2010 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

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 2007 population was 9,685,744. The 2008 population listed in the 2010 Georgia County Guide reported 29.07% of Georgians were age 19 or younger and 10.13% of the state's population was 65 or older. Of the state's citizens, the 2010 Georgia County Guide reported that in 2008, 65.4% of Georgians were of white descent, 30% were of African American descent, 8% were of Hispanic descent. From 2000 to 2008 there has been a substantial increase in the Hispanic/Latino descent from 5.3% in 2000 to 8% in 2008.

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 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.

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.

New peanut cultivars for non-irrigated fields resulted in about a $37-million increase in value to Georgia peanut producers.

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.

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. There were 2,282 training sessions provided. Georgia has 70 counties that are considered metropolitan according to the UGA CAES Center for Urban Agriculture.

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.

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.

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 nineteen planned programs for FVSU and UGA. Below is a brief summary of each planned program.

1) Agriculture and Food Defense Program / Agrosecurity - not reporting in the planned program for FY 10.

2) Animal Production and Protection - This program area explores different areas of animal production and protection, focusing on the production of sheep, goats, dairy and beef cattle and swine. Specific topics for this program include, but are not limited to: Georgia Beef Challenge, Master Cattleman's Program, profitability of dairy farming, swine intake regulation, pest control, sheep and goat parasite control, and evaluation of new forages and feeds.

3) Aquaculture - This program area supports the research and promotion of different aspects of aquaculture, including catfish and freshwater prawn production, disease diagnosis services, water quality and aquatic weed identification and re-circulating aquaculture systems.

4) Biorefinery and Carbon Cycling Program - Programming supports research projects that improve existing technology and identify new emerging technologies in the following areas: hydrogen production from peanut hulls and pine chips biomass, use of char in agriculture and BioOil and biodiesel development.

5) Chronic Disease Prevention / Healthy Lifestyles - Programming in this area brings awareness to and researches the issues of chronic disease prevention and healthy lifestyles by disseminating fact sheets on weight control, physical activity, diabetes management and prevention, cardiovascular diseases prevention and cancer prevention to the public. A large focus of this program will be on the state's youth, with statewide classes and meetings being held which will focus on healthy lifestyles.

6) Consumer Economics and Financial Literacy - In this program, UGA specialists 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. FVSU faculty will also develop a long range plan for early intervention in financial literacy and consumer education in targeted areas throughout Georgia.

7) Food Processing, Protection & Safety - Projects include analyzing consumer demand for food, workshops and short courses for food industry, research studies in food processing, development of models and publishing of journal papers and other media.

8) Housing and the Near Environment - In this program, faculty develop and disseminate information on indoor air quality, water quality, waste management and energy management. This program also includes a homebuyer education program, which teaches clientele how to transition from a renter, how to buy a home and how to keep a safe, how to maintain a healthy home environment.

9) Managing Water, Energy, Waste and Air Quality in Agriculture - this program focuses on the research and dissemination of information related to the areas of managing water, energy, waste and air quality in agriculture. Specific research areas will include, but are not limited to: water quality management, animal waste management, nutrient management, irrigation water management under the agricultural pollution control program, watershed management, treatment and utilization of animal manures, and reducing ammonia emissions in poultry production.

10) Meat and Dairy Goat Production and Processing - Program efforts identify the niche market of goat meat. This program also identifies the attributes and types and of goat meat, cheese and milk products. Studies are conducted to determine the effects of preslaughter dietary treatment, duration of feeding, spray washing on different areas of Chevon quality and food safety.

11) New Product Development / Genomics and Cultivar Development - In this program, researchers will conduct basic and applied research to understand the genetics of traits of agronomic importance and the performance of potential genotypes under field conditions, with an emphasis on crops/plants of current or potential importance to Georgia. Researchers develop new cultivars, with emphasis on plants of current or potential importance to Georgia, which manifest improved performance or manifest value-added traits.

12) Plant Production and Protection. Research carried out in the laboratory, greenhouse, experimental farms and in collaboration with commercial producers.

13) Poultry Production and Protection - This program focuses on developing management methods to improve egg production, fertility and hatchability. Field research will be conducted to develop improved energy efficiency and conservation techniques. In addition, educational meetings about bird health, avian influenza and human health will be conducted with poultry farmers and industry representatives. Education materials for each research area will be distributed to select clientele.

14) Quality Caregiving for Children and Youth - Various programs on enhancing parenting /care giving skills are provided. Health, home maintenance and community service are the research and outreach topics. This program will offer conferences for senior citizens, childcare providers and youth. This program will also disseminate parenting fact sheets, age-paced newsletters and information on early brain development, provide parenting and child care provider education classes to agents and select clientele.

15) Specialty Plants Technologies - Selected specialty plants, those with medicinal, nutraceutical and biofuel values, are studied for their invitro plant regeneration and genetic enhancement value -added traits including quality and quantity of phytomedicines, healthy nutrients, and biofuels. Different species of useful plants and animals will be grown / managed in an ecologically sound biological village system using environmentally sound management to develop it into a self -sustaining system on limited resources for improving quality of life for Americans.

16) Sustainability and Profitability of Agriculture - Issues addressed through this planned program, relate to the sustainability and profitability of agriculture, including, but not limited to: management, financial accounting and reporting strategies; alternate cultural practices that will protect, improve and maintain soil fertility; minimum tillage and cover crops; issues related to urban agriculture; value added products or production practices that can improve sustainability and profitability; investigation of niche markets in Georgia.

17) Technology Education for Seniors - Low intensity computer training classes are offered at the county level. Topics include: "Introduction to Computers," "Introduction to the Internet," "Introduction to Email," "Introduction to MS Word" and others as the needs assessment dictate.

18) Urban Agriculture - This program focuses 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.

19) Youth Life Skill Development - This program focuses on issues related to 4H and youth life skill development. 4H faculty members develop curriculum, train and support county extension agents to conduct monthly educational programs for in-school club meetings around the state. They develop and support educational opportunities including individual learning projects and clubs and summer camping programs. A Georgia Youth Summit is held, which will bring youth and adults together to discuss and train on local issues affecting their communities. The Operation Military Kids Team was created to meet the needs of military youth and families who do not fit in the traditional military family system. A large part of this program will fund specialists' research, outreach and their direct efforts primarily to county agents.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	76.0	8.0	87.0	24.0
Actual	92.0	7.2	84.8	22.6

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 meeting. 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.

FY2010 was unique in that a thorough "Review of County Operatations" was conducted for the 1862 Extension program. 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 committees met at least four times during the year. One youth development statewide survey was conducted to collect county input. The statewide CAES advisory committee met two times during the year. With the Archway Partnership, we invite individuals from the general public 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 is channeled to college administration so they have the knowledge to make budgetary decisions. All vacant positions in all departments are brought to college level administration for evaluation based on these criteria before a decision is made to refill. Or 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

• The county delivery program is valued by the external stake holders (Extension 1862, Review of County Operations initiative)
• 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
7875068	2528521	5483042	2863095

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	8074312	2528521	5483042	2863095
Actual Matching	8074312	2528521	5483042	2863095
Actual All Other	0	0	0	0
Total Actual Expended	16148624	5057042	10966084	5726190

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

Agriculture and Food Defense Program / Agrosecurity

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				
212	Pathogens and Nematodes Affecting Plants				
306	Environmental Stress in Animals				
311	Animal Diseases				
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals				
315	Animal Welfare/Well-Being and Protection				
608	Community Resource Planning and Development				
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins				
722	Zoonotic Diseases and Parasites Affecting Humans				
723	Hazards to Human Health and Safety				
	Total				

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	1.0	0.0	0.0	0.0
Actual	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

This program will support the State Strategic Plan for Terrorism and All-Hazards Preparedness through participation in the Georgia Committee on Agriculture & Food Defense. The program will develop and deliver agro- and bio-security education to citizens through the county extension office. The program will lead development of the County Agriculture Response Teams (CART) and/or county agriculture disaster plans in collaboration with local emergency services leadership. It will provide trained extension professionals for key positions in emergency response and participate in the management of a statewide communications network to serve all Agriculture stakeholders. Faculty members will effectively liaison with industry and government agencies.

2. Brief description of the target audience

University, and state and local government agencies, and industry will be trained for prevention and response capabilities. The general public will receive awareness education. A large part of this program will fund specialists and their direct efforts primarily to county agents. These agents will then disseminate this information to the appropriate audience in their counties.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2010

Actual: {No Data

Patents listed
{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	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 to county extension agents by state faculty directly associated with this planned program.

Year	Actual
2010	0

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
2010	0

Output #3

Output Measure

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

Year	Actual
2010	0

Output #4

Output Measure

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

Year	Actual

2010	0

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 program participants reporting increased knowledge after program participation.
3	County Agriculture Response Teams or county agriculture emergency plans created.

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	30000	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
212	Pathogens and Nematodes Affecting Plants
306	Environmental Stress in Animals
311	Animal Diseases
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
315	Animal Welfare/Well-Being and Protection
608	Community Resource Planning and Development
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety

Outcome #2

1. Outcome Measures

Percentage of program participants reporting increased knowledge after program participation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	80	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
212	Pathogens and Nematodes Affecting Plants
306	Environmental Stress in Animals
311	Animal Diseases
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
315	Animal Welfare/Well-Being and Protection
608	Community Resource Planning and Development

712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety

Outcome #3

1. Outcome Measures

County Agriculture Response Teams or county agriculture emergency plans created.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	10	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
212	Pathogens and Nematodes Affecting Plants
306	Environmental Stress in Animals
311	Animal Diseases
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
315	Animal Welfare/Well-Being and Protection

608	Community Resource Planning and Development
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
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

{No Data Entered}

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

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Animal Production and Protection

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
121	Management of Range Resources	0%	0%	0%	6%
133	Pollution Prevention and Mitigation	12%	0%	1%	0%
301	Reproductive Performance of Animals	11%	0%	3%	0%
302	Nutrient Utilization in Animals	16%	50%	10%	32%
303	Genetic Improvement of Animals	7%	0%	38%	8%
304	Animal Genome	0%	0%	3%	0%
305	Animal Physiological Processes	3%	10%	14%	6%
306	Environmental Stress in Animals	4%	0%	2%	0%
307	Animal Management Systems	17%	0%	2%	13%
308	Improved Animal Products (Before Harvest)	2%	0%	0%	0%
311	Animal Diseases	1%	0%	15%	0%
312	External Parasites and Pests of Animals	11%	0%	0%	0%
313	Internal Parasites in Animals	1%	0%	0%	9%
315	Animal Welfare/Well-Being and Protection	1%	0%	5%	0%
601	Economics of Agricultural Production and Farm Management	4%	0%	0%	0%
602	Business Management, Finance, and Taxation	3%	0%	0%	0%
603	Market Economics	4%	0%	0%	0%
701	Nutrient Composition of Food	0%	40%	0%	26%
702	Requirements and Function of Nutrients and Other Food Components	0%	0%	7%	0%
721	Insects and Other Pests Affecting Humans	3%	0%	0%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Extension	Research

Year: 2010	1862	1890	1862	1890
Plan	9.0	1.1	3.0	0.8
Actual	12.2	1.0	0.8	1.6

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
1071306	351184	58208	196798
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1071306	351184	58208	196798
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

Workshops, field trials and farm visits with groups of producers from across Georgia were conducted.

