2008 Fort Valley State University and University of Georgia Combined Research and Extension Plan of Work

I. Plan Overview

1. Brief Summary about Plan Of Work

The Georgia Plan of Work encompasses a five-year period beginning October 1, 2007. The plan addresses major agricultural issues as well as many other problems facing rural and urban areas, the environment, families and youth. The plan represents a 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.

As the twenty-fourth largest state, Georgia's 2004 population was 8,829,383. The 2004 population listed in the 2005-2006 Georgia County Guide reported 29% of Georgians were age 19 or younger and 10% of the state's population was 65 or older. Of the state's citizens, the 2005-2006 Georgia County Guide reported that in 2004 66% of Georgians were of white, non-Hispanic origin, 29% were of African American descent, 7% were of Hispanic/Latino origin, and 3% were of other races/origins. From 2000 to 2004 there has been a substantial increase in the Hispanic/Latino origin from 5.3% in 2000 to 6.8% in 2004.

The Georgia Extension Service has 160 offices in 158 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 Plan of Work 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.

Also part of annual needs assessment and an integral part of developing this plan of work, input is solicited directly from academic departments at FVSU's College of Agriculture, Home Economics and Allied Programs and UGA's College of Agricultural and Environmental Sciences, and College of Family and Consumer Sciences. Faculty members associated with this plan are working on the cutting edge. The faculty bring information and input to the table from both the academic literature and personal knowledge. This input is equally important to program development as is a strong advisory system.

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 112 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. It is the additional state funding, county funding, grants and gifts leveraged as a direct result of the programs in this plan that may create the greatest final impact. This plan does recognize this leveraged impact. Most of the planned programs include outcome measures that track the output levels of leveraged programming. The outputs of these leveraged programs are considered a direct short-term outcome of the core planned programs within the Georgia Federal Plan of Work.

The Georgia Federal Plan of Work is centered on seventeen planned programs. Individual faculty members participate in the development of personal plans of work. 146 very specific plans of work have been submitted by individual faculty members or faculty teams. These 146 plans were combined into seventeen state level planned programs. Five of the planned programs are specific to either FVSU or UGA. Eleven of the planned programs include a joint effort from both institutions.

Plant Production and Protection along with Animal Production and Protection are two of the larger planned programs. These traditional programs deal with the production practices and include systems to protect the plant or animal from pests and diseases. Sustainability and Profitability of Agriculture is designed to promote sustainable agricultural practices. It covers all program areas in agriculture and impacts both rural and urban communities. Managing Water, Energy, Waste and Air Quality in Agriculture also covers all areas of agriculture. It is the single largest focus of resources in the Georgia Federal Plan of Work. This planned program is designed to provide leadership in research and extension activities related to the inventory, management, protection, and enhancement of natural resources for which human civilization relies on food, clean water, and clean air.

Food safety, preventing chronic disease, and childhood obesity are all important parts of this plan. From diabetes education to healthy lifestyle education for youth, these programs will make an impact on the citizens of Georgia. Protection of our food supply from external forces is a part of the Agriculture and Food Defense Program. This growing part of our plan of work is an excellent complement to Georgia's commitment to food safety. The training of the food service industry is a large task in which this plan will have a great impact.

The greatest leveraging of resources is planned around the youth components of this plan. With relatively few federal formula dollars dedicated to youth programming, the core funded programs will leverage multiple county level programs impacting many thousands of young people.

The Georgia Federal Plan of Work is designed to meet the emerging issues of our community, support the sustainability and profitability of the agriculture industry, and provide educational programming for families and youth. Major components in the planned program specifically target youth and families at risk. Other components target small producers, limited resources farmers, and rural communities.

Estimated Number of Professional FTEs/SYs total in the State.

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	45.0	15.0	46.0	17.0
2009	45.0	15.0	46.0	18.0
2010	45.0	17.0	46.0	19.0
2011	45.0	17.0	46.0	21.0
2012	45.0	17.0	46.0	21.0

II. Merit Review Process

1. The Merit Review Process that will be Employed during the 5-Year POW Cycle

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

2. Brief Explanation

UGA's College of Agricultural and Environmental Sciences (CAES) periodically conducts an extensive, comprehensive program review of its research and extension programs. These reviews collect both internal and external input including faculty and staff, clientele, alumni and stakeholder groups. The results of these reviews have been used in the formulation of this plan of work. Additional guidance has been provided by UGA's CAES Advisory System through their critical review of programs and suggestions

for improvements.

