reduced production costs by \$4860.00 to \$6480.00 per year after improving and better managing pastures. Two goat producers were able to save \$221.00 to \$237.00 per month by growing forages to feed their herds (35 to 40 head) during the winter time. Other benefits included reduced parasitic infestation by at least 70 percent in animals grazing tannin rich forages. About 65 percent of beef and goat producers improved the quality and quantity of forages, renovating approximately 1500 acres of pastures and hay fields. Five farmers graduated from Farm Peer training. Ten farmers became Food Safety Certified (Good Agricultural Practices, GAP) to sell to commercial markets in 2014. In addition, three women farmers became GAP certified to sell leafy greens, resulting in them grossing over \$16,000 in a Farm to School program. Several farmers through a cooperative jointly produced about 746 bins of watermelons and over 3000 cases of peas that were marketed to large retailers, a new market for them. Another four farmers contracted 15,000 watermelons through private sales totaling over \$75,000, a 90 percent increase from 2013. Farmers who began using plasticulture for the first time grew about seven acres of collards under plastic and received an increase of 30 to 35 percent in profits compared to open row culture. In addition, farmers are installing hoop houses to increase vegetable production throughout the year, especially during the winter and early spring.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
211	Insects, Mites, and Other Arthropods Affecting Plants
301	Reproductive Performance of Animals
501	New and Improved Food Processing Technologies
601	Economics of Agricultural Production and Farm Management

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

Program outcomes were particularly affected by extreme weather conditions and the economy. A number of planned field demonstrations were cancelled due to bad weather and the number of participants were lower than expected for some workshop and training sessions that required registration fees and/or more time off from farm and other job-related activities.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Almost all the producers that participated in educational workshops and training sessions indicated a willingness to adopt the recommended practices to help reduce cost, improve efficiency and in turn increase their profits. A number of farmers have already adopted a cooperative marketing program and have seen higher profits from their sales. Through the risk management educational and training efforts, producers have made significant increases in profits through the collaborative marketing strategy to penetrate local commercial markets including Walmart, Whole Foods, and Sodexo. Farmers have gained a myriad of information and skills relating to farm safety and quality control, crop insurance, food safety, pricing and grading, as well as packaging and transportation of produce to commercial retailers. A number of youth from various Black Belt counties who participated in agricultural educational programs including livestock shows, TAPS, Agri-Treck and forestry camps have also been exposed to career opportunities and resources in the agriculture and natural resources field. About 40% have indicated an intension to pursue career paths in this field.

Key Items of Evaluation

Key program components focus on technical assistance and educational programs and resources on animal production efficiency and herd health management, fruits and vegetables production using plasticulture and hoop-houses, organic agriculture and sustainable practices, farm risk management and cooperative marketing, and timber sales management.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Youth Leadership, Science, and Technology 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
806	Youth Development		100%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	6.0	0.0	0.0
Actual Paid	0.0	5.0	0.0	0.0
Actual Volunteer	0.0	30.0	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	419553	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	248965	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Leadership Workshops
 Citizenship Education Tours
 4-H Clubs

After-school Tech Academies (GIS, Social Media Education, Entrepreneurship, etc.)
 Youth Gardens
 Youth Cattle and Goat Shows
 Group discussions
 Summer Camps

2. Brief description of the target audience

Pre-K Students, Teachers and Parents
 Mid Schoolers
 High Schoolers
 Collegiate Students

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	7705	9610	6968	9607

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	1	0	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Numbers and participants in: Citizenship Education Tours 4-H Clubs After-school Tech

Academies (GIS, Social Media Education, Entrepreneurship, etc.) Youth Gardens Youth Cattle and Goat Shows Group discussions Summer Camps

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participant's knowledge, understanding, and application of science, technology, engineering and math concepts; application of technical skills to grow and prepare food items in, and on from the gardens; quality of cattle and goats participating in livestock shows; public speaking, marketing, decision-making and agrifood business and leadership.