A bull testing program and sale was conducted at two locations per year in Georgia. Approximately 350 bulls were tested each year. A heifer evaluation and reproductive development program and sale was conducted at two locations in Georgia each year. Approximately 400 heifers were evaluated each year. The Georgia Beef Challenge evaluated calves for feedlot performance and carcass evaluation in commercial feedlots.

Georgia's producer organizations have continued to work closely with us in educational and outreach efforts. Through participation in 24 meetings, one-on-one consultations, publications, etc., we provided timely and pertinent information to agents, producers and the general public. In addition to information about flies, fleas, and other ectoparasites, we covered topics related to pests of livestock, poultry, and companion animals. Working with the media, we disseminated information on such topics as ticks, fleas, house flies, pest beetles, mosquitoes, bed bugs, chiggers, and venomous spiders. We collaborated with all the state's food animal associations, as well as the Georgia Pest Control Association, the Georgia Mosquito Control Association, and the Certified Pest Control Operators of Georgia, to provide their members the most up-to-date research-based information.

Research that compares cow-calf production on different bahiagrass and bermudagrass /creep grazing experiments was conducted, as well as evaluation of new forages including Coastcross II for grazing and hay quality; and, pigeon peas for grazing and for grain production for cattle feeding. By-product feeds were evaluated for nutritional and economic value in beef production systems. Strategies were employed to evaluate improved beef meat quality through feeding different additives and grains, and effects on human nutrition (Lowering fat content, decreasing cancer-causing agents, increasing CLA in fat.)

Six group-training sessions were held. Information materials relative to parasites and general small

ruminant management techniques were developed and distributed. On-farm and research station studies with sereica lespedeza, cool-season pasture & hay, warm season annuals, and use of hair sheep genetics were conducted. Over 550 responses were made to technical inquiries via e-mail and telephone. New informational materials were created for Extension/Goats. Field day was held which included livestock production system exhibits.

Growing Goats were supplemented on Bermuda grass pasture with commercial pellets, 75% or 95% sericia lespedeza leaf meal pellets. Body weight were recorded, blood and fecal samples collected.

2. Brief description of the target audience

The target audience is sheep, goat, beef & pork producers, dairymen, horse owners, pet owners, county agents, veterinarians, industry professionals, scientific peers, neighbors of livestock farms, including limited-resource farmers and homeowners.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	3515	22320	980	1792

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	11	24	35

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	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
2010	588

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
2010	1099

Output #4

Output Measure

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

Year	Actual
2010	63

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.

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	Quantitative Target	Actual
2010	31000	57869

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
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

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 Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	65	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
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

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	Quantitative Target	Actual
2010	1111	1615

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 1,263,728,965
Value this reporting year: 1,161,452,882
Decrease of: (102,276,083)

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Cooperation among beef breed associations, Sociological factor)

Brief Explanation

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

Personnel changes and availability of resources influenced and served as alternative explanations for outcomes.

Price of commercial fertilizer will promote the use of organic fertilizers in areas of crop production outside of the poultry producing region.

Public policy on biofuel and impact on land use, food supply, and feed supply. Government regulations on meat inspection. General down-turn in economy meant less money for new enterprises. Success rate of grant applications because more competition for limited funds. Fewer ear marks. Increase in target population and market brought higher demand. Marketing practice and opportunities are factors often cited by clients as challenges.

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

Evaluation Results

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.

Submission rate of poultry litter samples to the lab for analysis to aid in NMP decisions.

One case study on beef marketing was completed. One set of "before" data were collected to measure impact following intervention of deworming protocol. Three "after only" assessments were conducted.

Preliminary data show that growing goats supplemented with 95% pelleted sericia lespedeza leaf meal grw as well as those supplemented with 16% CP commercial pellets.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Aquaculture

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	25%	0%	25%	0%
131	Alternative Uses of Land	25%	15%	25%	15%
302	Nutrient Utilization in Animals	0%	10%	0%	10%
307	Animal Management Systems	25%	35%	25%	35%
311	Animal Diseases	0%	15%	0%	15%
312	External Parasites and Pests of Animals	0%	10%	0%	10%
403	Waste Disposal, Recycling, and Reuse	0%	5%	0%	5%
601	Economics of Agricultural Production and Farm Management	10%	10%	10%	10%
604	Marketing and Distribution Practices	15%	0%	15%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	1.6	1.0	0.0	0.5
Actual	0.6	1.0	0.6	1.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
52687	351184	38603	126967
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
52687	351184	38603	126967
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

FVSU's Georgia Center for Aquaculture Development (GCAD)
Research

- Water quality management and disease diagnosis services were provided for producers
- A variety of herbs were grown aquaponic systems Some were evaluated using tilapia RAS wastes as the sole nutrient sources. Herbs and vegetables in aquaponic units showed positive results.
- Number and diversity of aquatic macrophytes used was increased to begin work on bio-integration, waste cycling and feed. Work has begun on fish waste as a nutrient for algae, which show great promise as an alternative fuel.
- Vermiculture demonstration continued using excess aquatic macrophytes as food for the worms,. along with fruits and vegetables.
- Work with some species show the vital importance of RAS in the off-season spawning and production of commercially important species, as harvestable fish become scarcer.

Facilities

- FVSU's Georgia Center for Aquaculture Development (GCAD) gave direction to the implementation and installation of the new aquaculture facilities and continues improvement and operations. Aquaponic units, both monoculture and polyculture, have increased from 6 to 26.
- Progress was made in equipping the water quality, fish nutrition and disease diagnostic laboratory. Critical equipment was acquired and continues to be purchased, further enhancing research and diagnostic capabilities.

Collaboration:
We continued to collaborate with a number of other institutions and ngos. The director graduated from the LEAD21 program, providing new opportunities. Work with the USDA Southern Regional Aquaculture Center, UGA, Georgia Organics, Davis Farms, Digging Roots Educational Farm Inc., Auburn University, Growing Power, Alabama A &M, Sleepyhollow Farm, Delaware State, VETS LLC, Nature's Last Stand, and the University of Florida. GCAD is also collaborating as the site for selected marine fish testing of the INAD for gonadotropin implants.

Efforts continued for additional staffing besides existing two FTEs, Carpenter/ Production Asst Position, vacant since 7/09 resubmited.

Education

- Numerous publications were created, including articles, brochures, abstracts, and news articles.
- Presentations and workshops were offered with a variety of speakers, on subjects including: best management of optimum health, optimum water quality, proper nutrition, identification and prevention of diseases.
- Twice as many participants received in-depth training from workshops at FVSU than any previous years, even though the GCAD staff was reduced by 33%. Over 11,772 received either written info or training.
- For the first time a 30 hour course on recirculating aquaculture production techniques was requested, developed and taught to over 23 Georgia teachers , who received continuing education credit.
- More than 7,236 participants gained information at aquaculture exhibits and field days.
- Tours of the aquaculture facilities with hands-on experience were provided to more than 1,000 visitors.to the FVSU.

2. Brief description of the target audience

Georgia farmers and citizens who plan to enter the aquaculture business or are already in business. Catfish processing plant operators and their clients are helped directly and through county extension agents. County extension agents are trained at workshops and update meetings.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2352	4800	3672	5520

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	4	0	4

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	8

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
2010	138

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
2010	1767

Output #4

Output Measure

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

Year	Actual
2010	11

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 pond acres in catfish production in Georgia reported annually.
3	Farm gate value of catfish production in Georgia. Reported annually in millions of dollars.

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
- 1862 Research
- 1890 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	850	5186

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
307	Animal Management Systems
311	Animal Diseases
312	External Parasites and Pests of Animals
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

Outcome #2

1. Outcome Measures

Number of pond acres in catfish production in Georgia reported annually.

2. Associated Institution Types

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

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2600	2248

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Acres last reporting year: 2,213
Acres this reporting year: 2,248
Increase of: 35

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
601	Economics of Agricultural Production and Farm Management

Outcome #3

1. Outcome Measures

Farm gate value of catfish production in Georgia. Reported annually 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	Quantitative Target	Actual
2010	5	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 8,156,102
Value this reporting year: 5,994,094
Decrease of: (2,162,008)

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land
307	Animal Management Systems
311	Animal Diseases
312	External Parasites and Pests of Animals
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

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.)
- Other (Fuel cost)

Brief Explanation

Lack of completion of aquaculture laboratory greenhouse and pond facilities have delayed progress of accomplishing some of the planned outcomes. Employment of additional aquaculture staff besides one FTE (aquaculture director) came after the second part of the year and work was still directed at facilities development. Capacity for research had not been reached with facilities nor had staff been trained in aquaculture research capabilities in 2008.

The late date of the hire of asistance and the lack of completed laboratory, aquaculture facilities and acquisition of required research equipment prevented research goals from being accomplished in 2008.

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

Evaluation Results

Four different aquaculture workshops were held at the Georgia Center for Aquaculture Development at FVSU during 2010. At the completion of the workshops evaluations were given to workshop participants for comments on each topic of the workshop. 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 9.6 on a scale from one to ten for all of the different workshops. Speakers also were ranked high by the participants with an average of 9.5 on a scale from one to ten when judged on speaker information and quality. Suggestions on the evaluations included that more workshops be given on aquaculture, additional subject areas in aquaculture, in addition to the development of an aquaculture degree at FVSU. The only major complaints were on the size of the room of the event when larger crowds came to the workshop than anticipated. Future workshops will incorporate some of the new requests for additional information such as pond aquaculture and also ensure that the workshops are held in larger meeting areas.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Biorefinery and Carbon Cycling Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
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 professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	2.0	0.0
Actual	1.5	0.0	6.0	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
131717	0	386032	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
131717	0	386032	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 promoting bioenergy have 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.

