2011 Fort Valley State University and University of Georgia Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

This executive summary will provide background information regarding the state of Georgia and the development of Georgia Report of Accomplishments. This summary will provide background data for the state and universities, program highlights, examples of specific collaborative efforts between UGA and FVSU and brief summaries for each of the nineteen planned programs.

BACKGROUND

Fort Valley State University and The University of Georgia address major agricultural issues as well as many other problems facing rural and urban areas, the environment, families and youth. This Accomplishment Report represents the coordinated effort between the state's 1890 and 1862 institutions-Fort Valley State University (FVSU) and the University of Georgia (UGA), and includes joint planning between Experiment Stations and Extension units at both universities.

Georgia, one of the original thirteen colonies, has a land area of 57,919 square miles, which makes it the largest state east of the Mississippi River (24th overall). The total area of the state's three largest counties - Ware, Burke, and Clinch (2,565 square miles) - is greater than the area of the entire state of Delaware (2,489 square miles). Georgia falls within five major physiographic regions: the Blue Ridge Mountains in the northeast, the Ridge and Valley Province and the Cumberland Plateau in the northwest, the Piedmont across Georgia's center, and the Coastal Plain in the south. Elevations range from sea level to 4,784 feet at Brasstown Bald in the Blue Ridge Mountains.

Georgia's 2009 population was 9,829,211. The 2009 population listed in the 2011 Georgia County Guide reported 26.3% of Georgians were age 19 or younger and 10.3% of the state's population were 65 or older. Georgian's of white decent accounted for 65% of Georgians, 30.2% were of African American descent, 8.3% were of Hispanic descent. From 2000 to 2008 there was a substantial increase in the Hispanic/Latino descent from 5.3% in 2000 to 8% in 2008, yet remaining level to date.

The Georgia Extension Service has 167 offices in 157 of Georgia's 159 counties. FVSU and UGA county personnel are housed jointly in county offices. Extension programming is delivered as both individual county effort and as multi-county programming. State faculty members also deliver programming directly to clientele when appropriate. The research programs of FVSU and UGA are conducted through the Agricultural Experiment Stations system. In addition to Georgia's four main campuses located in Athens, Fort Valley, Tifton and Griffin, Georgia utilizes several research and education centers located strategically throughout the state. This joint Accomplishment Report was developed around core programs and targeted issues. The programming directions of core programs and the identification of targeted issues are decided under a structured program development system. The Georgia program development model is a multiple step process that is operational every year. The model includes a process for assessing needs and identifying problems. It also includes program evaluation to determine impact. The Georgia program development model works in unison with multiple advisory systems at both county and state levels.

The Georgia Federal Plan of Work does not attempt to capture all of the work of the colleges' faculty

members. It is intended to document the plans and actions of the faculty members receiving specific formula funds. The majority of these dollars are used to fund core programs at the state level. These core programs range from the traditional animal and plant production to the emerging issue of biofuels. The goals of these programs are to demonstrate short and long -term impact. However, the greatest impacts of these core programs are the foundations created to support and leverage additional resources beyond state matching funds.

HIGHLIGHTS

Georgia is involved in many significant programs that positively impact the citizens of the state, the economy, the business arena and the environment. Just a few examples of both small and large programming will be highlighted here.

Food Safety:

Chatham County Cooperative Extension programs in food preservation, food safety and fresh fruit and vegetable gardens have taught urban consumers best practices for a safe food supply. The Forsyth Farmers' Market and area farmer markets continue to be launched. The Family and Consumer Sciences agent established a network of supporters through the local Healthy Savannah Initiative and Food Policy Council to seek grant support for the food preservation program for 2011. A $1,200 grant from Ball Corporation provided products and equipment in addition to the funds. Another $500 grant provided the agent with the opportunity to provide 10 workshops and additional programs to reach more than 500 urban consumers throughout a multi-county area. The So Easy to Preserve Publication Series from UGA Cooperative Extension was provided to participants at workshops at the Forsyth Farmers' Market during multiple sessions on Saturdays with a different type of food preservation featured based on the growing season and produce available for sale at the market. Master Gardeners planted a demonstration veggie garden and the agent used produce in food demonstration workshops to teach food preservation. Agents documented an increase of more than 75 percent increase of new urban consumers learning about UGA Cooperative Extension through this educational program delivery. Agriculture classes in the local public schools have not been offered for more than 30 years. The AG/Science Pathway has secured a $75,000 grant to develop the program to engage the next generation of students in agriculture. The AG/Science Pathway is working with the Family and Consumer Sciences Pathway program to continue bridging the principles of agriculture with a safe food supply through food preservation in the Culinary Arts Program.

All fresh produce has the risk of bacterial contamination. In addition to demand produce packers and processors to provide safe produce, consumers are also looking for ways they can use at home to help ensure produce is safe. Electrolyzed oxidizing water developed by a CAES researcher is produced through electrolysis of a dilute salt solution and is effective in eliminating foodborne risks in fruits and vegetables. Small and low-cost EO water and ozonated water generators are now commercially available and for home. The research shows the potential of multiple home washing technologies to remove bacterial pathogens on produce with different surface morphologies. These results give consumers scientific evidence behind these technologies, and will help the consumer select produce-washing methods for home use. An educational video was produced to educate consumers based on research findings and has been uploaded to YouTube (http://www.youtube.com/watch?v=xCk2KYj2v1o).

Plant Production and Protection:

Blueberries passed peaches as Georgia's top moneymaking fruit a few years ago, worth more than $100 million on the farm annually. But new diseases -- necrotic ring blotch disorder and bacterial leaf scorch -- threaten the popular berry. Right now, there are no chemicals confirmed to control these diseases. UGA plant pathologists helped identify blueberry varieties that are resistant to the diseases and can prevent total crop losses. They are also working with scientists at the University of Florida to identify screening methods for plants in greenhouses and the field.

Managing Water, Energy, Waste and Air Quality in Agriculture:

One on-going project aims to protect Georgia's water resources in the major poultry producing regions of the state, while increasing farm income and developing on-farm bioenergy. Engineers found that screening separated litter into two products ideally suited for energy production and fertilizer. Pyroylsis was used to convert the course fraction into heat energy, a bio-oil that could be used for fuel, and char. While the bio-oil was not ideally suited for transportation fuels, it could be burned on-farm or used as a feedstock for other processes. The char could be used as a soil amendment to sequester carbon and improve soil properties or co-fired with coal to reduce atmospheric emissions in energy generation. The fine fraction was pelleted using both char and bio-oil as binders and shown to be a very good source of soil nutrients. Several bioenergy companies are using these concepts to implement other energy technologies. While it is too early to claim results in terms of cleaner water, the developments in this research are yielding advances in producing value-added products from poultry litter and will help farmers and industry in supplying sustainable uses and income from poultry production by-products.

Biofuel feedstocks are increasingly expensive due to competition from foreign markets and the relatively high demand for their use as feed additives. Both processors and fuel producers are concerned with keeping these resources within the US and Georgia to profitably reduce our dependence on foreign oil resources. UGA biological and agricultural engineers identified targeted food processing operations by the quality and composition of their byproduct streams. Fuel producers were identified through existing relationships with UGA Faculty of Engineering Outreach. Byproducts from the processing side provide high-quality, low-cost feedstocks for biofuel producers while processors receive a higher price and guaranteed market for their byproducts. By connecting these two industries, profitability of both increases. Processors see increased revenues for their waste streams. Fuel producers are able to obtain a reliable source of unadulterated feedstock to produce biofuels. The result is the capture of all revenues in the value stream within the state of Georgia. Through established systems, these revenues are often lost to foreign countries. It is predicted 1 million gallons of fuel will be produced through these relationships, resulting in $3 million in revenue that would otherwise be lost to foreign competitors.

Urban Agriculture:

Urban Agriculture programming reported over 4,000 direct contacts and over 400,000 indirect contacts due to the direct result of faculty receiving federal funds. These federal funded positions, in turn, provided further impact to the community through faculty, staff and volunteers not receiving federal funds. This county level programming resulted in over 270,000 additional direct extension contacts in the area of ANR programming for urban audiences. Georgia has 70 counties that are considered metropolitan according to the UGA CAES Center for Urban Agriculture. Over 2,500 Master Gardeners volunteer their time across the state each year, contributing more than 100,000 hours of volunteer service. This translates to over $1.5 million in service donated annually by volunteers. [From CAES Encounter, Discover, Grow marketing piece]

Housing and the Near Environment:

Faculty associated with federal funds reported over 400 direct contacts and almost 200 indirect contacts. These federal funded positions, in turn, provided further impact to the community through faculty, staff and volunteers not receiving federal funds. This county level programming resulted in 60,694 additional direct extension contacts in the area of housing programming for the residents of Georgia.

A series of homebuyer education workshops were offered throughout the year. The program is intended to raise awareness of assistance that is available for homeownership needs. In addition to these periodic workshops a statewide housing conference is held once a year. The intended audience for the statewide housing conference is other housing professionals in the field. These professionals learn about current rural housing needs, financial resources, and technical resources available for them to use with their clientele. State faculty also created training materials for county agents to use in their communities. A

few example topics for training materials are: home buying, home maintenance, indoor air quality, managing water and utility education. The downward turn in the economy has created an increased demand for this type of programming as clients are concerned about predatory lenders, loan defaults, saving money, and maintaining a healthy home.

Chronic Disease Prevention / Healthy Lifestyles:

Two UGA scientists introduced the world to pigs induced with pluripotent stem cells that may prove to eliminate reproductive failure. The pigs hold promise for improved human medical treatments and better breeding success for livestock producers. Obesity is a serious concern for many Georgians that leads to a host of chronic diseases including diabetes, hypertension, arthritis, asthma, cancer and heart disease. UGA Extension introduced an on-line fitness program to motivate people to become more active and learn more about Georgia's agricultural products, history and geography as they virtually walk across the state. During the eight-week program offered twice each year, almost 4,000 Georgians walked over 600,000 miles. The average participant dropped nine pounds during the session.