Outcome #1

1. Outcome Measures

Participant's knowledge, understanding, and application of science, technology, engineering and math concepts; application of technical skills to grow and prepare food items in, and on from the gardens; quality of cattle and goats participating in livestock shows; public speaking, marketing, decision-making and agrifood business and leadership.

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)

In the Black Belt communities and other underserved youth communities in Alabama, there is a dismal paucity of opportunities to develop and nurture youth leadership, entrepreneurship, science and technology education; and other relevant core competencies necessary for highly proficient participation in their society. A lack of adequate exposure to a variety of entrepreneurial and leadership skills and practices, and lack of experiential learning opportunities and competitive exercises have resulted in youth not being effectively involved in civics and youth led roles in their communities, and not being highly motivated nor see the rewards of studying science, technology, engineering, agriculture, mathematics (STEAM) and other fields requiring intensive studying efforts.

What has been done

TUCE teams with partnering schools and other organizations to provide targeted experimental learning opportunities in youth leadership, entrepreneurship and business development, STEAM initiatives, and other subjects. Students learned and participated to establish, maintain and harvest school gardens while learning horticulture, food preservation, healthy recipe development, produce marketing and entrepreneurial skills. A goat show competition was held, where students studied in advance how to properly care for, feed, groom and show goats. A Smart Kids camp was held with many hands-on science, technology, engineering, agriculture and mathematics (STEAM) exercises. Science Fairs were developed for young scientists at local schools. Twenty students were sponsored to attend a 4-H camp where a variety of learning exercises involving subjects such as environmental, entrepreneurial, leadership and STEAM subjects were employed. An oratorical preparation workshop entitled "Youth Expressions through Public Speaking" was held to offer specific public speaking techniques and practices to students in grades 6-12. A three-day 4-H Teen Leadership Retreat was held at the 4-H Camp in

Columbiana, Alabama. Youth from nine counties came to the Tuskegee University campus for a full day Youth Empowerment Summit, offering experiential learning experiences in leadership, public speaking and other subjects to more than 100 youths. Another 56 youth attended the 71st Annual Professional Agricultural Workers Conference at Tuskegee University, where they participated in special sessions on subjects such as agricultural careers. An oratorical preparation workshop entitled "Youth Expressions through Public Speaking" was held to offer specific public speaking techniques and practices to students in grades 6-12.

Results

Students learned how to establish and cultivate vegetable gardens, the nutrition content of different vegetables, and how to prepare vegetables healthily. Many gained an appreciation for agriculture through school gardening and the goat show. Through environmental science exercises, students became more aware of the need to study chemical and biological sciences. Students created hands-on audio and visual displays to promote arts in agriculture, and set up displays for competition and at local fairs, festivals and conferences to depict the importance of agriculture. 4-H campers learned about environmental science, horticulture, animal husbandry, healthy eating habits, keeping physically fit, public speaking, entrepreneurship, the scientific process, leadership skills, eco-art and preparing healthy meals. Students learning public speaking were able to select topics, create graphic organizers, discuss communication weaknesses, practice listening techniques and delivered impromptu speeches.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Program outcomes were affected by economic conditions in the region and competing programmatic challenges, particularly where participants were required to pay registration/enrollment fees. In addition, school systems give priority to "academic" programs in order to catch up under state and federal policies and requirements to show progress, reducing therefore regular access to youth.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Post program evaluations showed that out of the students who participated in the financial management classes, the majority learned how to calculate simple budgets and had improved their math skills, while more that 50% acquired an understanding of business

finance. Of the 42 students who attended classes on Mathematics of Inventory, all of them learned how to calculate profits and losses and acquired knowledge of profit margins. Also, 30 learned the difference between wholesalers and retailers and 22 learned how to calculate percentages for reinvestment. Another group of 54 students participated in the savings and decision making classes and from this group, 45 planned to open a savings account, 54 planned to improve their spending habits, and 18 planned to develop long term saving plans with parents. Overall, follow-up evaluations of the entire group of more than 180 based on random subjects indicated that 51 students practiced budgeting, 88 had improved Math skills, 42 students have opened savings accounts and 59 students have improved their spending habits.