2. Brief description of the target audience

Farmers, agribusiness, community leaders, entrepreneurs

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	900	1800	0	0

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

Year: 2010
Actual: 1

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	0	4	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	13

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
2010	276

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
2010	800

Output #4

Output Measure

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

Year	Actual
2010	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	The develoment of successful commercial enterprizes using technology developed in this program.

Outcome #1

1. **Outcome Measures**

The develoment of successful commercial enterprizes using technology developed in this program.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- 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.

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

Evaluation Results

Internal evaluations were conducted during delivery of individual trainings, classes, and proposal reviews. These are used to direct programmatic improvements.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Chronic Disease Prevention / Healthy Lifestyles

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%
502	New and Improved Food Products	1%	0%	0%	0%
703	Nutrition Education and Behavior	47%	50%	0%	0%
724	Healthy Lifestyle	25%	50%	0%	0%
806	Youth Development	27%	0%	0%	0%
	Total	100%	100%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	4.0	0.0
Actual	7.4	0.0	0.5	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
649809	0	32169	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
649809	0	32169	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 2-8 week sessions. Updated **Cooking for a Life Time Cancer Prevention Cooking School** was released. Agents trained to use all of these curricula and were provided media releases to promote and disseminate the information contained in the curricula.

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 as 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

All citizens of Georgia with special emphasis on school age children and populations at high risk of chronic disease.

A large part of this program will fund specialists and their direct efforts primarily to county agents. These agents will then disseminate this information to adults and youth at risk for chronic diseases or who have already developed them.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1382	1000	17285	200

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	6	11	17

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	60

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
2010	637

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
2010	90939

Output #4

Output Measure

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

Year	Actual
2010	60

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 outcome of the work of faculty receiving federal fund within this planned program.
2	Percent of people at risk for cancer who chose a lower fat or lower sodium food item.
3	Percent of participants that lose weight.

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 outcome of the work of faculty receiving federal fund within this planned program.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	14500	21997

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
806	Youth Development

Outcome #2

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
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	60	78

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
806	Youth Development

Outcome #3

1. Outcome Measures

Percent of participants that lose weight.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	80

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

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

External factors which affected the outcome of participants were clientele that were unable to participate in classes because of the economy or personalobligations.

New federal policy changes in reference to health and nutrition.

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

Evaluation Results

Walk Georgia continues to have a significant impact on the fitness level of Georgians. In the Fall 2009 session,3,826 enrolled and 2,597 were still participating after 8 weeks. Participants logged the equivalent of 793,742 miles. Sixty-three percent of participants reported that after Walk Georgia they were either a little or a lot more active than before the program began. During the spring 2010 session, 2014 people were active in the program logging the equivalent of 300,598 miles and in the fall session, 1983 people were active logging the equivalent of 310,499 miles. 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 three percent to 95% of participants said Walk Georgia encouraged them to become more active. Ninety-two to 95% of the participants who logged at least six of the 8 weeks were still active during the final week of each session. Participants in the spring session rated their sense of well-being on a scale of 1-10 as 7.4 before the program and 8.24 after the program ended. Similarly,

fall participants rated their sense of well-being before the program was 7.11 and was 8.31 once the program ended. Before and after the fall session, participants were asked to record their weights. The average weight dropped nine pounds during the session, but one person reported a weight loss of over forty pounds. Ninety-eight to 100% of spring and fall participants were satisfied with the program and 76-85% would recommend it to others. Most of the participants are white females, but 16-17% were African American and 2-3% were of Hispanic or Asian heritage. About 11% 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 $78 million to $93 million in hospital costs could be saved annually.

Evaluation following Ambassador program performed by participations and case studies evaluated. Healthy LIfestyler class also completed

For the planned evaluation studies; before-after questions will occur. This will help the presenter examine the project/workshop effectiveness on the participants. Also, comparisons will be studied between the participants and non-participants to see if behavioral changes have occurred with project/workshop participants. Data collection methods will occur by test being given at the beginning and the end of the workshop. Also, mail surveys will be mailed out a few weeks after the project/workshop to see if behavioral changes have occurred.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 6

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%	20%	0%	0%
801	Individual and Family Resource Management	0%	60%	0%	0%
802	Human Development and Family Well-Being	0%	3%	0%	0%
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	3%	0%	0%
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%	14%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	1.1	0.0	0.0
Actual	1.5	0.3	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
131718	87796	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
131718	87796	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.

Financial literacy fact sheets were distributed. Six 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 (particularly school teachers). More than 50 news articles were developed for distribution by agents to media outlets.

Our Financial literacy program provided 7 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 will direct efforts primarily to county agents. As a result, agents will reach youth, parents, senior citizens and others.

The targeted audiences of the FVSU faculty will be all Georgians and residents in surrounding areas with emphasis on all limited resource and low income families and individuals.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	468	7590	488	16600

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

Patent Applications Submitted

Year: 2010
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	12	0	12

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
2010	154

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
2010	38

Output #3

Output Measure

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

Year	Actual
2010	7

Output #4

Output Measure

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

Year	Actual
2010	28

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.

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	Quantitative Target	Actual
2010	6500	9902

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
802	Human Development and Family Well-Being
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

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

Brief Explanation

Apparel and textiles program may be affected by the following: Staffing patterns and resources available. Participants' and recipients'responses to program implementation.

Slow recovery to the recession of 2009 has resulted in an increased demand for financial literacy education and due to budget cuts, a dwindling capacity to meet the financial information needs of Georgia families.

The downward trend in the economy forced Georgians to take a hard look at their personal finances. High unemployment rates also has had a direct affect on the class. Current changes in credit card policies and a contracted lending market encouraged clients to secure additional information regarding personal finance.

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

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 rating 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, three 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 a 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 open-ended responses 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- and post-test assessments.

A Pre and post test was 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.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Food Processing, Protection & 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
204	Plant Product Quality and Utility (Preharvest)	0%	0%	37%	0%
216	Integrated Pest Management Systems	5%	0%	3%	0%
401	Structures, Facilities, and General Purpose Farm Supplies	0%	5%	5%	5%
402	Engineering Systems and Equipment	0%	0%	4%	0%
403	Waste Disposal, Recycling, and Reuse	0%	5%	0%	5%
501	New and Improved Food Processing Technologies	7%	23%	3%	23%
502	New and Improved Food Products	4%	5%	12%	5%
503	Quality Maintenance in Storing and Marketing Food Products	4%	18%	3%	18%
504	Home and Commercial Food Service	22%	0%	0%	0%
511	New and Improved Non-Food Products and Processes	0%	5%	9%	5%
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%	5%	0%	5%
606	International Trade and Development	2%	0%	1%	0%
701	Nutrient Composition of Food	0%	10%	0%	10%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	28%	24%	12%	24%
721	Insects and Other Pests Affecting Humans	5%	0%	3%	0%
722	Zoonotic Diseases and Parasites Affecting Humans	5%	0%	3%	0%
723	Hazards to Human Health and Safety	18%	0%	5%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890

Plan	8.0	0.3	0.0	6.8
Actual	4.9	0.3	3.1	9.8

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
430279	87796	199450	1237928
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
430279	87796	199450	1237928
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

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

According to the submitted plan of work, three main research activities have been performed: (1) development and evaluation of lipid moieties in low-fat compared to full-fat goat milk cheeses during refrigerated storage, (2) Proteolytic, lipolytic and rheological changes in low-fat and full-fat goat milk cheeses, and (3) development and quality evaluation of plain goat milk yoghurts under refrigeration.

Results of studies have been disseminated to producers, consumers and other clienteles by newsletters, e-mails and workshops. The findings were also shared with the scientific communities by journal publications and presentations.at several scientific conferences.

Educational programs were conducted with various clientele groups such as mosquito control, public health personnel and county extension personnel. Research in vector biology and control of several vector species is ongoing in Georgia.

HACCP workshops were delivered for the meat and poultry industry. Other workshops conducted for fresh-cut produce industry; fresh produce industry, nut processors
Plant microbial control workshop with hands-on labs was well received.
One Poultry Processing taught entirely in Spanish at the International Poultry Show, with 31 international attendees. The EFS team has scheduled HACCP and other food safety training workshops,

Researchers characterized the rheology of low methoxy pectin gels containing montmorillonite

nanoparticles with well-defined surface chemistry. They modified montmorillonite clay to have a surface chemistry of our own design, and these particles have already shown significant antimicrobial activity. Incorporation of this material into a series or filters that can easily be installed and reinstalled is also underway.

2. Brief description of the target audience

Food industry managers, quality assurance, HACCP coordinators, microbiologists, third-party auditors, government inspectors, county extension agents

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1386	20056543	300	6000

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	1	12	13

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
2010	698

Output #2

Output Measure

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

Year	Actual
2010	34

Output #3

Output Measure

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

Year	Actual
2010	1

Output #4

Output Measure

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

Year	Actual
2010	124

Output #5

Output Measure

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

Year	Actual
2010	33

Output #6

Output Measure

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

Year	Actual
2010	600

Output #7

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
2010	910

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Reduction of incidence of foodborne illness due to better training methods on handling and processing food safety.
2	Placement of gradutate students in food related industry, government agencies or institutions of higher education.
3	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.
4	Number of agents increasing knowledge as a result of food safety training provided by specialists.
5	Average percent increase in food safety test scores as a result of programs conducted statewide.

Outcome #1

1. Outcome Measures

Reduction of incidence of foodborne illness due to better training methods on handling and processing food safety.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

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

Not Reporting on this Outcome Measure

Outcome #3

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	15000	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
503	Quality Maintenance in Storing and Marketing Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
722	Zoonotic Diseases and Parasites Affecting Humans
723	Hazards to Human Health and Safety

Outcome #4

1. Outcome Measures

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

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	225

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

Average percent increase in 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	Quantitative Target	Actual
2010	{No Data Entered}	15

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

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.)
- Other (Personnel changes)

Brief Explanation

Stringent FDA regulations on infant (human subject) feeding trials. It requires at least 62 infants for a feeding experiment, which must have enormous amount of funds to execute the experiment -not enough funds to conduct infant feeding trials or complete the development of the original intended goat milk infant formula.