From children to adults, Georgians across the state are working toward a healthier lifestyle with the help of a University of Georgia Cooperative Extension fitness program called Walk Georgia. Since the program began in 2008, 20,000 participants have logged more than 2.2 million "virtual" miles of physical activity. Students at Vickery Creek Elementary School in Cumming, Ga., have been anticipating the 2011 spring session since last fall, when teachers formed several teams and hung large colorful posters in the hallways to track their progress. According to school nurse Ann Moore, this sparked interest from more students to get involved this spring. The 8-week program is a free service designed to get Georgia residents moving by tracking physical activities. Participants virtually walk across the state and learn interesting facts about the counties as they log their activity online. Vickery Creek students "have been eager to learn historical facts about each county and have been sharing this information on the school's morning news," Moore said. Georgians can register individually or form teams of up to four members. By participating as a community, the program becomes more competitive as members of the team challenge each other to get fit. Anyone who has access to a computer can join. "The program has encouraged our children to establish healthier lifestyles and has given them the incentive to try to maintain these good habits," Moore said.

EXAMPLES OF COLLABORATIVE EFFORTS

AQUACULTURE:

Each year FVSU hosts four to six aquaculture workshops at FVSU at the GCAD with the participation of University of Georgia. University of Georgia faculty provide presentations pertinent to workshop topics. Each workshop is followed by a tour of the aquaculture greenhouse facilities. FVSU also collaborates with the University of Georgia and Auburn University at the Tri-State Aquaculture booth at the SunBelt Agricultural Expo in Moultrie each year. This event represents contact with over 6,000 participants who either taste catfish and or gain information about aquaculture.

MEAT AND DAIRY GOAT PRODUCTION AND PROCESSING:

FVSU and UGA worked together to launch a state youth market goat show and record book program. FVSU brought to the table years of experience in leading such programs. Participation for the youth show continues to increase at the rate of about 25% per year ...making this the fastest growing youth livestock program in Georgia. There is on-going collaboration between UGA Extension county agents and FVSU small ruminant specialists. County meetings, in-service and district agent training, and contacts via phone and e-mail on technical issues and problem-solving are all examples of collaborative efforts where faculty work together to meet the needs of the state clientele.

ANIMAL PRODUCTION AND PROTECTION:

Several UGA faculty serve on FVSU animal and food science Master's program graduate committees and participate in research implementation and final review. Collaboration has contributed to

the success in classroom as guest lecturer opportunities are provided.

GENERAL PROGRAMMING:

Bringing the resources of both universities to the table during joint participation in monthly ANR Extension Coordination meetings, planning, and information exchange provides opportunities to build a strong program for Georgia clientele.

PLANNED PROGRAM SUMMARIES

There are ten planned programs for FVSU and UGA. Below is a brief summary of each planned program.

1. Childhood Obesity

This planned program has a major research and extension component to address human nutrition and health. Extension Specialists will train agents to provide training to adults and youth on nutrition and lifestyle choices. Specialists will also develop curricula, print media and on-line consumer resources, and program evaluations.

Specifically, faculty will develop in-school curricula on Nutrition and Physical Activity education to stimulate behavior changes among youth. The Food Product Development Learning Experience will focus on the benefits of healthy and safe food choices. A statewide, high school conference and 4-H Summer Camp Healthy Lifestyle classes will be conducted using healthy lifestyle curriculum.

2. Climate Change

This planned program is designed to provide leadership in research, teaching, and extension activities related to (a) managing water, energy, and waste; (b) plant production and protection (c) poultry production; and (d) urban agriculture and sustainability.

3. Consumer Economics and Financial Literacy

In this program, specialists will disseminate personal financial literacy fact sheets, provide personal financial management education classes to agents and select clientele, and provide information to be disseminated by agents to media outlets. Faculty will also develop a long range plan for early intervention in financial literacy and consumer education in targeted areas throughout Georgia.

4. Food Safety

This plan will address food safety by providing research and education related to (a) food processing, protection, and safety; (b) plant production; and (c) animal production and protection.

5. Global Food Security and Hunger

This planned program will serve to provide education and research to areas of (a) animal production industry and proper management, nutrition, and health; (b) agriculture and food defense; (c) aquaculture; (d) meat and dairy goat production; (e) plant production and protection; and (f) sustainability.

6. Sustainable Energy

The development of an integrated biorefinery industry in Georgia will stimulate our rural economies, sustain our core forest and agriculture industries, increase our tax revenues, improve our environment, and contribute to addressing the critical problem of global warming. Thus, the State of Georgia has begun investing in Research, Development, Outreach, and Technology Transfer through the University of Georgia that is providing statewide leadership required to develop and implement this biorefinery industry. Research projects will be developed and conducted to improve on existing technologies and identify new and emerging technologies. New markets will be established for biomass resources. New fuels for transportation will be developed along with new bio-based products.

7. Housing and the Near Environment

In this program, faculty will develop and disseminate information on indoor air quality, water quality, waste management and energy management. This program will also include a homebuyer education program, which will teach how to transition from a renter, how to buy a home and how to keep a safe, healthy home environment. Faculty will also develop training and educational materials for non-federally funded agents to utilize with clients in their communities.

8. Technology Education for Seniors

In this program, surveys will be conducted in each of the six identified counties to assess the true needs for Information Technology training. Curriculum based on the clientele needs will be developed. Low intensity training classes will be offered in each county, to include: "Introduction to Computers," "Introduction to the Internet," "Introduction to Email," "Introduction to MS Word" and others as the needs assessment dictate. This hands-on training will be enhanced by follow-up training via email.

9. Urban Agriculture

This program will focus on issues related to urban agriculture, including, but not limited to: breeding programs that incorporate variability derived from interspecific hybrids to greatly enhance the genetic pool from which new cultivars can be developed; water conservation technology and training; turf disease identification and management; development of new cost estimating and job bidding software for landscape installation; Master Gardner programs.

10. Youth Life Skill Development

This program will focus on issues related to 4H and youth life skill development. 4H faculty members will develop curriculum, train and support county extension agents to conduct monthly educational programs for in-school club meetings around the state. They will develop and support educational opportunities including individual learning projects and clubs and summer camping programs. This program will also conduct a Georgia Youth Summit, which will bring youth and adults together to discuss and train on local issues effecting their communities. The Operation Military Kids Team will be created to meet the needs of suddenly military youth and families. A large part of this program will fund specialists and their direct efforts primarily to county agents. These agents will then disseminate this information of youth in their county.

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Parts of this summary were taken from the UGA Research and Extension can be found at "Making an Impact: Hot Topics" further details and other articles can be found at the following web address - http://www.caes.uga.edu/about/hottopics/index.html and Georgia FACES found at http://georgiafaces.caes.uga.edu/index.cfm

Total Actual Amount of professional FTEs/SYs for this State

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	98.8	6.5	58.6	13.5
Actual	93.5	7.8	43.6	13.5

II. Merit Review Process

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

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

2. Brief Explanation

Both universities incorporated the items above in their merit review processes. A program development team meets four times per year to review plans of work and redirect resources as needed. All research projects conducted during this year were peer reviewed by both internal and external reviewers. In addition, greater than twenty percent of approved research projects are also associated with multistate/integrated projects which undergo an extensive review by the Southern Association of Agricultural Experimental Station Directors.

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
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey specifically with non-traditional groups

Brief explanation.

After visiting with local advisory committees, county agents provide data directly to state specialists through listening group meetings which are conducted annually and by individual department for a total of a dozen or more meetings. The data from these agent/specialist sessions is then analyzed by the state program development team and recommendations are made for next year's programming. County agents also use input from advisory committees to plan, execute, evaluate and communicate programming at the local level.

Currently, the UGA College of Agriculture is undergoing a comprehensive strategic planning process intended to gather information from stakeholder that will shape the future of CAES work. Further details can be found at http://caesplan.caes.uga.edu/minutes.html

FY2010 was unique in that a thorough "Review of County Operations" was conducted for the 1862 Extension program. The data collected from this review continues to be used in programming decision making. A complete report is located at http://www.caes.uga.edu/intranet/coextopr/review/documents/UGAExRevCoOpsPublic-FINAL.pdf. Both internal and external stakeholders were given the opportunity to provide feedback through electronic surveys, small listening groups, large listening groups, and organizational level input.

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
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

Statewide stakeholders and potential collaborators were identified by faculty and recommendations were made to the Dean for statewide advisory committees. The counties used a structured identification process to select a diverse advisory committee at the local level, to include representatives of both traditional and non-traditional stakeholder groups. The majority of counties reassessed and rotated their advisory committee membership this year.

External review teams have also provided suggestions as to new classifications of stakeholders, especially in regard to "departmental" advisory committees. The most dramatic changes in the research programs of the College occur when new faculty are hired. Departmental advisory committees help prioritize the needs of the stakeholders. Stakeholder input is also sought by members of search and screen committees prior to selecting candidates to interview and prior to the final recommendation.

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

1. Methods for collecting Stakeholder Input

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

Brief explanation.

Individual county level advisory program specific committees met at least four times during the year. At the 4-H state departmental level, one youth development programing survey was conducted to collect county input. The statewide college level advisory committee met two times during the year. Through the Archway Partnership, individuals from the general public were invited to participate in needs assessment and use for both Cooperative Extension and VP Public Service & Outreach (VPPSO) programming.

3. A statement of how the input will be considered

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

Brief explanation.

All input was channeled to college administration. Administration used this data as needed to make budgetary decisions. All vacant positions, in all departments, are brought to the college level administration for evaluation based on the criteria generated from stakeholder input before a decision is made to refill a position. Positions may be redirected as needed. The Dean solicits input from all faculty, staff and stakeholders prior to making hiring decisions on major administration positions.

Brief Explanation of what you learned from your Stakeholders

· Research efforts of the College must be balanced to both meet the needs of stakeholders, communities and the economic and environmental sustainability of the state.

· National reputation is important provided the local needs are being addressed.