Key Items of Evaluation

Following reports from the Youth Empowerment Summit, its continued implementation as an annual conference will provide an opportunity to motivate and inspire youth in the region to have a positive outlook about their futures. The infusion of the 4-H program template and integrated research-outreach opportunities will remain the primary components of this program area.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Childhood and Family Obesity Prevention

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		30%		
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources		20%		
723	Hazards to Human Health and Safety		20%		
724	Healthy Lifestyle		30%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	5.5	0.0	0.0
Actual Paid	0.0	4.0	0.0	0.0
Actual Volunteer	0.0	12.0	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	341285	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	202520	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Educational activities that were held included workshops, year-round or extended summer programs, one-on-one intervention, in-school and after-school demonstrations and lectures and in-service training meetings for Extension agents and paraprofessionals who will participate in this program. Key program activities were part of the Summer Youth College Program, Summer Health and Fitness Academy, and EFNEP educational sessions. Also with food demonstrations, participants had food recording database; bi-weekly exercise classes; weekly weigh-ins; and support group/counseling.

2. Brief description of the target audience

The target audience will consist of under-served and under-represented youth and adult populations in the twelve Black Belt counties of Alabama.

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	18812	1489	12630	3756

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

- This Program will follow Outcome Evaluation Methods by Green and Kreuter, 1991. This type of evaluation will provide data concerning short-term effects of the program, including increased awareness and knowledge, expressed intentions to make recommended changes, and responses to public service announcements. The measures can be self reported (interviews with the intended audience) in evident changes in the number of people loose weight, and amount of weight lost, change in small steps to improved behavior and healthy lifestyles, etc.

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	The outcome is to prevent obesity in children, young adults, and other members of the families, which will decrease the risk of high blood pressure, diabetes, and heart diseases. The ultimate outcome is the improvement in the quality of life, by incorporating skills and change behavior; increasing the number of people following exercising guidelines (60-minutes, 5 days a week); the percent of participants using food guide pyramids and dietary guidelines will increase; and the percent of participants reporting improved quality of life will increase.

Outcome #1

1. Outcome Measures

The outcome is to prevent obesity in children, young adults, and other members of the families, which will decrease the risk of high blood pressure, diabetes, and heart diseases. The ultimate outcome is the improvement in the quality of life, by incorporating skills and change behavior; increasing the number of people following exercising guidelines (60-minutes, 5 days a week); the percent of participants using food guide pyramids and dietary guidelines will increase; and the percent of participants reporting improved quality of life will increase.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The growing obesity epidemic is a priority concern throughout America. Over thirty percent of the adult and youth populations in the U.S are obese. Alabama's rate is higher at 32 percent. Among the African-American population, it is 40 percent. Almost one out of every five children in Alabama is obese -- not just over weight, but obese. Obesity is causing a large percentage of Alabamians to have serious diseases such as diabetes, heart disease, stroke, and some types of cancer. Just being overweight can also result in social problems such as stigmatization and discrimination. Most of the obesity cases have conclusive links to poor dietary habits and wanting physical inactivity. Areas such the rural Alabama Black Belt counties are experiencing higher rates of obesity and overweight than urban areas. Rural residents tend to eat diets higher in fat and calories, exercise less, and watch more television, all of which can contribute to unhealthy weight gain. Adding to the challenge, rural communities face barriers to address obesity, such as higher poverty levels, less access to facilities, foods, and services that accommodate physical activity and healthy eating, and limited school resources to provide nutrition and physical education.