Recent surge and governmental research supports/emphasis on biotechnology, genetic engineering and stem cell research programs has been extremely challenging to dairy goat research.

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

State budget cuts in FY09, 10, and 11 and decreased funding overall impacted outcomes.

Regulations requiring certification of restaurant managers/designated employee increased demand for ServSafe training. Decreases in state funding and loss of county Family and Consumer Sciences Agent positions remain a critical issue.

Tightened budgets in the food industry reduced attendance; some workshops were cancelled due to insufficient numbers.
The passage of the new Food Safety Modernization Act in December 2010 may result in higher attendance for the fresh produce GAPs/HACCP and fresh-cut HACCP certification courses in 2011.

Significant public policy change was the emergence of a new executive administration which caused a delayed deadline in submission of research proposals and some changes to the process and priorities, and this continues to evolve in early 2010 as we experience more delays and more significant changes (expected) to priorities.

Research personnel changes effected progress on than the nanotechnology projects.

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

Evaluation Results

The progresses of the research project have been evaluated by the appointed committee members, especially during the PI's Ph. D. student final oral exam period in 2007. Consumer acceptability studies at local retail outlet stores have not conducted due to lack of student assistance. Descriptive sensory studies on the developed goat cheese was once conducted at public gathering such as annual Agriculture Expo in Moultrie, GA. Since the project is far from completion, the two planned evaluations have not conducted, which include: #1. Estimate the volume of marketing and sale of the developed dairy goat products from this program. #2. Survey of the economic gains of the limited resources goat farmers after the planned project executed.
However, several refereed journal papers have been published and several paper presentations made at the annual scientific conferences using the data generated so far from the experiments conducted for the project.
Sensory quality of five year frozen-stored Monterey goat cheeses has been evaluated by sensory panel of collaborating institution, North Carolina State University. Moreover, the acceptability and sensory/flavor characteristics of the reduced-fat cheeses are currently investigated by the professional sensory panel by the same collaborating institution.

Evaluation forms were provided to participants in training programs. Evaluation results are considered and recommendations incorporated as future program activities are developed.

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.

Overall evaluations from participants were consistently high again in 2008. The results of the evaluations were distributed to all speakers, and reviewed during program planning for the 2009 calendar year.
For the 2009 calendar year, the EFS team created three new commodity-specific HACCP workshops for Coca-Cola, peanut product processors, and for nut product manufacturers. These were in addition to the four regularly scheduled HACCP programs for meat and poultry industry (2 workshops), fresh-cut produce industry, and a HACCP-based GAPs workshop for fresh produce growers, packers and shippers. A new workshop for poultry processors was delivered entirely in Spanish, with several HACCP components in the program, but the workshop not entirely dedicated to HACCP training.

The 2010 workshops were well attended and received high marks on the participant evaluations, ranging from 4.47 to 4.70 out of possible 5.0 in the overall course rating.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 8

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 professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	1.0	0.0	0.0
Actual	4.1	1.0	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
360029	351184	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
360029	351184	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 12 homebuyer education workshops to 600 consumers throughout the year. The workshops raised consumer awareness of programs available to assist with home ownership needs. 24 participants purchased homes valued at approximately $2.2 million.

Educational materials and resources have been updated. Agents received training on new housing and foreclosure prevention programs from HUD, USDA and DCA.

Education and information was 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 and lead safe work practices 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 37,535 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 specialist is the county agent. The county agents take the information into the communities where it is disseminated to the general public.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1015	625	51	0

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	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
2010	71

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
2010	3612

Output #3

Output Measure

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

Year	Actual
2010	8

Output #4

Output Measure

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

Year	Actual
2010	5

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	Quantitative Target	Actual
2010	120000	27113

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

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.

Not Reporting on this Outcome Measure

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
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	40	575

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Not measured by percentage, but actual number of participants who tested their homes for indoor air quality contaminants as a result of the educational programs conducted by county agents.

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	Quantitative Target	Actual
2010	0	60

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

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	Quantitative Target	Actual
2010	5	24

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
- 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.

The ongoing economic challenges, job losses and housing foreclosures impacted the types of questions and services requested.

The downturn in the economy means that even the slightest fluctuations in energy costs have a great impact on families. The drought ended and then we had severe flooding, both of which resulted in a decreased interest in water conservation programs and information.

Interest in lead safety as it relates to imported toys, candy and cooking vessels continues to increase. Also, changes in federal regulations require training contractors on how to safely remove lead in remodeling projects. UGA provided training for contractors and builders and will continue to do so in the upcoming year. There has been an increased focus at the Federal level in healthy housing issues that has resulted in additional funding

opportunities in this area.

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

Evaluation Results

At the beginning and at the conclusion of each homebuyer education series a test was adminstered 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 commented they felt their knowledge increased.

Agent trainings were assessed informally during the program to guide the program and make sure gaps in knowledge were addressed. An informal survey method was used with workshop and counseling participants. In about half of the workshops an evaluation tool was used.

Programs were evaluated at the end, so there was no way to measure knowledge gained. This method of evaluation was selected because energy and water programs are often less than one hour and participants come with an awareness of the water shortage or energy costs.

Pre- and post-tests are administered. Radon test kits were distributed free of charge and 1,234 consumers tested their homes.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Managing Water, Energy, Waste and Air Quality in 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
101	Appraisal of Soil Resources	1%	0%	1%	0%
102	Soil, Plant, Water, Nutrient Relationships	14%	0%	2%	0%
104	Protect Soil from Harmful Effects of Natural Elements	2%	0%	3%	0%
111	Conservation and Efficient Use of Water	9%	0%	12%	0%
112	Watershed Protection and Management	21%	0%	12%	0%
131	Alternative Uses of Land	2%	0%	3%	0%
133	Pollution Prevention and Mitigation	19%	0%	22%	0%
134	Outdoor Recreation	2%	0%	3%	0%
141	Air Resource Protection and Management	1%	0%	1%	0%
205	Plant Management Systems	12%	0%	17%	0%
403	Waste Disposal, Recycling, and Reuse	13%	0%	13%	0%
511	New and Improved Non-Food Products and Processes	0%	0%	6%	0%
605	Natural Resource and Environmental Economics	4%	0%	5%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	17.0	0.5	11.0	0.0
Actual	19.0	0.0	19.0	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**
1668428	0	1214088	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1668428	0	1214088	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

Numerous meetings and workshops were conducted, including those for mandated certification. Faculty worked with a wide variety of audiences including policy makers, youth, farmers, and concerned citizens.

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

Molecular Environmental Science: focused on the processes controlling the cycling, transport, and bioavailability of nutrients and contaminants in the environment. Combining with molecular biological tools is providing new insights into the processes and mechanisms controlling nutrient and contaminant behavior in the environment.

Nutrient Management: focused on the biological and chemical pathways of nutrient cycling in soils. Methodologies include remote sensing methods and other protocols for mapping the spatial variability of soil properties, ammonia volatilization from surface applied urea fertilizer and animal manures and the development of better methods for the routine determination of soil pH and lime requirement.

Remediation: research continues on abiotic remediation and phytoremediation, including: studies in highly contaminated ground waters of an abandoned chemical plant

Soil Biology and Biochemistry: studied the influences of biological activity on soil structure and function. Focus on how soil invertebrates (especially earthworms) affect water-stable aggregate formation and the associated turnover and accumulation of soil organic matter and nutrients. Also focus on microorganisms influence on the soil environment. Used standard soil microbiology techniques to study microbial life and soil organic matter, as well as the more advanced techniques of compound specific isotope analysis, nuclear magnetic resonance spectroscopy, and DNA-based methods. Focus areas have implications for environmental quality, conservation management and carbon-sequestration in agricultural and forest soils.

Soil Pedology: conducted research on the genesis, landscape distribution, and interpretation of soils. Current research is focused on understanding of hydraulic properties of soils, including investigations of the relationships between redoximorphic features and depth and duration of seasonal saturation; and soil-landscape relationships and their effect on landscape redistribution of water.

Waste Management: The faculty in the waste management area conduct research on land application of industrial and animal wastes. Industrial by-products studied include coal combustion wastes, pulp and paper mill wastes, and sewage sludge. Animal wastes include different poultry manures,(large poultry industry in GA). The waste management area includes a focus on on-site wastewater (septic) management systems.

Water Resources: studied the effect of non-point sources of pollution on surface water. Primary pollutants: phosphorus, sediment, and bacteria. Research focused on water conservation options through management changes.

2. Brief description of the target audience

The primary target audiences are county extension agents, growers, industry representatives, consultants, contractors, media, regulatory and policy representatives, community leaders,

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5358	13900	645	1330

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

Patent Applications Submitted

Year: 2010

Actual: 1

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	83	80	163

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
2010	271

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
2010	2090

Output #3

Output Measure

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

Year	Actual
2010	46

Output #4

Output Measure

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

Year	Actual
2010	56

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	Placement of graduate students in environmentally related jobs in industry, NGOs and/or government agencies.

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	Quantitative Target	Actual
2010	13000	101551

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
112	Watershed Protection and Management
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
141	Air Resource Protection and Management
403	Waste Disposal, Recycling, and Reuse
511	New and Improved Non-Food Products and Processes

Outcome #2

1. Outcome Measures

Placement of graduate students in environmentally related jobs in industry, NGOs and/or government agencies.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2	0

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
112	Watershed Protection and Management
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
141	Air Resource Protection and Management
403	Waste Disposal, Recycling, and Reuse
511	New and Improved Non-Food Products and Processes

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

Policy changes have been developed which did affect, lessening funding for research and support of farm environmental improvements.

Because of the drought, more emphasis was placed on water conservation issues and less on water quality issues than the planned initially called for. In 2010, State budget shortages have limited the number of faculty assigned to this issue. Also as a result of drought, many producers as some have cut herd sizes due to a lack of feed.

Government regulation concerning water use may also increase funding opportunities. Regulations and the interpretation and enforcement of the rules is constantly evolving and impacting our programs.

Interest and work continues on how to best manage water resources under volatile weather conditions to protect human uses and the value of ecosystem services. Government regulations continue to be key to designing best management practices for meeting the State's environmental and natural resource conservation objectives.

The increases in fertilizer prices is positively influencing the value of animal manures and increasing off farm demand.

The national push for biofuels is influencing nutrient management as animal diets are changing due to the high costs of corn.