· Stakeholders are seeking a greater partnership with the College and are willing to contribute their time, talent and resources to build the overall College. Most are placing the long term survival and enhancement of the College above the needs of their particular operation, organization or community. They want to be part of the solution knowing that as the total College becomes stronger, all segments of our stakeholders will benefit.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
7831287	2523413	6014463	3004511

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	7931126	2523414	6014462	3004511
Actual Matching	7931126	2523414	6014462	3004511
Actual All Other	0	0	0	0
Total Actual Expended	15862252	5046828	12028924	6009022

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

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Childhood Obesity

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	0%	0%	10%	0%
305	Animal Physiological Processes	0%	0%	80%	0%
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	0%	0%	10%	0%
703	Nutrition Education and Behavior	32%	50%	0%	0%
724	Healthy Lifestyle	17%	50%	0%	0%
802	Human Development and Family Well-Being	33%	0%	0%	0%
806	Youth Development	18%	0%	0%	0%
	Total	100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	5.1	3.0	3.7	0.0
Actual Paid Professional	10.1	2.0	1.1	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**
854305	700948	145488	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
854305	700948	145488	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

Walk-a-Weigh Program, our weight control program was updated and distributed to agents for their use via Weight Control Web page. Walk Georgia program, an on-line fitness program was developed and offered statewide during 1-8 week session. Newsletters for this program were written for the 2012 sessions. Agents were trained to present Cooking for a Life Time Cancer Prevention Cooking School that is funded by the American Cancer Society. The Extension Specialists are now part of a USDA grant to implement an obesity prevention program in Colquitt County with researchers from the College of Public Health and the College of Family and Consumer Sciences. Hopefully this research can be translated to other Extension offices in Georgia and throughout the country.

We disseminated parenting publications, age-paced newsletters, information on grandparents raising grandchildren, and information on early brain development through print and web sources. We provided information through the Just in Time Parenting and eXtension Alliance for Better Child Care communities of practice.

We provided parenting and child care provider education classes on a variety of topics to Extension agents, parents, and child care providers. We provided news releases and other information on parenting and child care topics to be disseminated by agents to print media outlets.

Sections of Fall Forum include Healthy Lifestyles. Additionally, the Food Product Development team contest was held and healthy lifestyles was offered as a fifth grade curriculum club meeting track. The Ambassador program included Health Rocks and each camper this summer attending a Healthy Lifestyles class. During this year's Junior Conference, each participant had a Health Rocks class was well

Health and nutrition workshops were held in various locations for different types of clientele. Classes/workshops were held in local program areas for parents, senior citizens caregivers and the youth of Georgia. Food demonstrations and interactive learning projects were the main style of teaching education for this topic. Health and nutrition brochures were developed to educate the clientele.

2. Brief description of the target audience

Specialists directed efforts primarily to educating and preparing county agents. As a result, agents reached parents, guardians, grandparents, child care providers, and other caregivers of children and youth.

Extension professionals delivered educational programs for a diverse clientele including the rural

disadvantaged, working homemakers, small scale family and part time farmers, community leaders, youth, small business operators, and other members of the general public in Georgia.

Parts of this planned program were targeted directly to at-risk individuals and families.

Researchers have shared findings with the scientific community through invited presentations and publications.

3. How was eXtension used?

The Childhood Obesity planned program has faculty serving as leaders and/or active members in 4 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	957	500	200	50

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

Patent Applications Submitted

Year: 2011

Actual: 1

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	11	4	15

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	33

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	918

Output #3

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	145

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	54

Output #5

Output Measure

- Website hits for diabetes, weight control, and cardiovascular disease.

Year	Actual
2011	7147

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of people at risk for cancer who chose a lower fat or lower sodium food item.
2	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
3	Percentage of program participants reporting increased knowledge after program participation.
4	Total number of youth participants that will enhance decision making skills and develop positive leadership skills, increase knowledge of science education
5	Percentage of participants that lose weight or improve fitness.

Outcome #1

1. Outcome Measures

Percent of people at risk for cancer who chose a lower fat or lower sodium food item.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	225199

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
305	Animal Physiological Processes
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

Percentage of program participants reporting increased knowledge after program participation.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	64

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
802	Human Development and Family Well-Being
806	Youth Development

Outcome #4

1. Outcome Measures

Total number of youth participants that will enhance decision making skills and develop positive leadership skills, increase knowledge of science education

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Percentage of participants that lose weight or improve fitness.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Funding sources have been decreasing at federal, state and private levels, which limited the amount of materials, trainings and programs specialists and agents can provide.

Also Medicare, Medicaid and private health insurance benefits have been fluctuating, so access to care may be preventing some individuals from implementing self-care and lifestyle recommendations.

The ongoing downturn in the national and global economy has caused child care providers to economize on training, which may have reduced attendance at Extension child care training sessions. The Georgia Department of Early Care and Learning, which handles child care licensing, regulation, quality improvement, and federal Child Care and Development Block Grant funds, continues to place highest priority on funds for pre-K, which leaves fewer funds available to fund Extension and other training efforts.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Agent knowledge was assessed by evaluation tools specific to the content provided. Evaluations assessed knowledge before and after training, either through pre and post tests or a retrospective measure of perceived knowledge change. Intent to change behavior was also measured at the end of educational programs. Agents assessed changes in parents' and child care providers' knowledge and intent to change behavior through pre post evaluations or retrospective evaluations designed for the content of specific programs.

Walk Georgia continues to have a significant impact on the fitness level of Georgians. In the Spring 2011 session,3,688 enrolled and 2,488 were still participating after 8 weeks. Participants logged the equivalent of 394,584 miles. Seventy-two percent of participants reported that after Walk Georgia they were either a little or a lot more active than before the program began. . The average person logged the equivalent of 16-17 miles per week and the average team logged 21 miles per week. Fifty-three to 55% percent of the participants were new to the program each session. Ninety two percent of participants said Walk Georgia encouraged them to become more active. Participants rated their sense of well-being on a scale of 1-10 as 7.14 before the program and 8.38 after the program ended. The average weight dropped three pounds during the session. Ninety-six percent

of participants were satisfied with the program and 73% would recommend it to others. Most of the participants are white females, but about 9.4% of the participants were youth. Using Georgia Department of Public Health statistics on how inactivity increases hospitalization costs, if these participants continue being active, potentially $170,000 in hospital costs could be saved annually.

Key Items of Evaluation

Assessments indicated that after attending educational programs, parents' and child care providers' knowledge and intent to change behavior increased.

Walk Georgia continues to have a significant impact on the fitness level of youth and adults in Georgia, with an increase in overall sense of well-being and activity levels.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Climate Change

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	1%	0%	1%	0%
102	Soil, Plant, Water, Nutrient Relationships	4%	0%	2%	0%
104	Protect Soil from Harmful Effects of Natural Elements	2%	0%	2%	0%
111	Conservation and Efficient Use of Water	19%	0%	17%	0%
112	Watershed Protection and Management	11%	0%	7%	0%
131	Alternative Uses of Land	2%	0%	2%	0%
133	Pollution Prevention and Mitigation	19%	0%	19%	0%
134	Outdoor Recreation	2%	0%	1%	0%
136	Conservation of Biological Diversity	0%	0%	10%	0%
141	Air Resource Protection and Management	6%	0%	5%	0%
202	Plant Genetic Resources	0%	0%	10%	0%
205	Plant Management Systems	11%	0%	10%	0%
305	Animal Physiological Processes	2%	0%	0%	0%
306	Environmental Stress in Animals	2%	0%	0%	0%
307	Animal Management Systems	6%	0%	0%	0%
315	Animal Welfare/Well-Being and Protection	2%	0%	0%	0%
403	Waste Disposal, Recycling, and Reuse	8%	0%	9%	0%
511	New and Improved Non-Food Products and Processes	0%	0%	2%	0%
605	Natural Resource and Environmental Economics	3%	0%	3%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	16.7	0.0	7.6	0.0

Actual Paid Professional	20.8	0.0	15.4	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**
1765563	0	2117930	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1765563	0	2117930	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

A large part of this program funded specialists and their direct efforts primarily to county agents. These agents disseminated this information to target audiences at the local level.

Research, work, and education continued in:
Animal Waste - participated in planning and instructing Nutrient Management

Biomicrometeorology -surface-atmosphere exchange of gases, turbulence and is generally focused on the exchange between the vegetated-canopy layer and its environment.

Molecular Environmental Science - processes controlling the cycling, transport, and bioavailability of nutrients and contaminants in the environment.

Nutrient Management - biological and chemical pathways of nutrient cycling in soils, including how environmental factors affect the rates of nutrient cycling.

Poultry Science - reduce environmental impact and increase energy efficiency in poultry houses.

Remediation - abiotic remediation and phytoremediation. Iron in conjunction with metal sulfides has been used for the effective remediation of halogenated solvents in groundwater.

Soil Biology and Biochemistry - influences of biological activity on soil structure and function.

Soil Pedology - the genesis, landscape distribution, and interpretation of soils.

Stream Restoration - worked with the Soque Watershed Association to secure a 319 grant to conduct a stream restoration project in North Georgia. This regional effort included NC State and Auburn University. A graduate thesis on Monitoring of Construction during Stream Restoration was completed and awarded a Graduate assistanceship ($12,000) for innovative involvement of public service in research.

Waste Management - land application of industrial and animal wastes (by-products). Industrial by-products studied include coal combustion wastes (fly ash, gypsum), pulp and paper mill wastes, and sewage sludge.

Water - continued to provide leadership in the Water Banner Program for the SE region. Maintain website for the States. Published numerous trade magazine articles, scientific abstracts, and proceedings.

USDA SCRI Grant work will continue through 2014, as will our related field demonstrations and our graduate student research projects in water conservation.

Worked to quantify water needs of various greenhouse and nursery crops. Presentations were made at scientific and industry meetings about more efficient ways to irrigate greenhouse and nursery crops. Several papers were published in scientific journals.

Plants have been supplied to private entities, state agencies, and federal agencies for reintroduction projects. Continued to work with growers, horticultural scientists, and state agencies.

Performed crosses in the following taxa: Delosperma, Ophiopogon, syringa, exochorda and spigelia. Evaluated abelia, vitex, amsonia, azalea,and little bluestem seedlings for desirable traits.