What has been done

Tuskegee University continues to address childhood and adult obesity and general wellness through several dedicated efforts. Through the community enhanced Head Start/Healthy Start by Kindergarten Program, preschool children learn about healthy eating and exercise habits, while the head start staff and parents are trained to select healthy foods and prepare delicious healthy meals. The week-long Summer Health Fitness Academy for children in grades 5 thru 9 has been expanded into nine counties, and is designed to help children learn and develop healthy diet and exercise habits early in life. Alternative sports such as archery and soccer are being introduced as

active sports to children not attracted to regionally popular sports such as basketball, football and baseball. The Shape Your Life- Steps to Success program has bi-monthly sessions consisting of a series of workshops aimed at empowering individuals to take their lives in their own hands and apply new knowledge and skills to improve their health and the health of their families, one step at a time. Bi-weekly workshops are held at Senior Nutrition sites to show seniors how to improve and maintain good health through long term dietary practices and physical activity; and enjoy nutritional education through group demonstration. Also, an Older Americans Month Program included wellness and resource management workshops, free health screenings as well as physical and social activities. A main objective of the program is for seniors to fit exercise and physical activity into their daily lives.

Results

Head Start teachers are incorporating nutrition education and physical activities into their curricula to address childhood obesity and overweight. Staffs at Head Start centers have changed their menus, ingredients, and cooking practices for more healthy meals. Parents are more conscious of healthy food choices and are including recommended foods in the family diets. Children in grades 5 thru 9 learned how to read and understand food package labels and how to recognize deceitful children-focused food advertisements that contribute to childhood obesity. Over 95 of participants pledged to assist their parents while food shopping to select healthy. All participants pledged to exercise for 60 minutes each day and also to encourage family members to exercise. The introduction of alternative sports enabled more students to engage in active sports. A total of 513 seniors at nutrition sites are eating more fruits and vegetables, drinking more water and consuming low-fat dairy products, and increasing physical activity on a daily basis. Pre- and Post-tests of adults and seniors in health literacy workshops show an over 90 percent improvement in knowledge on how to prepare for and get the most out of visits with health care providers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
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
- Government Regulations
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Program outcomes were affected by economic conditions challenges brought forth by new immigration state policies as evidenced by the number of parents who indicated they could

not afford to be part of government related programs. Participation rates were slightly lower compared to the previous year.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Youth and adult participants who participated in nutrition and health awareness programs have been educated on the importance of diet and exercise in obesity and chronic diseases prevention. Almost all the participants in these programs have indicated an intended willingness to change their behavior by making more healthy food choices, staying active and being healthy. Follow up evaluations indicate that students are still making wise choices with fast food; parents report students are keeping them conscious of the foods they purchase; and students report using less salt and also preparing healthier meals and snacks.

Head Start food "preparers" have also changed the way they prepare and serve foods to children by reducing unnecessary inclusion of sugar, salts and oils in preparation of foods for preschool children. Parents and adult participants have been exposed to and are more conscious of their dietary and physical activity needs and habits. Through personal testimony it has been noted that parents have changed the ingredients that they use to prepare meals. For example, substituting beef with turkey and using olive oil in lieu of butter. Community partnerships have been established in order to provide assistance in promoting and sustaining the program across their individual counties.

Key Items of Evaluation

TUCE continues to focus on promoting healthy nutrition and lifestyles as a way of preventing childhood obesity and cardio-vascular diseases through the EFNEP partnership, CYFAR, extended SHAFA, "Skegee Fit", Senior Olympics and Health Awareness Education Programs.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Community Resources 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
602	Business Management, Finance, and Taxation		25%		
608	Community Resource Planning and Development		25%		
805	Community Institutions, Health, and Social Services		25%		
903	Communication, Education, and Information Delivery		25%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	3.5	0.0	0.0
Actual Paid	0.0	2.5	0.0	0.0
Actual Volunteer	0.0	18.0	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	218423	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	129613	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Extension activities included business and leadership development skills workshops, resource development and proposal writing, business and personal finance planning workshops, one-on-one technical assistance for loan applications and Volunteer Income Tax Assistance (VITA) and personal finance education one-on-one follow up, short-term skills training, and volunteer leadership development in collaboration with other community agencies. The annual Booker T. Washington Economic Development Summit and related Business Pitch Contests were also primary outreach and educational venues for this program area.

2. Brief description of the target audience

The target audiences were start-up entrepreneurs, existing business owners, unemployed from low-income communities, leadership from civic and social community organizations and leadership from faith-based organizations.

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	4951	3227	7113	923

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

- Participants will be trained in leadership skills development, business planning and management, and how to access loans, employment, and other resources.