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

Evaluation Results

Reporting on research, teaching, extrmural funding, and publications was completed.

In Georgia, we did not conduct evaluation studies in 2010 although we contributed to regional evaluation efforts that are available on the website above.

Evalualtions were performed following presentations at grower meetings

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 rReporting on research, teaching, extramural funding, and publications was completed.

Georgia contributed to regional evaluation efforts that are available on the website above.

Evaluations were performed following presentations at grower meetings

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.eceive.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Meat and Dairy Goat Production and Processing

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
303	Genetic Improvement of Animals	0%	0%	0%	17%
304	Animal Genome	0%	0%	0%	17%
305	Animal Physiological Processes	20%	0%	0%	3%
306	Environmental Stress in Animals	20%	0%	0%	3%
307	Animal Management Systems	20%	0%	0%	3%
308	Improved Animal Products (Before Harvest)	20%	0%	0%	7%
502	New and Improved Food Products	20%	0%	0%	7%
601	Economics of Agricultural Production and Farm Management	0%	0%	0%	6%
604	Marketing and Distribution Practices	0%	0%	0%	20%
607	Consumer Economics	0%	0%	0%	7%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%	0%	0%	10%
	Total	100%	0%	0%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	4.0
Actual	0.4	0.0	0.0	4.3

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
35125	0	0	539600
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
35125	0	0	539600
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

An experiment was conducted to assess the effects of pasture grazing and transportation stress on microbial loads on skin and carcass and in the gastrointestinal tracts of meat goats.
In a Completely Randomized Design with split-plot treatment arrangement. Thirty Spanish intact male kids were allowed to graze on either Bermuda grass, sericea lespedeza, or BG+SL pasture for 8 wk.

At the end of the grazing period, 5 kids from each pasture were randomly selected. Samples were taken from subjects immediately after unloading from transport trailer and pre-slaughter the following morning.

Testing was done to assess the the microbial counts on skin immediately after transportation or prior to slaughter, as well as E. coli, total coliform, and total plate counts. The microbial counts of rumen and fecal contents were also tested.

In continuation with earlier work on myostatin gene promoter this year we identified a correctly oriented clone (pPRO-3) using restriction mapping. We have also sequenced the promoter-GFP reporter junction in both orientations which revealed a translation fusion of the MSTN promoter and GFP reporter (accomplishing our objective no 2).

We also did initial experiments whereby we transfected C2C12 cells with the p PRO-3 plasmid. In initial experiments we did not get any GFP positive cells. However we need to repeat those experiments to exclude any possibility. The results were presented in the American Society of Animal Science (Southern Section) Meeting at Orlando. Two undergraduate students, one technician and one middle school student received training in molecular biology during this period. This research also provided us an opportunity to extend linkages with Dr. Steve Stice (UGA), Dr. David Donovan (USDA) and Dr. Anil Sharma (Myo Clinic Rochester) anticipating future collaborations.
We also initiated work on cell culture; in collaboration with Dr. Anil sharma of Mayoclinic, Rochester. Three different commercially available media, known to support human and porcine-specific fibroblast cultures, were tested for their growth potential on goat skin explants. These goat skin fibroblast lines and the simple method of their isolation and freezing with high rate of viability will provide additional tools to study molecular mechanisms that regulate fibroblast function and for genetic manipulation of small ruminants.

A survey instrument for meat goat producers was developed. A database for small farmers was developed.

A pilot survey to determine the decision making process of meat goat production was conducted at the 2009 goat-a-rama in Sandersville, GA. A list of goat processors was put together. Multiple presentations were given using the collected data.

Survey questionnaires were mailed to farmers using a list provided by the FVSU Cooperative Extension to identify meat goat producers. Consumer surveys also were conducted at the annual Fort valley Field Day and at the 2010 Agricultural Exposition.
Presentations were made and an article was published on findings.

2. Brief description of the target audience

The scientific community in food and agricultural sciences, extension workers, food processors, goat enthusiasts, meat goat producers, and concusmers, dairy producers and consumers

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	100	500	0	0

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

Patent Applications Submitted

Year: 2010
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	0	1	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	2

Output #2

Output Measure

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

Year	Actual
2010	4

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
2010	0

Output #4

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
2010	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of research experiments completed on dairy goat products development, food quality and economic evaluation.
2	Number of farmers using best herd health and parasite management practices.
3	Percentage of decrease in herd production loss.
4	Number of farmers learning control techniques.

Outcome #1

1. **Outcome Measures**

   Number of research experiments completed on dairy goat products development, food quality and economic evaluation.

   Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

   Number of farmers using best herd health and parasite management practices.

   Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

   Percentage of decrease in herd production loss.

   Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

   Number of farmers learning control techniques.

2. **Associated Institution Types**

   - 1890 Research

3a. **Outcome Type:**

   Change in Knowledge Outcome Measure

3b. **Quantitative Outcome**

Year	Quantitative Target	Actual
2010	100	30

3c. **Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

Medium term measures are the number of producers receiving relevant information; and the number of farmers developing individual enterprise budgets and business plans.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
502	New and Improved Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)
- Other ()

Brief Explanation

Availability of homogenous groups of animals (similar age, breed, sex, etc.) was an external factor that caused some delay prior to beginning of experiments.

However, this did not affect the outcome of the experiments.

Manpower not available, faculty had more teaching load, and delay in instruments/supplies.

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

Evaluation Results

Ideal pre-slaughter management methods can be identified and recommended to the producers only after completion of all aspects (objectives) of the study. None of the pre-slaughter management methods studied so far to control carcass contaminations significantly influenced the quality characteristics of fresh (goat meat).

Evaluations were for the final stage.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

New Product Development / Genomics and Cultivar 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
201	Plant Genome, Genetics, and Genetic Mechanisms	54%	0%	30%	0%
202	Plant Genetic Resources	40%	0%	37%	0%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	5%	0%
204	Plant Product Quality and Utility (Preharvest)	0%	0%	6%	0%
205	Plant Management Systems	0%	0%	3%	0%
206	Basic Plant Biology	6%	0%	3%	0%
212	Pathogens and Nematodes Affecting Plants	0%	0%	3%	0%
511	New and Improved Non-Food Products and Processes	0%	0%	13%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	7.0	0.0
Actual	0.3	0.0	10.4	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**
21953	0	667513	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
21953	0	667513	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

Generated more than 3000 new plant seedlings. Made more than 150 new plant selections. Evaluated more than 300 advanced blueberry selections. Released a new blueberry cultivar.

Cereal breeding/genetics/genomics- develops cultivars and germplasm adapted to the Southeast's climatic conditions, with superior yield, agronomic traits, durable pest resistance, and end-use quality.

Comparative grass genomics -- develops cross-taxon genomic tools, genetic tools , comparative functional analyses of agronomically important genes.

Crop genomics--Genomics research reveals basic principles of genetics and evolution in the genomes of model organisms, and accelerate assembly of the genomic frameworks.

Cotton breeding/genetics/genomics- develops genetically improved cotton germplasm using classical breeding techniques with a focus on new biotechnology tools such as DNA markers and gene transformation technology.

Forage breeding/genetics/genomics-- breeds grass species. Applyed genomic approaches to improve the efficiency and effectiveness of cultivar development.

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

Peanut breeding/genetics/genomics- breeds superior cultivars and genetics of important agronomic traits. Development of molecular tools and information is also undertaken to reveal intrinsic genetic potential and support more efficient cultivar development.

Soybean breeding/genetics/genomics - develops superior yielding, multiple pest resistant cultivars, utilizes molecular technologies t, identifies and characterizes useful genetic variation improvement.

Sunflower and specialty oil breeding/genetics/genomics--applies breeding and cultivar development and uses molecular techniques, translational and comparative genomics.

Turfgrass breeding/genetics/genomics - breeds superior grasses with lower water, pesticide, and management requirements and cultivars with tolerance to salinity and other stresses.

Peach was selected as a model for woody ornamental plants because it has a short juvenile period, self-fertilizing perfect flowers, and a small, sequenced, diploid genome. The level of the mutagen EMS that reduced pollen viability by 50% was determined and then used to produce mutagenized pollen. Approximately 6000 emasculated peach flowers were pollinated with mutagenized pollen. The genomic sequence of the single-copy genes was obtained. PCR primers were designed to amplify TFL1 and AG exon sequences. Genomic DNA was isolated from 36 peach varieties and TFL1 exon regions were PCR amplified. Natural polymorphisms in TFL1 coding sequence were identified using high resolution melting.

Germplasm resistant to various watermelon diseases was obtained and seed was increased. Sequence databases was screened for NBS-sequences.SNP mapping was carried out for developed populations

2. Brief description of the target audience

Scientific peers and Extension Faculty.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1840	3680	20	0

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

Patent Applications Submitted

Year: 2010

Actual: 8

Patents listed

Mixotrophic algae and their consortia for the production of algae biofuel feedstock in wastewater ponds

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	0	208	208

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	41

Output #2

Output Measure

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

Year	Actual
2010	32

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Release of new cultivars or germplasms
2	Number of growers, both local and international, that are using new cultivar varities.

Outcome #1

1. Outcome Measures

Release of new cultivars or germplasms

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	15	2

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

Outcome #2

1. Outcome Measures

Number of growers, both local and international, that are using new cultivar varities.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	50	100

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
75 Georgia, 25 international

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
204	Plant Product Quality and Utility (Preharvest)

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

Brief Explanation

Extreme drought in 2007/2008 affected our ability to successfully grow the plant materials being evaluated.

Funding limitations limited some research activity.

Government regulations restricting water use hurt outdoor programs and badly damaged the economy of buying ornamental plants. The down swing in the economy reduced the demand for new material slowed blueberry acreage expansions.

A late spring freeze significantly reduced the number of viable peach seeds.

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

Evaluation Results

New promising advanced blueberry selections were identified for further testing. On-farm trials receive favorable reviews from growers of potential new varieties being evaluated. Commercial acreage of recent UGA blueberry variety releases was increased in 2010.

Reporting on funding, sales, extramural funding, released cultivars and publications was completed.

