V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Global Food Security and Hunger

☑ 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%		10%
205	Plant Management Systems		20%		20%
301	Reproductive Performance of Animals		10%		10%
302	Nutrient Utilization in Animals		20%		20%
307	Animal Management Systems		30%		30%
313	Internal Parasites in Animals		5%		5%
601	Economics of Agricultural Production and Farm Management		5%		5%
	Total		100%		100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	7.0	0.0	20.0
Actual Paid Professional	0.0	8.0	0.0	16.4
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	257669	0	792355
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	218990	0	658093
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	15087

V(D). Planned Program (Activity)

1. Brief description of the Activity

1. Conducted research and experiments using cattle, goats, swine, poultry, vegetables, pasture, forage, and other plants.
2. Continued to maintain facilities, modernize facilities and acquire adequate land for research and extension programs.
3.Conducted workshops, demonstrations, training sessions, and field days for farmers especially small and limited resource producers and encouraged client and potential client participation.
4. Delivered services to producers and potential producers. Conducted assessment; work with media to disseminated important information to clients and stakeholders.
5. Conducted farm and site visits to work with individual (or group of) clients .
6. Collaborated, cooperated and partnered with local, state and federal agencies, institutions, groups, private organizations/associations in seeking and delivering services to citizens and worked to elimnate hunger in the population.
7. Continued to create and enhance marketing opportunities in traditional and alternative outlets, such as farmer's markets, community supported agriculture (CSA), and other outlets.
8. Provided nutrition and healthy lifestyle education to citizens.

2. Brief description of the target audience

Our target audience includes (but is not limited to) , small producers, limited resource producers, socially and economically disadvantaged individuals, the underrepresented, the underserved, women, and minorities. Others are youth 13 - 18 years, policy makers, community leaders/stakeholders, interested agencies and organizations.

3. How was eXtension used?

Clients who had urgent questions concerning areas that the SU Ag Center does not have experts on board such as, horse, aquatic products, etc. were often referred to eXtension for answers to such questions.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	16391	68887	0	0

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

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	2	6	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- 1. Number of educational program activities

Year	Actual
2013	255

Output #2

Output Measure

- 2. Number of educational contacts

Year	Actual
2013	85278

Output #3

Output Measure

- 3. Number of published materials distributed

Year	Actual
2013	17017

Output #4

Output Measure

- 4. Number of research & extension outreach publications developed (in-house)

Year	Actual
2013	40

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	1. Percent of clients who gained new knowledge/skills, awareness and/or changed attitudes
2	NATIONAL Outcome #1: Enhanced capacity of a sustainable global food system including new/improved plans, animals, technologies and management systems
3	NATIONAL OUTCOME #2: More sustainable, diverse, and resilient food systems across scales.
4	NATIONAL OUTCOME #3: Improved national and global capacity to meet growing food demands.

Outcome #1

1. Outcome Measures

1. Percent of clients who gained new knowledge/skills, awareness and/or changed attitudes

2. Associated Institution Types

- 1890 Extension
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Small-scale producers faced tough economic times due to challenges of rising input costs coupled with unstable prices of food and the resulting problem of generating sufficient income and being profitable. Small agricultural producers who adopt alternative livestock and crop enterprises such as, goats, rabbits, vegetables, fruits, and herbs can earn profit while addressing global food security and hunger issues. According to USDA/ERS, about 50.1 million people (in 20.6% of US households with children) lived in food insecure households in 2011; about 33 million adults (14.4 percent of all adults) and 17 million children (22.5 percent of all children). Louisiana was ranked at number 45 in food insecurity with about 12 percent of its citizens living in food insecure households. Working to ensure sustainable animal and plant productivity and profitability are of paramount importance to the agricultural sector of Louisiana. Addressing these close knit and perennial problems through research in alternative crops could benefit the farmers, consumers, and governments worldwide.

What has been done
Faculty and staff received one research grant each in FY 2012 and FY 2013 for additional funding to implement projects in sustainable agriculture focusing on alternative crops. The grants were for $500,000 each. The first grant studied alternative uses of Roselle Hibiscus as small farm and niche market crop and the second grant studied specialty mushroom as a niche market crop for limited resource small family farms. NIFA Formula Grants were used to fund other research projects in the areas of grazing cattle and goat together to improve yield, utilization of alternative fertilizer (burnt corn gluten) on field crops. In FY 2013, nine sustainable agriculture field days were conducted with over 304 producers in attendance. Two goat field days were conducted in collaboration with LSU Veterinary School with 153 producers and potential producers in attendance.
A new initiative called WISTERIA Alliance has been started to provide practical hands on training

for women who live on farms, and those with interest in starting a farm, and/or urban & community gardeners.
Research-based educational information was packaged and disseminated through extension agents to the clients. Farm visits were conducted by research and extension personnel to advise clients and sometimes provide "on the spot" solutions to problems they may have.