2. Brief description of the target audience

The target audiences include county extension agents, growers, producers, farmers, industry representatives, manufacturers, consultants, contractors, greenhouse owners, media, scientific peers, and environmental professionals.

Focus also includes public sector (federal and state) decision-makers, regulatory and policy representatives, community leaders, and environmental concern/interest groups.

3. How was eXtension used?

The Climate Change planned program has faculty serving as leaders and/or active members in 4 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4072	24850	812	1425

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	127	13	140

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	171

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	586

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	53

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned

program.

Year	Actual
2011	63

Output #5

Output Measure

- Number of plant species propagated
  Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Percent of GA poultry producers utilizing NMPs to manage P appropriately.

Year	Actual
2011	35

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	Percentage of Georgia poultry producers trained in Phosphorous(P) reduction/management methods.
3	Estimates of savings ($ millions) resulting from reduced phosphorous (P) supplementation in poultry diets
4	Number of plantings by clientele

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	121022

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
111	Conservation and Efficient Use of Water
133	Pollution Prevention and Mitigation
136	Conservation of Biological Diversity
141	Air Resource Protection and Management
202	Plant Genetic Resources
205	Plant Management Systems
403	Waste Disposal, Recycling, and Reuse
511	New and Improved Non-Food Products and Processes

Outcome #2

1. Outcome Measures

Percentage of Georgia poultry producers trained in Phosphorous(P) reduction/management methods.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
133	Pollution Prevention and Mitigation
141	Air Resource Protection and Management
307	Animal Management Systems
403	Waste Disposal, Recycling, and Reuse

Outcome #3

1. Outcome Measures

Estimates of savings ($ millions) resulting from reduced phosphorous (P) supplementation in poultry diets

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	5

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
307	Animal Management Systems

Outcome #4

1. Outcome Measures

Number of plantings by clientele

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Economy:

In 2011, budget shortages have resulted in the loss of key faculty and limited the number of faculty assigned to many focus areas of this issue.

The economy is also causing hardships for producers resulting in less funding available for on farm environmental improvements.

The increases in fertilizer prices is positively influencing the value of animal manures and increasing off farm demand. In addition, the national push for biofuels is influencing nutrient management as animal diets are changing due to the high costs of corn.

Increases in energy costs have made this project even more critical to poultry farmers. Continued increases in the cost of phosphorous (P) to supplement poultry diets have increased the use of enzymes. This has resulted in less P in poultry litter. Increased commercial fertilizer costs have also resulted in poultry litter being more valuable as a fertilizer and it being used more effectively.

Nitrogen (N) utilization and N based NMP have been competing issues with phosphorous utilization.

Unexpected escalation of commercial fertilizer prices has driven much of the current use strategies relative to poultry litter. In addition, poultry producers have gone longer between cleaning out houses. Although this has not resulted overall in more phosphorous being generated or land applied, it has resulted in higher phosphorous levels in litter samples tested.

Drought:

Drought has caused many producers to have cut herd sizes due to a lack of feed.

Watering restrictions put some limits on our outdoor plant propagation activities.

Because of the drought, more emphasis was placed on water conservation issues and less on water quality issues than the planned initially called for.

Regulations:

Government regulations continue to be the key to designing best management practices for meeting the State's environmental and natural resource conservation objectives.

Regulations and the interpretation and enforcement of the rules is constantly evolving and impacting several programs.

The ordinances and rules involving water conservation are changing monthly in Georgia due to the "The Water Wars between GA/FL and TN. Additionally our Governor and Legislature are changing rules in response to the increasingly severe drought, and our local officials are introducing new ordinances on the local level for the same reason. This has caused much confusion and difficulty delivering a cohesive message as the rules change monthly. We are doing everything we can to keep up.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Water Conservation:

Growers reluctant to change are not the main problem. Delays, legal challenges and legislative disagreements in technical language is becoming the larger challenge to adoption of water conservation technology because growers don't want to invest until they see the new laws and regs legislators keep telling them are coming. Water conservation systems may costs tens of thousands of dollars and if growers buy the wrong system, and have to retrofit or buy yet another system, growers could face serious financial issues. Based upon our USDA SCRI Grant we will evaluate our field studies and demo studies in 2013 - 2014 for cultural and economic impact.

Animal Waste and Nutrient Management:

Most of the feedback has been positive. County agents and other stakeholders continue to request assistance through the program which indicates some level of satisfaction in the service they receive.

Phosphorous management and reduction in poultry houses:

Evaluations of ferric sulfate as a litter treatment for reducing ammonia generation and soluble phosphorous formation in commercial broiler houses have been conducted.

Key Items of Evaluation

Water conservation efforts are making progress but still face regulatory barriers to fully implement.

Educational program have shown an increase in knowledge and change in behaviors.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Consumer Economics and Financial Literacy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
607	Consumer Economics	100%	15%	0%	0%
723	Hazards to Human Health and Safety	0%	5%	0%	0%
801	Individual and Family Resource Management	0%	65%	0%	0%
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%	15%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	1.7	0.3	0.0	0.0
Actual Paid Professional	3.1	1.2	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**
264901	87619	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
264901	87619	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 program was implemented through group discussions, workshops, demonstrations and training supplemented by print and electronic media resources. Preparing for the Workforce publications were developed and distributed to educate the clientele seeking employment.

Financial literacy fact sheets were distributed. Ten different trainings ranging from 30 minutes to six hours in length were conducted for FACS agents and 4-H agents. In turn, agents provided training to other clients. More than 50 news articles were developed for distribution by agents to media outlets.

Our Financial literacy program provided 4 workshops to Georgians. Program is an educational program designed to meet the financial literacy needs of Georgians. The program offered specialized instruction to individuals on the application of money management skills and strategies. The program assisted individuals in establishing healthy banking relationships, building assets and securing a better future for themselves and their families.

2. Brief description of the target audience

Specialists directed efforts primarily to county agents. As a result, agents reached youth, parents, senior citizens, the unemployed, small farm families, and others.

The targeted audience of the FVSU faculty was residents of Georgia and surrounding areas, particularly limited resource and low income families and individuals.

3. How was eXtension used?

The Consumer Economics and Financial Literacy planned program has faculty serving as leaders and/or active members in 1 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	474	13571	486	15247

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

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	295

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	35

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	11

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	13

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	Number of Financial Literacy Education Opportunities

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	11461

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
723	Hazards to Human Health and Safety
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #2

1. Outcome Measures

Number of Financial Literacy Education Opportunities

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Slow recovery from recession has resulted in an increased demand for financial literacy education, but budget cuts have caused a dwindling capacity to meet the financial information needs of Georgia families.

Current changes in credit card policies and a contracted lending market encouraged clients to secure additional information regarding personal finance.

Apparel and textiles program are affected by reduced staff and resources.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Participants revealed that the programs helped them personally and that the program served its purpose. Participants felt that the programs were a success. The overall ratings of the programs were excellent.

Agent knowledge was assessed by evaluation tools specific to the content provided at each training. The evaluation database was used to assess changes in knowledge and intent to change behavior by county agents at the time of the educational intervention. In addition, four major program evaluations were conducted. Participants in a 2 hour financial literacy class mandated for individuals that have filed for bankruptcy completed a pre-test and post-test with a selected portion receiving a follow up survey to measure behavior change. Participants in the **When Your Income Drops** program targeted to recently unemployed workers provided to an end of workshop evaluation. Middle school youth (4th through 8th grades) participating in a six part series of 30 minute lessons completed pre-test and post-test assessments. Participants in the **Money Matters for Aspiring Entrepreneurs** program completed a pre-test and will be contacted in 2012 for follow up.

Key Items of Evaluation

Pre and post-tests were provided at each workshop. In general test scores increased for individual participants after the workshop was completed. Additionally, participants indicated they would use resources learned in the workshop to improve their personal finances.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Food Safety

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	0%	7%
204	Plant Product Quality and Utility (Preharvest)	0%	0%	20%	5%
205	Plant Management Systems	0%	0%	0%	3%
206	Basic Plant Biology	0%	0%	0%	3%
216	Integrated Pest Management Systems	5%	0%	5%	0%
311	Animal Diseases	20%	0%	20%	0%
401	Structures, Facilities, and General Purpose Farm Supplies	0%	10%	3%	3%
403	Waste Disposal, Recycling, and Reuse	0%	10%	0%	3%
501	New and Improved Food Processing Technologies	2%	10%	0%	18%
502	New and Improved Food Products	0%	10%	5%	3%
503	Quality Maintenance in Storing and Marketing Food Products	0%	10%	0%	14%
504	Home and Commercial Food Service	14%	0%	0%	0%
511	New and Improved Non-Food Products and Processes	0%	10%	5%	7%
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%	10%	0%	3%
701	Nutrient Composition of Food	0%	0%	0%	8%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	36%	30%	27%	20%
721	Insects and Other Pests Affecting Humans	5%	0%	5%	0%
722	Zoonotic Diseases and Parasites Affecting Humans	5%	0%	5%	0%
723	Hazards to Human Health and Safety	13%	0%	5%	0%
724	Healthy Lifestyle	0%	0%	0%	3%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	2.6	0.0	0.5	6.0
Actual Paid Professional	6.5	0.2	4.0	8.8
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
553642	87619	544927	1565543
1862 Matching	1890 Matching	1862 Matching	1890 Matching
553642	87619	544927	1565543
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

Research and field study activities include:

(1) evaluation of free fatty acid composition in low fat compared to full fat goat milk cheeses during refrigerated storage

(2) development and quality/shelf life evaluation of plain goat milk yoghurts under refrigeration compared with commercial products.

(3) Medicinal, nutraceutical and biofuel plant species for in vitro plant regeneration and genetic enhancement for value added traits.

(4) Vector biology and control of several vector species

(5) Food safety as related to poultry - novel chemistry techniques to disinfect or remove microbial pathogens from poultry products

(6) Montmorillonite nanoparticles

Educational activities include:

Educational programs were conducted with various clientele groups such as mosquito control, public health personnel and county extension personnel. Individual poultry processing plants were visited and provided assistance.