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Acquisition of jobs skills and actual employment Reduction in personal credit challenges Development business plans Access to personal and business loans

Outcome #1

1. Outcome Measures

Acquisition of jobs skills and actual employment
Reduction in personal credit challenges
Development business plans
Access to personal and business loans

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)

Though recent unemployment data for Alabama is within the relatively modest 5.7 to 6.1 percent range, unemployment in some of Alabama's Black Belt counties is recently reported to be within the 10.1 to 14.2 percent range. Not only are large numbers of people unemployed, but there are large numbers of working poor and other low income families. The working poor makes up more than a third of all working families in Alabama, earning less than 200 percent of the federal poverty level, the most severe numbers existing in the Black Belt counties. This is strongly correlated with historical cycles of poverty, low education levels and skills training opportunities and lack of higher paying manufacturing jobs in these areas. Much of this is the result of Alabama's public policies and the general neglect of declining rural economies. Self-help programs and increased self-employment have been regarded as essential to the improvement of conditions. To implement effective self help programs, it is essential for individuals and organizations to develop tools needed in leadership, entrepreneurship, resource management, and other essential skills.

What has been done

Tuskegee University Cooperative Extension (TUCE) worked with schools and other community organizations to provide training in volunteer leadership development; financial management for families, youth, non-profit organizations and businesses; and business development and youth entrepreneurship. Specific sessions at the 19th Booker T. Washington Economic Development Summit addressed entrepreneurship and business development with counseling workshops and an Elevator Pitch Competition, and addressed leadership development as well. TUCE conducts a County Leadership Series which is a program designed to identify and develop leaders, which involved 148 trainees this year who learned various leadership topics including organizing and grant acquisition processes. The annual Youth Empowerment Summit which is a one-day conference focusing on leadership, entrepreneurship and other topics for more than 100 middle, high school and college students was held again this year. TUCE planned and conducted 10

business development classes with emphases on money management, business development and niche markets. A one-day annual Business Etiquette workshop addressed some of the personal and professional skills that are often overlooked, including proper attire, confident handshakes, table etiquette, and general rules for personal conduct in public and business settings. The annual four-day Alabama Youth Entrepreneur Summer Camp was held again this year, providing thirty students from the Black Belt in grades 8 thru 12 opportunities to learn real-world business skills through interactive curricula and field trips. The annual Homegrown Entrepreneurs Conference event focused on energizing small businesses in rural communities, and featured strong, hands-on learning opportunities for potential and existing business owners. A workshop on Advancing Innovation and Small Business Success was held which centered on start-up issues and the incorporation of technology in businesses. In Macon County, eight workshops were held on entrepreneurship, financial empowerment, and social media in business, in addition to 30 one-on-one business counseling sessions primarily on business planning. Two eight-week programs were conducted for 18 participants targeting family financial management and credit matters, emphasizing preparation for home purchases. TUCE's continued effort through the Wil-Low Dollars for Scholars program supports opportunities for communities to make strong, collective statements about the importance of education beyond high school.

Results

Almost 63 percent of leadership trainees said they had already begun to use the information they received from the workshops. Of those, 60 percent were using it to encourage the community to come together to do something. Twenty percent looked for grant sources online and 20 percent worked with people by harnessing leadership capabilities. TUCE assisted startup businesses involving spring water processing and bottling, development of a low cost biomass gasifier for on-farm energy production, and a fashions design startup. Ten workshop participants have applied for loans through the SBA, Trufund and Accion. Two students chose photography as part-time independent businesses, and two others started working on music productions. Eighteen out of 25 students established saving accounts, and learned how to develop budgets, take sample scenarios of business plans and budgets, and analyze information given to derive cash flow statements. Eleven of fourteen individuals trained in Green Construction Technology obtained employment. People were able to use training to obtain homes and home improvement loans. A TUCE supported community group awarded the 326th scholarship (\$500-\$1000) in its 19th year. As a result of participating in the various camps, tours, workshops and conferences, it is reported that the grades, behavior and positive outlook of participating students have improved.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

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

Program activities were affected by factors such economic conditions in the region and low-asset communities, as well as competing programmatic outreach challenges in the absence of better partnerships or collaborations.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

More than 60 taxpayers who used the free tax assistance program received refunds, at an average of about \$1,200 each. About 80 percent of these taxpayers selected to receive their tax refunds by direct deposit and more than half indicated an intention to save portions of their tax refunds. Two taxpayers were actually referred to a local bank to open new bank accounts in order to be able to receive their refunds by direct deposit.