Within a group of 36 peach varieties, genetic polymorphism was found at the same locus in the fourth TFL1 exon. Two varieties were heterozygous for this nucleotide change and one was homozygous for this change. There were no other genetic changes in TFL1 sequence.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Plant Production and Protection

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%	2%	0%
124	Urban Forestry	0%	0%	3%	0%
136	Conservation of Biological Diversity	0%	0%	3%	0%
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	4%	0%
202	Plant Genetic Resources	1%	0%	2%	0%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	6%	0%
204	Plant Product Quality and Utility (Preharvest)	5%	0%	4%	0%
205	Plant Management Systems	12%	0%	2%	0%
206	Basic Plant Biology	1%	0%	4%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	4%	0%	2%	0%
212	Pathogens and Nematodes Affecting Plants	46%	0%	47%	0%
213	Weeds Affecting Plants	5%	0%	2%	0%
215	Biological Control of Pests Affecting Plants	0%	0%	7%	0%
216	Integrated Pest Management Systems	24%	0%	12%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	16.0	0.0	12.0	0.3
Actual	16.0	0.0	18.6	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**
1404992	0	1198564	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1404992	0	1198564	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

Research conducted includes:

- Herbicide efficacy in agronomic and horticultural crops, and non-cropland areas
- Herbicide physiology including herbicide resistance
- Environmental fate of herbicide in soil and water systems
- Minor crop herbicide registrations (IR-4 program) and third party herbicide registrations
- Herbicide-resistance weed management and weed management challenges resulting from the use of herbicide-resistant crops
- Computer-based software for weed management decisions
- Cultural practice interactions with crop weed management
- Weed sensor sprayer technology related to precision agriculture
- Alternatives for methyl bromide in plasticulture vegetable production
- Invasive plant ecology and management
- Cotton management systems to improve quality and production efficiency.
- Forages - effects of livestock graze toxic endophyte-infected tall fescue pastures
- Grain crops - increase efficiency and profitability summer/ winter production
- Peanut- applied production issues that have a synergistic effect with pest management, mechanization, irrigation, and economic stability
- Soybean - asiatic soybean rust detection and control, and plant growth regulation
- Turfgrass - water conservation, alternative sources for irrigation water (often more saline), including salinity tolerance, drought resistance, and site assessment
- Transgenic plants
- Plant cold hardiness potential
- DNA sequencing andmap chromosomal regions inherited with apomixis
- Physically map chromosomal regions inherited with apomixis
- gspC gene products in function and specificity of protein secretion by the Type II systems in R. solanacearum and related betaproteobacteria
- Peaches-
- Blueberry- Phosphite products possible low-cost alternative to Aliette
- DMI resistance to Monilinia fructicola (brown rot)
- Bt toxin efficacy
- fluopicolide and mandipropamid efficacy
- Diverse plant pathogens, fungi, growth regulators
- Powdery mildew of cucurbits
- Fungicides, insecticides and biological control product trials

Education and publications based on research findings include:

- Presentations at National, State, and Regional conferences
- Extensive number of production meetings, workshops, in-service trainings , and demonstrations at State, Regional, and local levels
- Several industry handbooks and patents
- Peer reviewed articles, abstracts, chapters, posters and proceedings
- Newsletters, bulletins, DVD, online modules and various other media
- Undergraduate and graduate student training

2. Brief description of the target audience

Greenhouse operators, farmers, county extension agents, seed companies, chemical companies, industry representatives, turfgrass professionals, general public

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5070	7270	81	211

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

Patent Applications Submitted

Year: 2010

Actual: 1

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	179	242	421

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	267

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
2010	226

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
2010	435

Output #4

Output Measure

- Number of disease samples processed by diagnostic laboratory.

Year	Actual
2010	1545

Output #5

Output Measure

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

Year	Actual
2010	204

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 Master Gardener certifications granted through this program.
3	Farm gate value of row and forage crops in Georgia. Reported annually in millions of dollars.
4	Farm gate value of fruit and nut crops in Georgia. Reported annually in millions of dollars.
5	Farm gate value of vegetable crops in Georgia. Reported annually in millions of dollars.
6	Farm gate value of ornamental horticulture crops in Georgia. Reported annually in millions of dollars.

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	Quantitative Target	Actual
2010	120000	1149767

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
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

Number of Master Gardener certifications granted through this program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	600	498

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
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

Farm gate value of row and forage crops in Georgia. 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	Quantitative Target	Actual
2010	1901	1881

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 2,009,762,474
Value this reporting year: 1,881,292,056
Decrease of: -128470418

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #4

1. Outcome Measures

Farm gate value of fruit and nut crops in Georgia. 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	Quantitative Target	Actual
2010	248	366

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 267,729,337
Value this reporting year: 366,299,671
Increase of: 98,570,334

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #5

1. Outcome Measures

Farm gate value of vegetable crops in Georgia. 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	Quantitative Target	Actual
2010	792	916

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 849,037,686
Value this reporting year: 915,632,787
Increase of: 66,595,101

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

Outcome #6

1. Outcome Measures

Farm gate value of ornamental horticulture crops in Georgia. 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	Quantitative Target	Actual
2010	716	697

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Value last reporting year: 695,986,551
Value this reporting year: 698,621,712
Increase of: 2,635,161

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems

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.)
- Other (Available Resources Success in obtaining agency contracts and grants for one project)

Brief Explanation

Severe budget limitations from economic decline reduced state and grower inputs significantly. Economic recession during 2010 affected fruit producers' economic outlook and changed cost-benefit ratios in pest management. Much higher prices for fuel, fertilizer and pesticides put tremendous pressure on the bottom line for most growers.

No federally funded competitive grant in place. Changes in NIFA eligibility negatively impacted our progress.

Drought conditions in Georgia during the last year and watering restrictions put some limits on our outdoor plant propagation activities. Dry weather in 2010 really caused bacterial psot to not be a problem. Our field trials showed that current bacterial spot practices work while new measures show promise.

Hail & cold damage occurred in some plots causing severe damage to onions.

Re-registration of insecticides and registration problems with a specific new insecticide resulted in loss, or potential loss, of several kewy insecticides. Educational activities were modified to highlight these situations with growers. Insecticide resistance in the cowpea curculio presented severe problems for growers of beans. This resulted in changes in educational activities and development of research to attempt to address this problem.

Removal of pecan from the label of aldicarb reduced the choices for aphid and mite control.

Peach insecticide efficacy trials were conducted, but fruit loss associated with cold injury and flooding of the orchard while pest life stages were in-ground reduced pest pressure to negligible levels.

Naturally infested seeds were available through solicitation from seed companies as well as by the ability of collaborators to generate naturally infested seedlots. Laboratory personnel participated in the trials and the workshops.

Phytophthora ramorum remains a federally regulated pathogen. However, federal funds to study, survey, and ultimately manage P. ramorum are being significantly reduced compared to past funding years. The elimination of funding in 2009 due to state agency budget cuts resulted in sample processing being completed on a per sample basis with the SPDN laboratory in Gainesville, FL. The funding and support for the P. ramorum certification program has decreased due to economic hardships (economy, drastic increase in transportation costs, and drought) to the green industry in Georgia, as well as lack of publicity following P. ramorum recovery.

Awaing EPA approval on halosulfurons registration.
Government regulations on germplasm release policies required that were unexpected.

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

Evaluation Results

A major validation of ammonia emissions from broiler houses was completed. A significant equipment grannt was received by the UGA ammonia emission team.

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

Evaluations of workshops were completed. Program participants ranked the value of workshops very highly. In addition, government and industry funding agencies have provided evidence of the impact of this work by volunteering to supply resources for energy conservation projects. Poultry farmers have adopted new energy efficiency strategies that have been recommended.

Evaluation will be based on negative results; that is the failure of AI to infect Georgia poultry flocks will be considered a successful outcome. Data will be collected from participants in trainings and state and federal agencies responsible for poultry health.

Problem solving activities were able to prevent several poultry processing plants from failing additional food safety inspections and prevented possible plant closings.

Field trials are being conducted with industry partners. Implementation of findings from this research is beginning to be seen in the poultry industry.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Poultry Production and Protection

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	13%	0%	20%	0%
141	Air Resource Protection and Management	7%	0%	10%	0%
301	Reproductive Performance of Animals	9%	0%	14%	0%
305	Animal Physiological Processes	7%	0%	0%	0%
306	Environmental Stress in Animals	5%	0%	0%	0%
307	Animal Management Systems	21%	0%	6%	0%
311	Animal Diseases	13%	0%	20%	0%
315	Animal Welfare/Well-Being and Protection	5%	0%	0%	0%
403	Waste Disposal, Recycling, and Reuse	7%	0%	10%	0%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	13%	0%	20%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	2.0	0.0
Actual	3.8	0.0	1.0	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**
329295	0	89600	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
329295	0	89600	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

Research conducted includes:

• A comprehensive validation of ammonia emissions from broiler houses Findings demonstrated emissions could be measured accurately, simply and inexpensively. Ammonia group received a significant equipment grant.
• Ammonia emissions from broiler houses were measured to determine concentrations at various distances from the broiler houses.
• Research on phytate phosphorous and phytase enzyme
• Food safety as related to poultry
• Evaluation of novel chemistry techniques to disinfect or remove microbial pathogens
• Research to develop improved methods of feeding and managing broiler breeders to increase egg production, improve fertility and reduce stress. Findings from this research resulted in improvements in all of these areas. Egg production has been increased almost 10% by changes in feeding regimes. Animal welfare has been improved by increasing the frequency of feeding.
• Research to help reduce heating fuel and electricity costs, which account for almost 60% of a typical contract broiler grower's variable production costs. Rising energy costs over the last decade have contributed to the need for growers to find more energy efficient means of heating and cooling their poultry houses.
• Studies on energy efficiency of solid-wall vs. curtain-sided houses. While solid-wall houses are more efficient t, both can benefit from taking steps to maximize the benefit of the fuel used. Recommendations as a result of this project were shared with industry producers and professionals.
•

In addition to published newsletter, bulletins, and articles, educational Extension programs were offered based on research findings, including:

• Methods of feeding and managing broiler breeders
• Weatherproofing
• Reduction in electrical usage taking specific steps:
• Ventilation workshops
• Nutrient management planning (NMP) which included phosphorous management strategies to reduce environmental impact
• Visits and assistance to individual processing plants

2. Brief description of the target audience

The target audience of this planned program include county extension agents, poultry producers, and poultry company professionals.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1031	8600	50	0

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	5	5	10

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
2010	15

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
2010	63

Output #3

Output Measure

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

Year	Actual
2010	22

Output #4

Output Measure

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

Year	Actual
2010	36

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Farm gate value of poultry production in Georgia. Value reported annually in millions of dollars.
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	Number of poultry companies assisted as a result of this program.
4	Percentage of Georgia poultry producers trained in reduction/management methods.