Five basic HACCP workshops were delivered in 2011: two tailored to the meat and poultry industry; one for the fresh cut produce industry, one for nut processors, and one for the fresh produce industry were also delivered. The in plant microbial control workshop with hands on labs in June was well received. The 3rd Poultry Processing taught entirely in Spanish (Procesamiento avicola) was held following the International Poultry Show, with 38 international attendees.

In ServSafe Program:
(1) ServSafe Education classes were conducted for Extension Agents and clientele.
(2) Food safety trainings were provided to Family and Consumer Sciences, 4-H and Agriculture Agents.
(3) Food Safety was taught as a part of specific college classes in Foods and Nutrition.
(4) Food Preservation training was provided to Family and Consumer Sciences Extension Agents.
(5) Consumer resources were developed and distributed both in print and on-line.
(6) Curriculum packages, lesson plans, and other food safety teaching tools were developed and disseminated to Extension Agents for use in county programming.
(7) News releases, newspaper articles and radio scripts were developed for agent use with media outlets in local communities.

2. Brief description of the target audience

Programs were targeted to food industry managers, food service professionals, quality assurance professionals, HACCP coordinators, microbiologists, third-party auditors, and government inspectors.

Extension Specialists targeted Extension Agents, as a result, Agents provided adult and youth consumers, foodservice employees, care providers, volunteers and media with food safety education.

Researchers have shared findings with the scientific community through invited presentations and publications.

3. How was eXtension used?

The Food Safety planned program has faculty serving as leaders and/or active members in 1 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1406	70104	15	0

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

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	4	6	10

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	582

Output #2

Output Measure

- Number of significant publications including articles, bulletins and extension publications.

Year	Actual
2011	15

Output #3

Output Measure

- Number of research projects completed on dairy goat development, food quality and economic evaluation.

Year	Actual
2011	1

Output #4

Output Measure

- Number of persons taking and passing the HACCP certification exam.

Year	Actual

2011	122

Output #5

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	22

Output #6

Output Measure

- Number of food handlers receiving ServSafe certification from Extension Agent programs.

Year	Actual
2011	624

Output #7

Output Measure

- Food Preservation website number of files viewed

Year	Actual
2011	3905696

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Placement of graduate students in food related industry, government agencies or institutions of higher education.
2	Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.
3	Average percentage of increase food safety test scores as a result of programs conducted statewide.
4	Multiple or repeat attendance by food processing company personnel (ie, company sends more than one person to our course(s) from one year to the next)
5	Number of agents increasing knowledge as a result of food safety training by specialist.

Outcome #1

1. Outcome Measures

Placement of graduate students in food related industry, government agencies or institutions of higher education.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.

2. Associated Institution Types

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	64894

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
216	Integrated Pest Management Systems

311	Animal Diseases
401	Structures, Facilities, and General Purpose Farm Supplies
501	New and Improved Food Processing Technologies
502	New and Improved Food Products
503	Quality Maintenance in Storing and Marketing Food Products
511	New and Improved Non-Food Products and Processes
701	Nutrient Composition of Food
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
721	Insects and Other Pests Affecting Humans
723	Hazards to Human Health and Safety

Outcome #3

1. Outcome Measures

Average percentage of increase food safety test scores as a result of programs conducted statewide.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	14

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #4

1. Outcome Measures

Multiple or repeat attendance by food processing company personnel (ie, company sends more than one person to our course(s) from one year to the next)

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	36

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

Outcome #5

1. Outcome Measures

Number of agents increasing knowledge as a result of food safety training by specialist.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
504	Home and Commercial Food Service
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Economy:

In 2011, budget shortages have resulted in the loss of key faculty and county Family and Consumer Sciences Agent positions and remain a critical issue.

Decreases in state and external funding have limited research capacity. Dairy goat

products research has submitted grant proposals to funding agencies such as Georgia FoodPAC and SARE/USDA funding programs, but the proposals have not been funded.

Tightened budgets in the food industry have reduced attendance since 2008. In 2011, two regularly scheduled workshops were cancelled due to insufficient numbers and one workshop (SPC) was dropped from the calendar.

Government Regulations:

In developing infant formula, FDA has extremely stringent regulations on infant feeding trials. It requires at least 62 infants for a feeding experiment, which must have enormous amount of funds to execute the experiment. We don't have enough funds to conduct infant feeding trials.

The passage of the new Food Safety Modernization Act (FSMA) in January 2011 has result in higher attendance for the fresh produce GAPs/HACCP and fresh cut HACCP certification courses in 2011. A larger increase in attendance is expected in 2012 as FDA formulates new regulations of the food industry.

Regulations requiring certification of restaurant managers/designated employee increased demand for ServSafe training.

Competing Programmatic Challenges:

Recent surge and governmental research supports/emphasis on biotechnology, genetic engineering and stem cell research programs have been extreme challenges to dairy goat research for enhancing limited small goat farmers. Therefore, continuous research productivity has been in huge competition and perhaps discouraging external factors for dairy goat products research.

Miscellaneous:

Drought impacted mosquito breeding in pond and container breeding environments for mosquitoes as well as black flies were reduced by low stream flows.

An unexpected personnel situation resulted parts of this project having to be placed on temporary hold.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Agent knowledge was assessed by written tests specific to the content provided. In some instances, pre and post tests were used to assess knowledge gained. In ServSafe trainings, agents were administered the certification exam from the Educational Foundation of the National Restaurant Association.

The 2011 workshops were well attended and received high marks on the participant evaluations, ranging from 4.39 to 4.89 out of possible 5.0 in the overall course rating. The results of the evaluations were distributed to all speakers, and reviewed during program planning for the 2012 calendar year.

Two studies have been conducted: (1) Free fatty acid composition in low fat goat milk cheeses were compared with those of full fat goat cheeses during refrigerated storage, and (2) Quality and shelf life of plain goat milk yogurt developed at Fort Valley State University and stored under refrigeration were evaluated in comparison with commercial goat and cow milk counterparts. The low fat goat cheese generated higher amount of FFA than full fat goat cheese, although total FFA content was significantly ($P<0.05$) lower in low fat cheese than in full fat cheese. From the goat milk yogurt study, the commercial caprine yogurt had less lipolysis than the commercial cow milk yogurt and Fort Valley goat milk yogurt, which might be due to the added stabilizer, whereas proteolysis of all three products steadily increased during the storage.

Key Items of Evaluation

Food Safety workshops were well attended and received high marks on satisfaction and increase in knowledge on participant evaluations.

Proteolysis of goat cheese products steadily increased during the storage.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger

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	1%	0%	1%	6%
131	Alternative Uses of Land	1%	8%	1%	5%
201	Plant Genome, Genetics, and Genetic Mechanisms	7%	0%	16%	0%
205	Plant Management Systems	6%	0%	1%	10%
211	Insects, Mites, and Other Arthropods Affecting Plants	10%	0%	7%	0%
212	Pathogens and Nematodes Affecting Plants	22%	0%	30%	0%
216	Integrated Pest Management Systems	15%	0%	11%	0%
301	Reproductive Performance of Animals	7%	0%	4%	0%
302	Nutrient Utilization in Animals	6%	5%	5%	11%
303	Genetic Improvement of Animals	3%	3%	8%	10%
304	Animal Genome	0%	0%	1%	8%
305	Animal Physiological Processes	1%	0%	4%	3%
307	Animal Management Systems	8%	28%	4%	18%
311	Animal Diseases	1%	8%	3%	5%
312	External Parasites and Pests of Animals	4%	5%	0%	3%
313	Internal Parasites in Animals	0%	10%	0%	6%
502	New and Improved Food Products	0%	0%	0%	3%
601	Economics of Agricultural Production and Farm Management	5%	33%	3%	6%
603	Market Economics	3%	0%	1%	0%
701	Nutrient Composition of Food	0%	0%	0%	6%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Extension	Research

Year: 2011	1862	1890	1862	1890
Plan	59.5	1.5	42.0	9.3
Actual Paid Professional	30.2	1.8	20.3	4.7
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**
2560265	771043	2799218	1438968
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
2560265	771043	2799218	1438968
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 planned program encompasses the largest area of combined research & Extension work for UGA & FVSU.

Ongoing research & field study activities included:

Plant: breeding/genetics

-Fruits & Berries >generate new plants & crosses, investigate bacterial invasion & diseases, pollination

-Cereal >develop superior grain & forage yield, agronomic traits, durability & quality

-Comparative grass >develop cross taxon genomic tools for a wide range of cereals

-Corn/Maize >develop superior crop yields

-Crop >genetics & evolution in the genomes of model organisms for improvement of major crops.

-Forage >develop superior alfalfa & forage grass species to improve the efficiency & effectiveness of cultivar development.

-Legume transgenics >develop technology to facilitate genetic engineering of crop plants, deployment of transgenes of agronomic importance, & development of improved agronomic crops.

-Peanut >breed superior peanut cultivars

-Soybean > develop superior yielding, multiple pest resistant soybean cultivars, utilizes molecular technologies to improve efficiency cultivar

-Sunflower & specialty oil > apply breeding & cultivar development in novel oilseeds & sunflower & use molecular techniques & translational & comparative genomics in sunflower, peanut, & other oilseeds.

-Transgenic plants >produced & screened green houses

- gspC gene > examine function & specificity of protein secretion by the Type II systems

Pest management

-Response of new cultivars & breeding lines to phorate insecticide
-All major commodity areas, & with insects affecting human & animal health
-Flies, fleas, & other ectoparasites & other related to pests of livestock & poultry
-Host parasite interactions, effective biological toxins, & compounds to enhance Bt toxin efficacy for agricultural & medical pest

Livestock

-Multi-breed evaluation procedures to analyze breed association data sets provides genetic values on both purebred & crossbred animals
-Bull testing, heifer evaluation, & reproductive development program
- Poultry: nutrient management, nutrient balance, sustainable water quality, egg production, fertility, stress reduction
-Research cow-calf production on different bahiagrass & bermudagrass /creep grazing
-Research sheep, goat, small ruminant management techniques: parasites, seasonal feed crops, genetics, diet,

Aquaculture

-Develop & evaluate aquaculture species, production methods & systems
-Recirculating aquaculture systems
-Aquaponic systems
-Culture tilapia & hybrids, koi, freshwater prawns, channel catfish, copper nose bream, largemouth bass, pacu & Australian red claw
-Biointegration of aquaculture with macrophyte production & waste recycling
-Azolla, Lemna minor, giant duckweed & Lemna sp. grown in fish waste from various RAS

Educational activities include:

Face to Face

-Workshops
-Field trials
-Farm visits
-Demonstration
-Field Days
-Media interviews
-Conferences
-Society meetings
-Laboratory workshops
-Student training
-Consultations
-National Guard trainings
-Tours

-Collaborations with other institutions

Media & Publications

-Handbooks
-DVDs
-Production guides
-Trade magazine articles
-Posters
-Abstracts
-Book Chapters
-Extension publications
-Newsletter
-Articles

2. Brief description of the target audience

As Georgia's largest, this planned program has a broad and varied range of audiences.