This plan of work is under continuous review by the Program Development Team, which is comprised of Program Development Specialists and Coordinators from Agriculture and Natural Resources, Family and Consumer Sciences and 4-H and Youth, as well as faculty from both FVSU and UGA. This review is an on-going process and future annual reviews and changes in the plan of work will be the responsibility of this team.

The research portion of the plan of work undergoes scientific peer review prior to each project being submitted. All scientists are required to have active projects for expenditures to be made. Each project is peer reviewed by both internal and external reviewers and must be approved by the appropriate Dean and Director prior to submission to the Cooperative State Research, Extension and Education Service.

III. Evaluation of Multis & Joint Activities

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

Multi-state programs are identified and supported using the Georgia Program Development Model just like state specific programs. As issues emerge through our advisory system and through faculty knowledge, information is shared through regional and national meetings. Professional association conferences and administrative conferences such as the Southern Region Program Leadership Conference, are all important venues to share information and to develop collaborations around similar issues or concerns. From these collaborations, informal working relationships will develop. As programming intensifies around an area of interest, the collaborative efforts of individual faculty easily transforms into formal multi-state programming partnerships.

Integrated Extension /Research activities are easily developed. The majority of faculty members receiving federal formula funding have both a research and extension appointment. This joint appointment within a department is fertile ground to encourage the development of joint extension / research projects.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

When appropriate, under-served and under-represented populations are specifically targeted within a planned program. In these cases, the level of contact with the targeted audience is part of the program development process. Goals are set and accomplishments toward those goals are recorded.

3. How will the planned programs describe the expected outcomes and impacts?

Outcomes and impacts will be measured and describe according to the accomplishments in Georgia. While planning and program resources are shared among several states, reporting of impact will be done by each state individually.

4. How will the planned programs result in improved program effectiveness and/or efficiency?

All state planned programs are summaries of individual plans of work. These individual plans contain specific individual goals that link to the overall program goals. Individuals are evaluated on their personal goals. This evaluation will improve performance and effectiveness at the program management level. As individual faculty improvements are made, overall program effectiveness and efficiency will improve.

IV. Stakeholder Input

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

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

Brief explanation.

The use of surveys is an instrument that is used at the planned program level. Information is collected and shared as part of the program development process. The advisory system requires that faculty seek the participation in non-traditional stakeholder individuals. Georgia's advisory system states that advisory committee membership should reflect the community.

2(A). A brief statement of the process that will be 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 Surveys
- Open Listening Sessions
- Use Advisory Committees
- Needs Assessments

Brief explanation.

Organizations that are direct stakeholders or potential collaborators for addressing community issues are identified by the faculty. County programs identify individuals with the ability to represent diverse current or potential stakeholder groups in the community. These groups may be identified by race, ethnicity, income or communities of interest.

2(B). A brief statement of the process that will be 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 individuals
- Survey of traditional Stakeholder groups
- Meeting specifically with non-traditional groups
- Meeting with the general public (open meeting advertised to all)
- Survey specifically with non-traditional groups
- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder individuals

Brief explanation

Seeking stakeholder input is an important part of the program development process. The county faculty members in the field are very active gathering input for the college. They do this in a variety of ways; advisory committees, program surveys, being active with organizations and industries in their county, one-on-one input with clientele, and by monitoring phone calls and office visit content for any trends. This process offers a great deal of stakeholder input into the state program planning process. This is the best source of information from our end users.

Georgia seeks input through its state advisory committees also. In addition to the formalized advisory committees, specific actions are taken to seek stakeholder input at the state level. One example is the organizational liaison program. There are approximately 200 organizations and industries to which a faculty member (tenured or non-tenured) is assigned as a liaison. The faculty member may serve as a resource person, board member, attend board meetings, or meet individually with members, in order to learn what is happening in that organization and/or industry.