Results
-Ninety-three percent of participants in the sustainable agriculture goat field days stated that they gained new knowledge and skills;
-89 percent said they will certainly utilize knowledge and skills gained.
-The participants also gained knowledge/skills about the benefits of the FAMACHA chart. They used the chart and saved money in goat health care costs.
-Fifty farmers are actively growing hibiscus, making hibiscus-related products such as, tea, jelly, jam, and cookies and selling them in the local farmers' market.
-with the assistance of faculty and staff, one 972 acre farm transitioning to organic production has adopted burnt corn gluten meal in their fertilizer program due to the abundance and low cost.
-WISTERIA Alliance provided practical hands on training for women to enhance their farming and gardening skills.
- Faculty and staff wrote two research grants for additional funding in FY 2012 & 2013 to implement sustainable agriculture projects which were funded for $1,000,000.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
307	Animal Management Systems
313	Internal Parasites in Animals

Outcome #2

1. Outcome Measures

NATIONAL Outcome #1: Enhanced capacity of a sustainable global food system including new/improved plans, animals, technologies and management systems

2. Associated Institution Types

- 1890 Extension
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Parasite infestation is one of the biggest threats to the small ruminant producers in the southeastern region of the US. Damage to the goat occurs when the parasites attach to the lining of the gastrointestinal tract and ingest blood. Parasites cause diseases when they are present in large numbers or when the host animal is weakened by another disease or poor nutrition. If the parasites are present in large numbers, they can cause anemia due to blood loss, along with weight loss, poor growth, and maybe, sudden death. According to USDA/NASS Sheep and Goat Death Loss 2010 report, goat farmers in the US lost 255,000 heads (or 46%) of the total deaths to diseases and other known causes. These numbers can be reduced if producers could employ a proactive approach to examining the health of their animals, and especially monitor & prevent them from parasites.

What has been done
To help local producers tackle this issue, in FY 2013, the SU Ag Center in collaboration with the Louisiana Goat Producers Association hosted three goat field days and an animal clinic for ruminant producers. At the clinic (which lasted seven hours), farmers learned how to test fecal samples collected from their farms for parasites; and also how to identify and count the parasites present. Producers were instructed on how to collect, store and encouraged to bring at least six samples each from cattle, goat and sheep. They also came with a list of de-wormers used on their farms. Another instruction was to keep samples separate and properly labeled. Twelve goat producers and five potential producers attended the hands on clinic. They processed the samples and examined them under powerful microscopes to identify and count the parasites and also used FAMACHA Scores chart to examine their goats.

Results
The hands-on Animal Clinic was a great experience for the farmers as they were able to conduct the hands-on fecal analyses and parasite count for themselves and save money. In the FY 2013 animal clinic, producers saved about $1,000 (value of what they would have paid to analyze their samples, and another $800 that they would have paid to consultants. Additionally, the analytical laboratory continued to assist producers in analyzing samples. We estimate that producers may have saved $25,000 in treatment costs and another $120,000 in income due to reduced loss of animals.
A survey of participants indicated as follows:
100% said they would recommend the animal clinic to others.
100% said that Knowledge & skills gained at the clinic would be useful to them in dealing with animal disease issues.
100% indicated that materials provided at the clinic would be useful to them.

Some comments from the participants were as follows:
-"Gave me confidence to want to purchase my own microscope, I plan to get a microscope, etc. to do my own testing."
-"I Gained knowledge, skills and abilities; my knowledge & skills will be useful and shared with the groups of socio-economically disadvantaged farmers & ranchers for their herds."

-This is "a wonderful process, very educational, hands-on and beneficial, please keep me on your email list for future goat events"
-"Very practical & useful information."
-"Very well done, I like the hands-on part very much."

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
307	Animal Management Systems
313	Internal Parasites in Animals
601	Economics of Agricultural Production and Farm Management

Outcome #3

1. Outcome Measures

NATIONAL OUTCOME #2: More sustainable, diverse, and resilient food systems across scales.

2. Associated Institution Types

- 1890 Extension
- 1890 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Formal training and instruction in leadership development is a crucial skill which had not been offered to small, limited resource agricultural producers in the state of Louisiana (and possibly in the country). Economic crisis over the past decade, especially the high cost of farm inputs during FY 2013 made it difficult for producers to compete and remain profitable. The existence of many small farmers is in serious jeopardy as they are debt-ridden and are in the verge of being bankrupt. The Small Farmer Agricultural Leadership Training Institute at Southern University Agricultural Research & Extension Center was designed to address these needs with the goal of promoting small & family farm sustainability, survival and profitability through enhanced decision making skills and leadership development. The goal was to help farmers become better leaders

while enhancing their overall farm management skills.