Outcome #1

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	Quantitative Target	Actual
2010	5190	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
305	Animal Physiological Processes
307	Animal Management Systems
311	Animal Diseases

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	20000	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection

Outcome #3

1. Outcome Measures

Number of poultry companies assisted as a result of this program.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percentage of Georgia poultry producers trained in reduction/management methods.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
141	Air Resource Protection and Management
307	Animal Management Systems
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Personnel changes)

Brief Explanation

The downturn in the economy has caused the loss of an important faculty resource that was key to this project. We will continue to address this issue but will be forced to do so with reduced personnel and resources.

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.

Nitrogen (N) utilization and N based NMP have been competing issues with phosphorous utilization. Unexpected escalation of commercial fertiler 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.

Continued increases in energy costs the past 24 months have made this project even more critical to poultry farmers.

Dramatic increases in feed prices have made increasing egg production even a higher industry priority.

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

Evaluation Results

Managing ammonia emissions from Georgia poultry houses: A major validation of ammonia emissions from broiler houses was completed. A significant equipment grannt was received by the UGA ammonia emission team.

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.

Energy conservation in poultry production: Evaluations of workshops were completed. Program participants ranked the value of workshops very highly. In addition, government and industry funding agencies have provided evidence of the impact of this work by volunteering to supply resources for energy conservation projects. Poultry farmers have adopted new energy efficiency strategies that have been recommended.

Bio-security/Ag-security for Georgia poultry producers. Evaluation will be based on negative results; that is the failure of AI to infect Georgia poultry flocks will be considered a successful outcome. Data will be collected from participants in trainings and state and federal agencies responsible for poultry health.

Improving food safety in poultry processing and production (farm to fork): Problem solving activities were able to prevent several poultry processing plants from failing additional food safety inspections and prevented possible plant closings.

Improving reproductive efficiency and hatchability in broiler breeders: Field trials are being conducted with industry partners. Implementation of findings from this research are beginning to be seen in the poultry industry.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Quality Caregiving for Children and Youth

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%	10%	0%	0%
802	Human Development and Family Well-Being	100%	45%	0%	0%
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	10%	0%	0%
805	Community Institutions, Health, and Social Services	0%	10%	0%	0%
806	Youth Development	0%	25%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	1.0	0.0	0.0
Actual	4.5	2.0	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
395154	702368	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
395154	702368	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 family life program offered several programs on parenting skills. The programs provided information to GA inmates who would be release within the next 5 years for their crimes; also the programs provided information to young care givers and daycare providers on a host of subjects (nutrition, health, discipline, and home maintenance and community services.) For the youth at large the family life area educated them on self-esteem, life skills, decision making and appropriate etiquette skill to advance in life's social settings. The program also provided Georgia Seniors with health, recreation and estate planning services. The family life program has worked with local, state and federal agencies in providing this information for public usage.

We disseminated parenting publications, age-paced newsletters, and information on early brain development through print and web sources. We provided information through the **Just in Time Parenting** and **Better Kid Care America** eXtension 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.

2. Brief description of the target audience

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

The planned program will also target directly limited resources individuals and families.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1548	2500	1103	1500

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	8	0	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
2010	713

Output #2

Output Measure

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

Year	Actual
2010	22

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
2010	500

Output #4

Output Measure

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

Year	Actual
2010	18

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percentage of program participants reporting increased knowledge after program participation.
2	Percentage of program participants who indicated a plan to adopt one or more of the practices recommended in 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 planned program.

Outcome #1

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	Quantitative Target	Actual
2010	75	80

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
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #2

1. Outcome Measures

Percentage of program participants who indicated a plan to adopt one or more of the practices recommended in this program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	65	72

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
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

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 planned program.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	15000	0

3c. Qualitative Outcome or Impact Statement

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

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

The economy may have affected the participant ability to learn. The participants may have been more concerned on ways of paying bills or other ways of caring for the family.New policy on unemployment benefirs and healthcare may have affected the outcome.

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 and Data Collection)

Evaluation Results

For the before and after questions that were asked 84% of the participants were able to verbally indetify 2/3 of the workshop goals. Mail-out surveys are being developed to check on long-term behavioral changes. Also, hard copy evaluations are used for programs.

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.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Speciality Plants Technology

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
136	Conservation of Biological Diversity	0%	0%	5%	5%
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	5%	5%
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	20%	20%
204	Plant Product Quality and Utility (Preharvest)	0%	0%	15%	15%
205	Plant Management Systems	0%	0%	10%	10%
206	Basic Plant Biology	0%	0%	10%	10%
511	New and Improved Non-Food Products and Processes	0%	0%	10%	10%
701	Nutrient Composition of Food	0%	0%	5%	5%
724	Healthy Lifestyle	0%	0%	10%	10%
903	Communication, Education, and Information Delivery	0%	0%	10%	10%
	Total	0%	0%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	0.0	2.0
Actual	0.0	0.0	0.0	2.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
0	0	0	253934
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	0	253934
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

Medicinal, nutraceutical and biofuel plant species were studied for in vitro plant regeneration and genetic enhancement for value added traits. Medicinal and nutraceutical analyses and evaluations were carried out. New plant species were added. Genetic structure of Plant accessions was determined. Field planting of biofuel plant was established.

2. Brief description of the target audience

Scientic peers and extension agents.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2010
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	0	3	3

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

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

Year	Actual
2010	3

Output #2

Output Measure

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

Year	Actual
2010	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. **Outcome Measures**

{No Data Entered}

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Government Regulations
- Competing Public priorities

Brief Explanation

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

Evaluation Results

Evaluation studies were carried out during the research program period. Experimental procedures and data collection methods were modified as needed for specific objective(s).

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 16

1. Name of the Planned Program

Sustainability and Profitability of 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	0%	40%	0%	20%
123	Management and Sustainability of Forest Resources	0%	0%	0%	50%
133	Pollution Prevention and Mitigation	2%	0%	2%	0%
134	Outdoor Recreation	6%	0%	0%	0%
205	Plant Management Systems	0%	60%	0%	30%
206	Basic Plant Biology	0%	0%	22%	0%
211	Insects, Mites, and Other Arthropods Affecting Plants	8%	0%	8%	0%
215	Biological Control of Pests Affecting Plants	3%	0%	3%	0%
216	Integrated Pest Management Systems	10%	0%	11%	0%
312	External Parasites and Pests of Animals	1%	0%	1%	0%
503	Quality Maintenance in Storing and Marketing Food Products	12%	0%	14%	0%
601	Economics of Agricultural Production and Farm Management	8%	0%	9%	0%
602	Business Management, Finance, and Taxation	31%	0%	8%	0%
603	Market Economics	5%	0%	5%	0%
604	Marketing and Distribution Practices	4%	0%	4%	0%
608	Community Resource Planning and Development	6%	0%	7%	0%
610	Domestic Policy Analysis	2%	0%	3%	0%
802	Human Development and Family Well-Being	2%	0%	3%	0%
	Total	100%	100%	100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890

Plan	12.0	0.9	4.0	9.5
Actual	10.2	0.2	14.7	4.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
891292	70233	947386	507868
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
891292	70233	947386	507868
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 studies were conducted, including:
Study compared cover crops-nitrogen fertilization impact on sweet corn cultivars
Study to determine cover crop-tillage-nitrogen fertilization effect on sweet corn cultivars.
Eight cultivars were harvested and evaluated for yield, harvest quality, and postharvest quality after a 3 week storage period. Information will be presented at the upcoming GFVC in Savannah, and results will at the same time be relayed to vested industry partners, county agents, and growers.
Insect pest management were studies carried out in all major commodity areas, and with insects affecting human and animal health to include vector biology work with mosquitoes and related vector species.
Characterized PR genes in soybean and maize. Also classified ASR isolates collected from fields in South Georgia.

Research information obtained from program was disseminated to students and presentations given and abstracts published at the 2010 annual American Society for Horticultural Science Conference held in Palm Desert, California.

Research information obtained was integrated and relayed through several Extension programs.

A new program initiative in plant vector biology, established in 2009. Continues to increase in invasive species work. Acting in concert with the Georgia Sustainable Agriculture Advisory Committee, the program developed and implemented a statewide strategic plan for sustainable agriculture. Implementation included sustainable agriculture workshops/trainings and farm tours.

Workshops were held and publications related to forestry were distributed. Additional workshops were held in partnership with the Environmental Protection Agency (EPA). Exhibits were also presented. Ten one-on-one site visits were conducted.

State Agritourism Workshop was held - 140+ people attended. It focused on getting up and running an agritourism operation as well as addressed current industry issues.

2. Brief description of the target audience

The traget audience for this program includes all areas of agriculture including greenhouse operators, growers, farmers, livestock producres, county extension agents, seed companies, chemical companies, industry representatives, turfgrass professionals and the general public.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	5731	3294903	435	8950

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

Patent Applications Submitted

Year: 2010

Actual: 2

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	68	65	133

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
2010	13160

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
2010	230

Output #3

Output Measure

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

Year	Actual
2010	203

Output #4

Output Measure

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

Year	Actual
2010	102

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of farmers who have adopted verifiable sustainable agricultural practices in their farming operations as a result of sustainable agricultural educational programs.
2	Percentage of clientele who will save money on their household groceries by growing their own organic fruits and produce.

Outcome #1

1. **Outcome Measures**

Number of farmers who have adopted verifiable sustainable agricultural practices in their farming operations as a result of sustainable agricultural educational programs.

Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

Percentage of clientele who will save money on their household groceries by growing their own organic fruits and produce.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Weather conditions and competing needs for Departmental resources impacted programming. Recent very significant external funding has improved programs. Current cuts in the state budget have affected outcomes.

Georgia's changing and diverse agricultural industry and program funding impacted programs.

Stagnant incomes and personal spending, tight credit, a real state/foreclosure crisis, high unemployment, and a government focus on improving the economic situation continued in 2010. This makes economic development an even higher priority for future years. Farm Bill changes still effecting targeted audience

Drought conditions have lessened but weather volatility is still causing issues for Georgia producers, particularly for those with limited market access. Public programs such as crop insurance re still being impacted, making it necessary to respond with improved risk management strategies. Immigration is leading to issues of financial literacy and access to credit. Volatile input and commodity prices continued to affect industry performance.