Also, through its revolving loan and entrepreneurship training program, the Tusk-Mac CDC is still making microloans loans to small businesses for a total of nearly \$120,000 still remaining. Two new businesses were opened in the area over the past year.

Key Items of Evaluation

TUCE has continued to strengthen its efforts in providing small business development and technical assistance programs as a way of promoting community economic development. As much as housing assistance, personal finance management, and job skills development remain key aspects of this program area, additional effort is being geared towards organizational finance and record keeping in order to assist community-based organizations to improve their financial record keeping practices to be able to attract outside funding and expand the services that they offer to the community. Our resource staff has designed and implemented an organizational finance course that follows a step-by-step approach to understanding organizational finance and cash flow systems. Participating organizations that have followed the recommended practices, have reported financial savings for their organization, and have become eligible recipients of grants based on the knowledge and skills provided by this training.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Renewable Resources and 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
104	Protect Soil from Harmful Effects of Natural Elements		20%		
111	Conservation and Efficient Use of Water		20%		
112	Watershed Protection and Management		20%		
131	Alternative Uses of Land		20%		
132	Weather and Climate		10%		
133	Pollution Prevention and Mitigation		10%		
	Total		100%		

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	2.5	0.0	0.0
Actual Paid	0.0	3.5	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
0	300331	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	178218	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The Renewable Resources and Sustainable Energy program activities included private well testing/wellhead protection, and home air quality assessments and energy audits. The activities were also part of youth programs such as the Annual Forestry Camps, Kids-N-Creek camps, Kids Day on the Farm camps and County Annual Water Festivals.

2. Brief description of the target audience

The target audience consisted of youths and adults, rural and urban agriculture clientele with needs in the areas of water quality, energy audits, and other environmental management issues or opportunities.

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	2646	8170	3177	659

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

- Rural well owners and homeowners will be exposed to a set of activities intended to improve the

quality of their private water wells, and the use of energy in their homes, farms and other businesses. Underserved Black Belt area grade school students will be exposed to specific age appropriate educational activities designed to reinforce current classroom instructional curriculums on natural resource management. While targeting the youth, parents, volunteers and community leaders will also be provided necessary instructions in responsible environmental stewardship practices and principles, including information on climate change and sustainable energy.

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-point source pollution, environmental stewardship, management of natural resources and water conservation, as well as climate change and sustainable energy. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides. Awareness will be acquired in climate change and sustainable energy.

Outcome #1

1. Outcome Measures

Youth participants will acquire knowledge, skills and awareness regarding well head protection, point/non-point source pollution, environmental stewardship, management of natural resources and water conservation, as well as climate change and sustainable energy. Adult participants will incorporate skills/knowledge and change behavior related to: pollution prevention, management of water resources, litter disposal and waste management, conservation and recycling of natural resources and safe and effective use of fertilizers and pesticides. Awareness will be acquired in climate change and sustainable energy.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Alabama is blessed with an abundance of natural resources such as forests, freshwater and wildlife. Historical usage of these renewable resources has been sustainable, but continuing pressures on usage in some areas are raising concerns about their management for future sustainability. Much of the concern about sustainable management of Alabama's forestlands focuses on profitability, particularly for smallholders who know little about conservation management programs and profitable marketing. Along with forestry, wildlife management to keep various species in balance is an issue, and so is nuisance species such as feral hogs. Because there is mounting irrigation water usage, there are growing fears about falling water tables in some areas. Fears are also rising regarding contaminated surface and groundwater due to agricultural and general industrial pollution, and about farmers and homeowners whose activities contaminate their own water sources. Energy is the resource that is not produced in significant amounts by home and farm users, and must be almost totally purchased from and at prices determined by utilities and other sources. Continuing increases in costs for electricity, natural gases and other fuels are continuing to raise the cost of living and business and farming overhead costs. There exists some sustainable energy production methods for small groups, individual homes and farms, but these are yet to become popular. Various energy conservation methodologies are also quite well known, but many farms and homes have not implemented them appreciably.