What has been done

In FY 2013, we conducted the third annual Louisiana Small Farmers conference to provide information to farmers by experts about the latest educational tools and resources which they can use to improve productivity and sustainability of their agricultural enterprises. About 45 producers participated in the 3-day conference and gained knowledge and skills on Record Keeping and Other Strategies to Create Profitable Enterprises; Estate Planning; Healthy Soils: The Foundation to All Farming; Marketing Strategies and Techniques; Diversifying your Farm Operation; Grant writing; and Round Table Discussion with USDA Panel Discussion: FSA, NRCS, NASS, RD

In addition, seven 4-day intensive training workshops (lasting over 8 hours each day) and tours were held from October 2012 until March 2013 in six states (Louisiana, Texas, North Carolina, Atlanta, South Carolina, and Alabama) with 33 participants in each session. Topics discussed were: Developing the Leader Within, Planning the Business and the Team, Agricultural Legal Issues and Risks, Taking it to the Next Level, Agricultural Opportunities Unlimited (Summer Tour featuring Urban Agriculture), Civic Engagement, The Agricultural Professional, and Promoting the Business. Participants attended and experienced the 69th Professional Agricultural Workers Conference (PAWC), Tuskegee University, Alabama. They also participated at the Graduation Ceremony in Washington, DC hosted by USDA. In addition, participants had opportunity to interact and network with their peers from six states, research scientists, extension specialists, and legal scholars from six universities and agricultural professionals from the USDA.

Results

Several current participants (and former participants) are already assuming leadership roles indicating change in their conditions as follows:

-One participant from Richland Parish used knowledge gained to obtain NRCS EQIP program and others. More than half of his 400 acre farm was precision leveled. This one practice increased his wheat yield two-fold and his income by $100,000 annually.

-The 2014 Aetna's African American History Calendar spotlights one Leadership Institute graduate in the month of March. The calendar entitled ?Community transformations: African Americans creating sustainable neighborhoods? encourages healthy living. Aetna is a member of the Fortune 100. The calendar is available online at www.aetnaafricanamericanhistorycalendar.com

-One graduate developed a website to publicize and market her products at: http://backyardgardenersnetwork.org/

-A member of the class who had never served on any type of governmental committee was appointed to serve on the Advisory Committee on Animal Health by USDA Secretary, Tom Vilsack. The committee is composed of 20 individuals who advise the Secretary on strategies, policies and programs that prevent, control, or eradicate diseases of national significance.

-Two other participants were appointed by Secretary Vilsack to serve on the Advisory Committee on Beginning Farmers and Ranchers. The Committee advises the Secretary on ways to develop programs to provide coordinated assistance to beginning farmers and ranchers while maximizing new farming and ranching opportunities.

-Two participants were awarded research and development grants to test new and emerging agricultural markets, alternative enterprises and new technologies such as hydroponics.

-Two participants opened retail stores to market fresh food to their local communities.

-Several participants have been recruited, invited and selected to serve as a grant reviewers for the competitive USDA grant programs.

A survey of participants showed the following: 100 percent of participants said they gained new knowledge and skills; 100 percent indicated that new knowledge and skills gained will be very useful; and 100 percent indicated that they will definitely use new knowledge and skills gained.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management

Outcome #4

1. Outcome Measures

NATIONAL OUTCOME #3: Improved national and global capacity to meet growing food demands.

2. Associated Institution Types

- 1890 Extension
- 1890 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
{No Data Entered}

What has been done
{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
307	Animal Management Systems
313	Internal Parasites in Animals
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

Ongoing economic struggle caused serious setback on the availability of funds. In FY 2013, state appropriations were increased for the first time in almost six years. Federal Sequestration caused reduction in appropriations thus resulting in budget problems. Government priority changes caused the relocation of some program participants resulting in decline in number of citizens impacted. Additionally, Louisiana rural population continued to lag behind other 1890 states which resulted in the SU Ag Center receiving less federal formula funds. Furthermore, the continuing recovery from previous hurricanes (2005 and 2008) and the 2010 oil spill caused problems in the state and impacted outcomes.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

- 53 percent of participants in our programs are ready to adopt new techniques.
- Despite the number of communication technologies available, over 70 percent of farmers and producers still prefer face-to-face form of communication.
- Participants in the Leadership Institute agreed that peer training is an added asset to understanding new cultural practices.

- WISTERIA Alliance (Women in Agriculture) indicated they can perform tasks better when taught by women.

Key Items of Evaluation