We experienced a cold winter resulting in some damage to fruit and partial loss of production. We also experienced one of the wettest Springs on record, also influencing postharvest quality of fruit. A competing grant from Florida investigating similar traits resulted in modification of our project.

Zoning and land use issues are significant impediments to the expansion of agritourism.

Several different rust isolates were identified in different regions of South Georgia. This is likely due to the change/evolution of the pathogens in response the plant population not the weather.

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

Evaluation Results

The cover crop-tillage-nitrogen fertilization experiment indicated cv. Silver King grown in strip till crimson clover at zero nitrogen had highest yield and second highest water use while cv. Silver Queen in CC-0N had lowest yield and lowest Wu with no differences among treatments for LAI and AGB fresh and dry yields. The results for cover crops-nitrogen study indicated that cv. Avalon in crimson clover at half nitrogen rate had highest yield and cv. Frosty in CC-0N had lowest yield with water use similar among treatments. Avalon cultivar under CC-0N treatment produced maximum LAI during the week before harvest while AGB yields of C2 were affected the most by CC-HN.

Program evaluations were completed by participants and case studies were done on specific programs such as the Beekeeping Institute and changes were made as appropriate.

Evaluations are on-going as programs are delivered and are evaluated annually through survey and loss reports.

Survey data revealed/demonstrated need for training in sustainable agricultural practices among agents and producers.

Workshop participants evaluated on the usefulness of the LIFE Program in which the findings indicate the LIFE program is very beneficial to its targeted audience. Participants were also evaluated on program knowledge before and after.

Increase in planting of crispy cultivars, increase in utilization of mechanical harvesters.
Have an evaluation of the 2010 workshop.

We have developed molecular tools to isolate and characterize PR genes and resistance gene homologues (RHGs). We have characterized these genes to better understand defense mechanisms.

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 17

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 professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	1.0	0.0	0.0
Actual	0.0	0.5	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	175592	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	175592	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, and Dougherty, and Colquitt County 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 will consist primarily of senior citizens and retirees. However, in cases where space is available, others will be allowed to enroll in a particular training.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	713	625	928	250

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	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
2010	1050

Output #2

Output Measure

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

Year	Actual
2010	0

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.

Outcome #1

1. Outcome Measures

Percent 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	Quantitative Target	Actual
2010	80	815

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results
Reported in actual number of participants not percentage

4. Associated Knowledge Areas

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

Outcome #2

1. Outcome Measures

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

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	175	815

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

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

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

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

Brief Explanation

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

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

V(A). Planned Program (Summary)

Program # 18

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	6%	0%	0%	0%
111	Conservation and Efficient Use of Water	16%	0%	0%	0%
124	Urban Forestry	3%	0%	47%	0%
202	Plant Genetic Resources	0%	0%	53%	0%
206	Basic Plant Biology	2%	0%	0%	0%
212	Pathogens and Nematodes Affecting Plants	15%	0%	0%	0%
213	Weeds Affecting Plants	2%	0%	0%	0%
216	Integrated Pest Management Systems	16%	0%	0%	0%
404	Instrumentation and Control Systems	3%	0%	0%	0%
405	Drainage and Irrigation Systems and Facilities	3%	0%	0%	0%
601	Economics of Agricultural Production and Farm Management	5%	0%	0%	0%
602	Business Management, Finance, and Taxation	10%	0%	0%	0%
605	Natural Resource and Environmental Economics	13%	0%	0%	0%
609	Economic Theory and Methods	3%	0%	0%	0%
806	Youth Development	3%	0%	0%	0%
	Total	100%	0%	100%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	1.0	0.0
Actual	1.2	0.0	10.1	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**
105374	0	651429	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
105374	0	651429	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 volume of research findings, trainings and educational programs, recognized as having significant impact, have been offered, including:

- Wimba training sessions
- Peer reviewed articles, chapters, and proceedings
- Radio spots
- Master Gardener trainings
- Online learning modules
- YouTube educational videos
- Phone application
- Presentations at international; national; regional; state; and local events
- Workshops
- Seminars
- Bilingual material for underrepresented clientele
- Downloadable print material
- Continuing education programs certified by the DOE for PLU credit

Areas addressed include:

- Water conservation
- Master Gardener program
- Organic alternatives in gardening
- Pesticides and pesticide safety
- Lawn
- Urban forestry
- Greenhouse growing
- Water-wise landscaping

Research and field trials include:

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

- Field and greenhouse trials
- Water conservation
- Forestry: over 250 trees have been visited and documented

Extramural funding was obtained through competitive grants and industry collaborations

Recently received grant from the Georgia Forestry Commission will help provide practical training for advanced Master Gardeners. The subsequent training materials and website will be a big boost to this program.

Faculty served on water conservation committee to devise new rules and regulations that involve the greenhouse, nursery and landscape industries.

2. Brief description of the target audience

The target audience for this planned program includes urban agriculture industries professionals, public policy makers and regulators, county Extension faculty, homeowners.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4130	401640	925	2050

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	8	1	9

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
2010	533

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
2010	196

Output #3

Output Measure

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

Year	Actual
2010	27

Output #4

Output Measure

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

Year	Actual
2010	25

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 technical school students taught how to use the software in their classes as a direct result of this program.
3	Collaboration on community mapping projects occuring as a direct result of this program

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

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	250000	270519

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
111	Conservation and Efficient Use of Water
213	Weeds Affecting Plants
601	Economics of Agricultural Production and Farm Management

Outcome #2

1. Outcome Measures

Number of technical school students taught how to use the software in their classes as a direct result of this program.

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Collaboration on community mapping projects occuring as a direct result of this program

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.)

Brief Explanation

A downturn in the economy and job layoffs has brought an increased number of people into the landscape profession who have little to no training in horticulture or business management skills. Hispanic labors have left the area, and sales of plant materials are minimal.

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 has had a negative effect on program support and attendance.

In 2010 there were sequels of a 2009 extremely wet weather patterns in the fall combined by an early 2010 extreme cold conditions resulting in widespread turfgrass disease incidences. Extreme and prolonged heat wave in June, July and August also resulted in widespread damage to cool season grasses. However, the program objectives for the year were and surpassed predictions. While extreme weather conditions have influenced the turfgrass industry and this program itself. However we have been successful in attaining a variety of extramural funds for travel and other activities.

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.

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.

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

Evaluation Results

Promising new cultivars with drought and heat tolerance are being developed. Close to release are new cultivars of abelia, native azalea, little bluestem and vitex.

Programs conducted had both pre and post surveys done to evaluate the skills learned and knowledge obtained. Evaluations also revealed future program 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 is 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. In fact, a detailed description of these later efforts has been the topic of the impact statement submitted to the college.

As of 2011, the laws and regulations are not yet finalized. We will attempt a survey of water use technique and attitude changes after the crisis passes as rules and regulations expected of growers is changing rapidly. We cannot assess this until the level of new ordinance writing and new rules and edicts from the Governor and city leaders are finished. As of January, 2011, we are still without state water agreements, and our local ordinances are yet to be finalized. 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 it you buy the wrong system, and have to retrofit or buy yet another system, growers could face serious financial issues.

Post-training survey to determine effectiveness and additional needs.

Highlights are being placed on nomination website

Key Items of Evaluation

V(A). Planned Program (Summary)

Program # 19

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	6%	0%	0%	0%
135	Aquatic and Terrestrial Wildlife	10%	0%	0%	0%
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%	0%	0%	0%
301	Reproductive Performance of Animals	3%	0%	0%	0%
302	Nutrient Utilization in Animals	3%	0%	0%	0%
307	Animal Management Systems	10%	0%	0%	0%
311	Animal Diseases	3%	0%	0%	0%
312	External Parasites and Pests of Animals	3%	0%	0%	0%
313	Internal Parasites in Animals	3%	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	44%	100%	0%	0%
	Total	100%	100%	0%	0%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	1.0	0.0	0.0
Actual	4.5	1.0	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**
395154	351184	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
395154	351184	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 twenty-four (24) 4-H Science Meetings Sessions, forty-eight (48) 4-H Leadership Meetings Sessions, and seventy-two (72) 4-H Entrepreneurship Meetings Sessions. Faculty facilitated a 4-H Academy Day Camp in Peach County and I co-facilitated a 2 week county Day camp in Twiggs County.

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.

The Georgia Youth Summit is a biannual event and was completed with representation from throughout Georgia. The 4-H Ambassador program trained youth and adult partners in Health Rocks, Operation Military Kids, Science, Engineering & Technology and Global Awareness. The Ambassadors have completed 1 year of activities sharing information learned from training. Through the Operation Military Kids program, youth have been trained to lead programs for military families. Additional six youth were selected to attend National 4-H Conference and the leadership in Action Program was completed. Additionally, training through Community of Opportunities has been offered to plan and conduct community programs in service regions in South Georgia. Participating in Leadership in Action Increased with additional programs offered in communities

The previous workshops were offered through Environmental Education
State Horse Show, Hippology, Judging Contest, Horse School, and Quiz Bowl were all offered.

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.

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	6527	15453	44493	5833

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

Patent Applications Submitted

Year: 2010

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Actual	11	0	11

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
2010	615

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
2010	16534

Output #3

Output Measure

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

Year	Actual
2010	22

Output #4

Output Measure

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

Year	Actual
2010	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.

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	Quantitative Target	Actual
2010	150000	688652

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
802	Human Development and Family Well-Being
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

Weekly, bi-weekly, and 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; the 2010 American Economy was recorded as one of the worst in American history. These economic challenges or external factors have affected the outcome of 4-H Programming activities.

Since this program involves several types of food animals, changes in any production factor or population changes can affect individual components of the program. This includes prices and economical influences.

Economic situations effected schools accessibility to the program

Program involving horses, a recreation animal whose ownership, use, and maintenance is in direct correlation to the economy, any changes in the economy and population can affect individual components of the program.

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

Evaluation Results

Based on pre and post testing results of each respected area there were increases in youth participants acquiring knowledge in the following areas: Science education: 75% of youth participants increased their knowledge of science technology, Leadership: 70% of youth participants acquired strategies to enhance their ability to make good decisions, and Entrepreneurship: 70% of youth participants learned information that taught them how to start their own business.

A record of numbers of youth were involved in projects.

Teachers evaluate the student experience.

Participants felt the programs were worthwhile and they learned from them. They felt the programs were suitable for the fee involved, and they would participate again. Life skills were also enhanced.

Key Items of Evaluation