Federally funded Extension Specialists provided training, information, and resources to Extension Agents. Agents were able to reach far and wide into Georgia and the surrounding region. Between programming provided by Specialist and Agents, audiences include:

- Sheep and goat producers
- Dairymen
- Beef cattle producers
- Poultry Producers
- Aquaculture professionals
- Catfish processing plant operators
- Agribusiness professionals and entrepreneurs
- Plant breeders
- Fruit, berry, and nut producers
- Vegetable growers
- Government officials and policy makers
- USDA personnel
- Non-Governmental Organizations (NGO's)
- Neighbors in animal agricultural environments
- Typically underserved clients in livestock enterprises

Researchers have shared findings with the scientific community through invited presentations and publications. Audience also includes biotech companies, chemical companies, and multiple industry professionals and producers.

3. How was eXtension used?

The Global Food Security and Hunger planned program has faculty serving as leaders and/or active members in 9 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	10801	221481	5615	7258

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

Patent Applications Submitted

Year: 2011

Actual: 4

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	94	73	167

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	118

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual

2011	838

Output #3

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	13011

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	123

Output #5

Output Measure

- Number of disease samples processed by diagnostic laboratory.

Year	Actual
2011	1652

Output #6

Output Measure

- Number of field experiments to develop disease management approaches.

Year	Actual
2011	18

Output #7

Output Measure

- Number of international contacts

Year	Actual
2011	149

Output #8

Output Measure

- Website page views

Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.
2	Number of Master Cattlemen certifications granted through this planned program.
3	Increase in the farm gate value of livestock production in Georgia. Reported in millions of dollars.
4	Farm gate value of poultry production in Georgia. Value reported annually in millions of dollars.
5	Medium term: development of disease management approaches the reduce disease damage by 65%

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.

2. Associated Institution Types

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	347150

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
131	Alternative Uses of Land
201	Plant Genome, Genetics, and Genetic Mechanisms
205	Plant Management Systems
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals
304	Animal Genome
307	Animal Management Systems
311	Animal Diseases

601	Economics of Agricultural Production and Farm Management
701	Nutrient Composition of Food

Outcome #2

1. Outcome Measures

Number of Master Cattlemen certifications granted through this planned program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	112

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management
701	Nutrient Composition of Food

Outcome #3

1. Outcome Measures

Increase in the farm gate value of livestock production in Georgia. Reported in millions of dollars.

2. Associated Institution Types

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

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1249

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 1,161,452,882
Value this reporting year: 1,248,599,742
Increase: 87,146,860

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals
304	Animal Genome
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management

701 Nutrient Composition of Food

Outcome #4

1. Outcome Measures

Farm gate value of poultry production in Georgia. Value reported annually in millions of dollars.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	5388

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 5,186,128,879
Value this reporting year: 5,387,694,561
Increase: 201,565,682

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management
701	Nutrient Composition of Food

Outcome #5

1. Outcome Measures

Medium term: development of disease management approaches the reduce disease damage by 65%

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	55

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
205	Plant Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Economy:

Funding sources have decreased at federal, state and private levels causing budget shortages that have resulted in the loss of key faculty and limited the number of faculty assigned to many focus areas of this issue. Reduced resources have also limited the amount of materials, trainings and programs specialists and agents can provide.

Continuation of economic recession during 2011 affected fruit producers' economic outlook and changed cost-benefit ratios in pest management. Price of commercial fertilizer will promote the use of organic fertilizers in areas of crop production outside of the poultry producing region. Volatile input and commodity prices continued to affect industry performance.

Much higher prices for fuel, fertilizer and pesticides were offset by near record prices and strong demand for nuts.

Georgia and public programs such as crop insurance are still being impacted, making it necessary to respond with improved risk management strategies. Decrease in the availability of credit to support new and/or existing farm enterprises was detrimental.

Regulations & Policy:

Waiting for answer on whether the EPA approved halosulfurons registration.

Government regulations on germplasm release policies required were unexpected.

Changes in public policy, particularly trade and farm bill legislation, needed responses.

Re-registration of insecticides and registration problems with a specific new insecticide resulted in loss, or potential loss, of several new insecticides.

Drought & Weather:

Drought caused high feed prices and marketing situations from milk didersions and pooling.

Drought conditions interfere with the ability to carry on applied research on plant diseases. Field experiments impacted by low rainfall, and as a result, disease was often decreased substantially.

Weather volatility is causing issues for Georgia producers, particularly for those with limited market access.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

On-farm trials receive favorable reviews from growers of potential new varieties being evaluated. Field trials are being conducted with industry partners. Implementation of findings from this research are beginning to be seen in the industry.

A survey of viruses in peanuts were conducted in over 50 counties in Georgia to determine what viruses were present in the peanut crop. Soils were collected from individual plant sites and from composite samples from plot areas and compared for micronutrient ratios.

Case studies, surveys, data analysis, program evaluations, and livestock pregnancy evaluations were performed. Evaluations are on-going as programs are delivered and are evaluated annually through survey and loss reports. Quality of research was recognized by invitations from preeminent colleagues to co-author or contribute review publications.

Final year results showed that cv. Silver King grown in strip till crimson clover at half nitrogen had highest yield and second highest water use while cv. Silver Queen in crimson clover at zero N had lowest yield and highest WU. Plant biomass and LAI of cv. Silver Queen and Silver King performed similarly under zero N or half N when planted on land where crimson clover is grown and then strip tilled.

Submission rate of poultry litter samples to the lab for analysis are monitored to aid in NMP decisions. Soil assays collected before and after application of treatments showed that ring nematode population densities were significantly reduced by all treatments.

Although "hot topics" vary seasonally and annually, numbers of contacts remain relatively consistent. Agents and clientele continue to send queries by phone, e mail, postal mail, and in person (with specimens presented primarily by mail and DDDI). Not surprisingly, upticks in contacts occur immediately after media coverage.

An overwhelming positive response was given by the workshop participants on the usefulness and quality of information available at the different workshops. Participants ranked the usefulness and interest in the workshops an average of 4.5 on a scale from one to five for the overall usefulness or value of the workshop topic to the participant. County agents have indicated grower satisfaction with current educational programs and have requested similar programs for next year. Future workshops will incorporate some of the new requests for additional information.

Research progress was reported in several refereed and non-refereed publications and presented at professional and grower meetings. Research finding led to revised

recommendations for growers.

Key Items of Evaluation

Implementation of findings from this research are being seen in the industry.

An overwhelming positive response was given by the workshop participants on the usefulness and quality of information available at the different workshops.

On-farm trials receive favorable reviews from growers of potential new varieties being evaluated.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Sustainable Energy

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
133	Pollution Prevention and Mitigation	33%	0%	33%	0%
403	Waste Disposal, Recycling, and Reuse	33%	0%	33%	0%
605	Natural Resource and Environmental Economics	34%	0%	34%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	4.9	0.2	4.8	0.0
Actual Paid Professional	7.8	0.0	2.1	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
662252	0	294544	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
662252	0	294544	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

Faculty at UGA are involved in numerous research and extension projects related to energy production from biomass. Recently faculty activities in working with government, defense bases, and private industry in promotiting bioenergy has increased. Attendance at the annual energy from biomass conference in Tifton is increasing each year. Numerous start-up companies are being established in Georgia to produce energy or fuels from biomass.

Four workshops were held and two publications related to forestry were distributed. Exhibits were also present at the workshops, field days, and demonstration in five black-belt counties. Twelve one-on-one site visits were conducted.

A project evaluating the production of hydrogen from peanut hull and pine chips biomass is underway. Peanuts and pine chips are plentiful in Georgia. Additional tests are beginning on the use of char in Agriculture. Two chars (peanut hulls and pine chips) produced from the process are being evaluated for nutrient benefits, water holding and irrigation benefits, and carbon sequestrations benefits.

BioOil has been developed by pyrolyzing pine pellets in a pilot scale system. Blends of BioOil with other solvents/fuels have been prepared and are being characterized. BioOil blend analysis and testing is ongoing.

The transesterfication of oils and fats to produce biodiesel is being studied. This work evaluates new sources of oils and fast that could be substrates for producing biodiesel. Once developed, the biodiesel will be tested for properties and behavior in engine testing.

2. Brief description of the target audience

Audiences for this planned program included farmers, agribusiness, community leaders, and entrepreneurs.

Programs were also presented to small, minority, and limited resource landowners and farmers.

3. How was eXtension used?

The Sustainable Energy planned program has faculty serving as leaders and/or active members in 3 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	450	950	75	200

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	3

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	0

Output #3

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	0

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	4

Output #5

Output Measure

- Number of site visits to landowners/farmers

Year	Actual
2011	250

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	Total number of site visits made to small, minority, and limited resource landowners and farmers

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	24735

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
403	Waste Disposal, Recycling, and Reuse
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Total number of site visits made to small, minority, and limited resource landowners and farmers

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	250

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Changes in government policy are significantly influencing investment in these new technologies. The economy is also influencing the capital available for new ventures. The drought also is impacting our ability to produce some value added bioenergy crops.