What has been done

The Tuskegee University Cooperative Extension, TUCE, partners with other organizations to conduct workshops, training sessions and other events to address educational needs concerning sustainable management of natural resources and energy conservation. This included a Forestry Workshop in Camden, AL this year that taught nearly 40 landowners the best practices for marketing timber, and how to develop and maintain a sustainable and profitable timber management plan. The annual week long Forestry Camp was held again this year for ninth through twelfth graders who participated in interactive hands-on classes covering subjects such as tree identification, forest products, forest management, wildlife, water quality and urban forestry. This camp exposed teenagers to careers in forestry and natural resources. Also, a workshop was conducted in Midway, AL to expose 22 middle and elementary school students to careers in forestry. A Youth Educational Meeting (Forestry Program for 4th grade students) was held and attended by 196 students and 52 adults (including teachers, instructors, volunteers and presenters). To manage nuisance wildlife such as wild hogs, beavers and coyotes, one-on-one visits were made to more than 20 farms and homes. The second annual Water Festival was held this year, designed to educate 4th grade students about aspects of groundwater and other related natural resources such as surface water, wetlands, forestry and wildlife. Three Farm Energy Audit workshops were held this year with a participation of from 18 to 48 farmers who learned how energy audits can cut the energy costs on their farms.

Results

Farmers who attended the Small Farmer Area Work Conference indicated that information received on nuisance wildlife control enabled them to apply for assistance to control nuisance wildlife, and assisted several landowners to establish spring and winter food plots to increase wildlife habitation. Several landowners indicated they would be seeking advice from a Consulting Forester in order to improve forestry operations. Over the eighteen years since the annual Forest Camp was established, former campers continue going to college and major in environmental science and natural resources as well as enter distinguished careers locally, statewide and nationally. Each Energy Audit Workshop had participation ranging from 16 to 48 farmers whose learning resulted in nine having farm energy audits completed. In turn, farm energy audits have allowed some of the farmers to implement renewable energy technology systems such as solar energy systems and energy efficient improvements to their farm homes, farm buildings and farm equipment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
131	Alternative Uses of Land
132	Weather and Climate
133	Pollution Prevention and Mitigation

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

Brief Explanation

Teachers and group leaders of students who attended the water festivals and other youth education workshops indicated that most of the students increased their knowledge on the discussed topics. More than 70 percent of students this year increased knowledge of forestry information through participation in the outdoor class learning activity. Eight property owners were also assisted with one-on-one visits to provide assistance on managing and controlling nuisance wildlife such as wild hogs, beavers, and coyotes for landowners, hunters, and the general public.

A number of energy audits, site evaluations, and renewable energy workshops were conducted throughout the state of Alabama, including three workshops on the economic benefits of bio-energy, and six energy audits, site evaluations and feasibility studies.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Teachers and group leaders of students who attended the water festivals and other youth education workshops indicated that most of the students increased their knowledge on the discussed topics. More than 75% of students increased knowledge of forestry information through participation in the outdoor class learning activity. Ten property owners were also assisted with one-on-one visits to provide assistance on managing and controlling nuisance wildlife such as wild hogs, beavers, and coyotes for landowners, hunters, and the general public.

A number of energy audits, site evaluations, and renewable energy workshops have been conducted throughout the state of Alabama including six workshops on the economic benefits of bio-energy, and 12 energy audits, site evaluations and feasibility studies.

Key Items of Evaluation

As much as efforts in forestry and other natural resources management education continue, more emphasis is being laid on renewable energy and energy audit education, water quality education and environmental protection for youth and adults.

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.