Farm Bill changes still effecting targeted audience; Slumping housing market still affecting prices as well as financial institutions lending practices; state budgets continually being reduced. Weather is still a constant factor.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Workshop participants evaluated on the usefulness of the LIFE Program in which the finding indicated the LIFE program is very beneficial to its targeted audience. Participants were also evaluated on program knowledge before and after, showing an increase in knowledge and intent change behavior.

Key Items of Evaluation

Educational programs were well received and reviewed by participants.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Housing and the Near Environment

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	0%	25%	0%	0%
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	100%	50%	0%	0%
903	Communication, Education, and Information Delivery	0%	25%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	3.2	1.0	0.0	0.0
Actual Paid Professional	4.7	1.0	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**
397351	350474	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
397351	350474	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

Our program offered 9 homebuyer education workshops to 450 consumers throughout the year. The workshops raised consumer awareness of programs available to assist with homeownership needs. 22 participants purchased homes valued at approximately $2 million.

Agents received training updates on changes in housing market and new programs from HUD, USDA and DCA.

Education and information were provided to consumers in group programs, presentations, fairs and individual meetings.

Publications and news articles were distributed to agents for use in local programs and media outlets. UGA continued to provide healthy housing training for professionals through the partnership with the National Center for Healthy Housing. The radon program continues to provide radon education and test kits, reaching over 30,000 Georgians through educational programs and exhibits. This is funded by EPA grant dollars received by DCA.

2. Brief description of the target audience

The primary audience for the federally funded Extension Specialists was Extension Agents. Agents took the information into the communities where it is disseminated to the general public, including home owners, families, the media, and industry professionals.

FVSU Extension served the needs of minorities and residents of rural areas that are classified as limited resource clientele.

3. How was eXtension used?

The Housing and the Near Environment planned program has faculty serving as leaders and/or active members in 1 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	557	528	58	72

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	2	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	250

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	22969

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	7

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	7

Output #5

Output Measure

- Number of home-buyer education opportunities

Year	Actual
2011	9

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	The percentage of participants who increased their knowledge of Indoor Air Quality issues as a result of the educational programs conducted by county agents.
3	The percentage of participants who tested their homes for indoor air quality contaminants as a result of the educational programs conducted by county agents.
4	The percentage of participants who indicated a change in behavior, such as conserving water, purchasing Energy Star products or testing their well.
5	Total number of consumers transitioning from rental to homeownership after participating in this program.

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	40591

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

The percentage of participants who increased their knowledge of Indoor Air Quality issues as a result of the educational programs conducted by county agents.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	70

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #3

1. Outcome Measures

The percentage of participants who tested their homes for indoor air quality contaminants as a result of the educational programs conducted by county agents.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

*Reported total number of participants who tested their homes for indoor air quality contaminants as a result of the educational programs conducted by county agents. (not %)

4. Associated Knowledge Areas

KA Code	Knowledge Area
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #4

1. Outcome Measures

The percentage of participants who indicated a change in behavior, such as conserving water, purchasing Energy Star products or testing their well.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #5

1. Outcome Measures

Total number of consumers transitioning from rental to homeownership after participating in this program.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	22

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

There are various outcomes, negative and positive, that have occurred based upon the following external factors.

Most notably the downward trend in the economy has positively affected the outcome. Clients are more aware of the pitfalls of foreclosure, scams and predatory lending practices and therefore, attend the classes to educate themselves. Public policy changes most notably the tax credit for first time homebuyers also helped to increase enrollment. Lastly, new federal regulations regarding lead and renovations also assisted in increasing enrollment for the classes.

Economic conditions, job losses and housing foreclosures continue to impact housing programs. The downturn in the economy continues to impact households. The year was filled once again with natural disasters; however, early in the year drought conditions in the northern half of the state improved, resulting in a decreased interest in water conservation.

Interest in indoor environmental programs is impacted by natural disasters as well as changes in federal regulations and policies. Increased focus at the Federal level in healthy housing issues has resulted in additional funding opportunities in this area.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

At the beginning and at the conclusion of each homebuyer education series a test was administered beforehand to gauge clients' knowledge prior to completing the class, and then the same test was given at the conclusion of the series to see if the test scores increased. On average individual test scores increased. Additionally, participants indicated an increase in knowledge and felt empowered enough to make informed decisions.

Agent trainings were assessed informally during the program to guide the program and make sure gaps in knowledge were addressed.

Evaluations from education programs showed a statistically significant increase in knowledge gained and intent to change behavior through participation in the program.

Key Items of Evaluation

Over 2,500 people tested their home for radon and 455 with high radon test results mitigated their homes.

Five households tested their well water.

70% of participants in radon education classes indicated that after the program they would test their home for radon.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Technology Education for Seniors

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	0%	25%	0%	0%
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	50%	0%	0%
903	Communication, Education, and Information Delivery	0%	25%	0%	0%
	Total	0%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.5	0.0	0.0
Actual Paid Professional	0.0	0.5	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	175237	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	175237	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

Surveys were done in Houston, Peach, Sumter, Dougherty, and Colquitt counties to identify need for IT training. Training courses offered included Introduction to the Internet, Introduction to MS Excel, Introduction to Quicken, Introduction to MS Word, Introduction to MS Publisher, Introduction to Digital Photography, and Introduction to Computers.

2. Brief description of the target audience

The target audience for this FVSU planned program was senior citizens and retirees.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	774	952	650	1200

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	1370

Output #2

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	0

Output #3

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	2

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	6

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of program participants will able to send and receive email at the completion of training
2	Number of senior citizens whose technology proficiency was improved as a direct result of this program.
3	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this plan.
4	Number of program participants will able to send and receive email at the completion of training
5	Number of participants will be able to intelligently search the internet for useful consumer information.

Outcome #1

1. **Outcome Measures**

Percent of program participants will able to send and receive email at the completion of training

Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

Number of senior citizens whose technology proficiency was improved as a direct result of this program.

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this plan.

2. **Associated Institution Types**

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	585

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. **Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being
903	Communication, Education, and Information Delivery

Outcome #4

1. Outcome Measures

Number of program participants will able to send and receive email at the completion of training

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	328

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
903	Communication, Education, and Information Delivery

Outcome #5

1. Outcome Measures

Number of participants will be able to intelligently search the internet for useful consumer information.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	328

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
903	Communication, Education, and Information Delivery

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

No external factors affected the outcome. The Mobile Information Technology Center is continuing to see a high demand in its requests for services.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluations of the programs were done informally. Pre and post surveys indicated that everyone owned a computer who came to the workshop or had access to a computer. After

the training, all clients demonstrated a basic level of proficiency in the classes they selected. Telephone calls and emails were used for communications for post survey responses. Clients also indicated that they knew others and would disseminate the skills learned to friends and family.

Key Items of Evaluation

Education program participants showed an increase in knowledge and intent to disseminate information to others in the community.

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Urban Agriculture

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	2%	0%	0%	0%
124	Urban Forestry	12%	0%	29%	0%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	14%	0%
204	Plant Product Quality and Utility (Preharvest)	11%	0%	14%	0%
206	Basic Plant Biology	1%	0%	0%	0%
212	Pathogens and Nematodes Affecting Plants	22%	0%	22%	0%
213	Weeds Affecting Plants	1%	0%	0%	0%
215	Biological Control of Pests Affecting Plants	0%	0%	7%	0%
216	Integrated Pest Management Systems	12%	0%	0%	0%
404	Instrumentation and Control Systems	2%	0%	0%	0%
405	Drainage and Irrigation Systems and Facilities	2%	0%	0%	0%
601	Economics of Agricultural Production and Farm Management	3%	0%	0%	0%
602	Business Management, Finance, and Taxation	7%	0%	0%	0%
605	Natural Resource and Environmental Economics	9%	0%	0%	0%
609	Economic Theory and Methods	2%	0%	0%	0%
806	Youth Development	2%	0%	0%	0%
902	Administration of Projects and Programs	6%	0%	7%	0%
903	Communication, Education, and Information Delivery	6%	0%	7%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890

Plan	0.7	0.0	0.1	0.0
Actual Paid Professional	3.3	0.0	0.8	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**
276821	0	112355	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
276821	0	112355	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

A large part of this program funded specialists and their direct efforts primarily to county agents. These agents disseminated this information to target audiences at the local level.

In 2011; Research endeavors have resulted in 3 new CAES CES circulars and 3 abstracts and proceedings. 16 field and greenhouse trials evaluating 118 treatments have been evaluated. Results from these investigations have been applied to extension activities and delivery of information.

Under scope of this program these Extension outputs have been delivered: Publication of 2 chapters in books; 3 peer reviewed, non-refereed extension bulletins and circulars; 12 sections in 12 special extension bulletins; 7 articles in industry journals; 10 mass media and visual aids information; These publications have been recognized as having significant impact.

Implementation of statewide and local trainings has been the core of this program. Participated in 2 international professional educational conferences, 13 state and regional industry, professional and educational conferences/workshops/seminars and 11 county programs. Several presentations were conducted throughout the year to educate growers, county agents, and master gardeners on disease identification and management.

Other efforts included attending and delivering information to underrepresented clientele and in bilingual format. Several innovative programs were implemented. Examples include computer-based trainings for industry personnel. Extramural funding was obtained through competitive grants and industry collaborations

Plant selections or plants derived from breeding programs were evaluated in the laboratory for their cold hardiness potential. Specific data was collected on the timing and rate of cold acclimation, the timing and extent of the maximum mid-winter cold hardiness attained, and the timing and rate of cold deacclimation.

Presentations have been given to educate extension personnel, green industry professionals, and Master Gardeners.

Continued to survey nurseries, landscapes, and forest and suburban streams for P. ramorum. UGA Extension Plant Pathology Laboratory continued to process plant, soil, and water samples. Funding for surveys and laboratory processing of samples from state agencies (GDA and GFC) was elimated in 2009. All GDA and GFC survey samples are being processed through other contracted laboratories. The draft P. ramorum certification program for Georgia-grown ornamental nursery stock was developed; however, implementation of the program was not accomplished due to the lack of funding.

Communicated with audiences through electronic newsletters and web sites (www.gaurbanag.org and www.ugaurbanag.com).

Over 260 trees have been visited and documented.

Fungicide and biological control product trials were conducted in the greenhouse. Alerts for plant diseases and potential problems were written and distributed to county agents via email and through the GGIA email newsletter and association journal. Pythium and Phytophthora isolates were collected and fungicide sensitivity screening is underway.

2. Brief description of the target audience

The target audience for this planned program included

- Golf Course Superintendents
- Turfgrass Professional Managers
- Landscape Companies
- Sod Producers
- Grounds maintenance personnel
- Sports Fields Managers
- General green industry personnel
- Landscape professionals
- Urban Ag Industries Representatives
- Public Policy Makers and Regulators
- Master Gardeners
- Arborists
- City Foresters
- Homeowners
- Scientists interested in diseases of turfgrasses

Extension Specialists provided training and information to Extension Agents. Agents then took the information into the communities where it was shared with the general public

Researchers shared findings with the scientific community through invited presentations and publications.

3. How was eXtension used?

The Urban Agriculture planned program has faculty serving as leaders and/or active members in 2 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1417	1230	3	0

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	6	2	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	80

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	83

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	34

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	21

Output #5

Output Measure

- Number of research trials conducted

Year	Actual
2011	16

Output #6

Output Measure

- Number of disease management recommendations based on disease samples processed

Year	Actual
2011	388

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.
2	Pre and post tests, email follow-up evaluation

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by county faculty not receiving federal funds, staff or volunteers as a direct result of the work of faculty receiving federal funds within this planned program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	108622

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
124	Urban Forestry
206	Basic Plant Biology
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
404	Instrumentation and Control Systems
405	Drainage and Irrigation Systems and Facilities
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
605	Natural Resource and Environmental Economics
609	Economic Theory and Methods

806 Youth Development

Outcome #2

1. **Outcome Measures**

Pre and post tests, email follow-up evaluation

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

A downturn in the economy and job layoffs brought an increased number of people into the landscape profession who have little to no training in horticulture or business management skills.

The economy and fuel cost may decrease ability of people to attend programs. Creative computer alternatives may be needed to address needs. Decrease of state and federal funds have had a negative effect on program support and attendance.

In 2011, extremely wet weather patterns and conditions resulted in widespread turfgrass disease incidences. Extreme and prolonged heat wave in June, July and August also resulted in widespread damage to cool season grasses in particular. However, the program objectives for the year were and surpassed predictions. While extreme weather conditions have influenced the turfgrass industry and this program itself. We have been successful in attaining a variety of extramural funds for travel and other activities.

The change in the economy affected the program as operating funds were taken back.

New companies are entering the market, providing lower-cost GPS data collection units. Unfortunately, this is creating a wide range of available products that use different software.

The downturn in the economy and the housing market directly affects the green

industry. Numerous nurseries and greenhouses in Georgia have closed or have significantly cut back their production for financial reasons resulting from drought, watering restrictions, and poor sales due to the economy and reduction in new home construction, which needs landscape plant materials.

Personnel changes in leadership of Master Gardener program limited reporting capacity.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Programs conducted had both pre and post surveys done to evaluate the skills learned and knowledge obtained. Evaluations also revealed future program needs. Post training surveys are used to determine effectiveness and additional needs. The Master Gardener program used a professionally operated evaluator to assess the needs and success of the program statewide.

Pre and post test evaluations of trainings, retrospective evaluations and appropriate modifications were implemented. Programs were constantly evaluated and improved based on feedback and evaluations. Evaluations are used to constantly improve and modify the program. Improved methods of delivery, content of programs are constantly updated.

Research results have been evaluated, selected and implemented to address clientele needs. Detailed observation of site and behaviors or participants can be implemented. Number of references, citations, web links to published articles can be implemented. The publications department in the college now collects numerical information on number of web visits, top accessed publications etc. Publications from this program were on the top most viewed publications for 5 months in a row.

Highlights are being placed on nomination website. A Google map has been initiated.

Key Items of Evaluation

Master Gardener program continues to be popular and well received.

Research results have been evaluated, selected and implemented to address clientele needs.

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Youth Life Skill Development

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
134	Outdoor Recreation	7%	0%	0%	0%
135	Aquatic and Terrestrial Wildlife	10%	0%	0%	0%
136	Conservation of Biological Diversity	1%	0%	0%	0%
206	Basic Plant Biology	1%	0%	0%	0%
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%	0%	0%	0%
302	Nutrient Utilization in Animals	2%	0%	0%	0%
305	Animal Physiological Processes	5%	0%	0%	0%
307	Animal Management Systems	10%	0%	0%	0%
311	Animal Diseases	7%	0%	0%	0%
315	Animal Welfare/Well-Being and Protection	5%	0%	0%	0%
802	Human Development and Family Well-Being	5%	0%	0%	0%
806	Youth Development	42%	100%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	4.4	1.0	0.0	0.0
Actual Paid Professional	7.0	1.0	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**
596026	350474	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
596026	350474	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

Faculty facilitated 4-H Science Meetings, t4-H Leadership/Citizenship Meetings, Healthy Living Meetings and 4-H Entrepreneurship Meetings Sessions. They also facilitated 4-H Summer Camps and Day Camps. Faculty conducted monthly 4-H Club Meetings in the areas of Science, Healthy Living, Entrepreneurship and Leadership/Citizenship.

Training programs and materials were developed to teach them about the projects. Youth fed and managed livestock. Shows were held for cattle, swine, sheep and goats to allow youth to demonstrate their skills. This program continues to be successful and have impact on our youth.

State Horse Show, Hippology, Judging Contest, Horse School, and Quiz Bowl were all offered.

4-H faculty members developed curriculum, trained and supported county extension agents to conduct monthly educational programs for in-school club meetings around the state.

4-H faculty members developed and support educational opportunities including individual learning projects, animal projects, entrepreneurship clubs, science clubs, environmental clubs and product evaluation/judging activities.

The 4-H Youth program developed curriculum and trained staff to conduct a summer camping program that allow young people to learn and practice life skills. Five residential camps were supported through the work of this program.

The 4-H Youth program conducted a Georgia Youth Summit with youth and adult teams preparing information on local issues, receiving training on enacting change and working together and returning to home communities to enact the change. State federally funded faculty provided in-service training and web based information for county faculty, staff, and volunteers for working with youth in civic engagement. They trained 4-H issue ambassadors to work on community change during ambassador training and prepared complimentary information for ambassadors to use as reference. State faculty trained youth and adults to work with communities on meeting the needs of suddenly military youth and families under the direction of the Operation Military Kids Team. Faculty members produced and provided web based training and information for directing and assisting youth in individualized community engagement with recognition within the Leadership in Action program.

2. Brief description of the target audience

The target audience for this planned program includes two groups. County agents and volunteers will be targeted to multiply the efforts of faculty associated with this program. In many cases, faculty will have direct contact with the youth.

All Georgia youth from Kindergarten through college are targeted for life skill development programs. The in-school club program will target 5th through 8th grades. Different activities within the program will target different ages.

Many programs identify more specific audiences. An example of these would be programs that target youth of military families or programs that target audiences at risk. Some programs target low-income and limited resource families.

3. How was eXtension used?

The Youth Life Skill Development planned program has faculty serving as leaders and/or active members in 1 public **eXtension** Communities of Practice. Our faculty utilize Ask an Expert Widgets and offer various resources for the public.

Overall, we have increased UGA **eXtension** user ids from 92 to 539 in 5 years, and 67,000 web hits on the National **eXtension** site came from Georgians in 2010. UGA has 9 faculty members serving as CoP leaders and 113 active members in 33 of the 47 public communities of practice.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	3237	15317	9851	6327

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

Patent Applications Submitted

Year: 2011

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	3	0	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational contact hours generated from formal educational programs presented to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2011	520

Output #2

Output Measure

- Number of educational contact hours generated from formal educational programs presented directly to clientele by state faculty directly associated with this planned program.

Year	Actual
2011	10520

Output #3

Output Measure

- Number of significant publications including articles, bulletins and extension publications. (excluding peer reviewed articles)

Year	Actual
2011	6

Output #4

Output Measure

- Number of invited presentations by faculty directly resulting from the success of this planned program.

Year	Actual
2011	22

Output #5

Output Measure

- Number of Leadership, Entrepreneurship, and Science Meeting sessions coordinated

Year	Actual
2011	36

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.
2	Total number of youth participants that will enhance decision making skills and develop positive leadership skills, increase their knowledge of entrepreneurship education, and increase their knowledge of science education.

Outcome #1

1. Outcome Measures

Number of additional direct extension contacts made by volunteers, staff, or county agents not receiving federal funds as a direct outcome of the work of federally funded faculty associated with this planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1067725

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
134	Outdoor Recreation
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
206	Basic Plant Biology
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Total number of youth participants that will enhance decision making skills and develop positive leadership skills, increase their knowledge of entrepreneurship education, and increase their knowledge of science education.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	337

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

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

Brief Explanation

Monthly 4-H program activities do not cost youth participants as long as 1890 Extension funds or external grant funding are available to provide funding for these programs. However, current economic challenges or external factors have affected the outcome of some 4-H Programming activities.

Economic situations have also effected schools' accessibility to the program and families' opportunities to participate in some activities.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Based on pre and post testing results and post program evaluations of each respected area there were increases in youth participants acquiring knowledge in the following areas: Science education, Leadership and Entrepreneurship.

4-H'ers all across the state continued to serve other citizens through Georgia 4-H.
Educators today often describe the new three "R's" of education: rigor, relevance, and relationships; citing their significance related to student achievement. The Georgia 4-H Environmental Education program helps school systems by providing opportunities for students to experience rigorous and relevant programming, and opportunities to build and develop relationships.

Data collected from evaluations of the 4-H Environmental Education, conducted during the 2010-11 school year, demonstrates a statistically significant increase in student (1) relationships with their classmates, (2) relationships with their teacher, (3) environmental awareness, (4) environmental behavioral intent, and (5) connectedness to nature. Each of these results can be linked directly back to one of the new 3 R's of education.

Key Items of Evaluation

Georgia 4-H program is well received and continues to provide Georgia's youth with valuable skills and character development.