3. A statement of how the input will be considered

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

Brief explanation.

Stakeholder input is an important part of Georgia's program development model. Stakeholder input is currently used specifically for

program planning purposes. It is used to identify issues and to evaluate the level of resources directed toward a specific planned program. Advisory committee members are encouraged to participate in program implementation as a tool to understand the value and scope of the program.

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Agriculture and Food Defence Program / Agrosecurity
2	Animal Production and Protection
3	Aquaculture
4	Biorefinery and Carbon Cycling Program
5	Chronic Disease Prevention / Healthy Lifestyles
6	Consumer Economics and Financial Literacy
7	Food Processing, Protection & Safety
8	Housing and the Near Environment
9	Managing Water, Energy, Waste and Air Quality in Agriculture
10	Meat and Dairy Goat Production and Processing
11	New Product Development / Genomics and Cultivar Development
12	Plant Production and Protection
13	Poultry Production and Protection
14	Quality Caregiving for Children and Youth
15	Speciality Plants Technology
16	Sustainability and Profitability of Agriculture
17	TEAM Success Program
18	Technology Education for Seniors
19	Urban Agriculture
20	Youth Life Skill Development

V(A). Planned Program (Summary)

1. Name of the Planned Program

Agriculture and Food Defence Program / Agrosecurity

2. Brief summary about Planned Program

The Extension Agriculture & Food Defense Program is based on education and preparedness. This program would leverage the statewide Extension infrastructure to increase Georgia's capacity to respond to and recover from related manmade or natural disasters related to our agriculture and food supply.

3. Program existence :   New (One year or less)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 133 5% Pollution Prevention and Mitigation
- 212 15% Pathogens and Nematodes Affecting Plants
- 306 5% Environmental Stress in Animals
- 311 28% Animal Diseases
- 314 2% Toxic Chemicals, Poisonous Plants, Naturally Occuring Toxins, and Other Hazards Affecting Animals
- 315 5% Animal Welfare/Well-Being and Protection
- 608 15% Community Resource Planning and Development
- 712 10% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins
- 722 5% Zoonotic Diseases and Parasites Affecting Humans
- 723 10% Hazards to Human Health and Safety

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Agriculture and agribusiness represent a $57 billion industry in Georgia, and provide one of every six Georgia jobs. The security of our agriculture and food supply is vital. The events of September 11, 2001 and Hurricanes Katrina and Rita clearly demonstrate our vulnerability to manmade and natural disasters. Most recently, our $4.8 billion poultry industry has come under the threat of Highly Pathogenic Avian Influenza. The UGA Cooperative Extension Service has the expertise and infrastructure to play a major role in protecting our agriculture and food assets.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Agriculture and food are the number one industries in Georgia in terms of economics and employment. Agriculture is very vulnerable to attack or natural disaster because of its complex nature and broad geographical dispersion. Rapid problem recognition, notification, and response is key to effectively protecting our agriculture and food. Extension has the statewide infrastructure to provide education, agriculture problem diagnosis, and contribute in a skilled manner to response. The combination of economic value and vulnerability

2. Ultimate goal(s) of this Program

The ultimate goals of this program are to educate the public to take steps to prevent harm to our agriculture and food. The goals are to establish and maintain a skilled cadre of responders to disasters that affect our agriculture and food; credentials will be based on state and national standards.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	1.0	0.0	0.0	0.0
2009	1.0	0.0	0.0	0.0
2010	1.0	0.0	0.0	0.0
2011	1.0	0.0	0.0	0.0
2012	1.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Education Class • Group Discussion	• Newsletters • Web sites

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

Year	Direct Contacts Adults Target	Indirect Contacts Adults Target	Direct Contacts Youth Target	Indirect Contacts Youth Target
2008	250	1000	0	0
2009	250	1000	0	0
2010	250	1000	0	0
2011	250	1000	0	0
2012	250	1000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009** :0   **2010** : 0   **2011** :0   **2012** :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 : 1800   **2009** :500   **2010** : 500   **2011** :500   **2012** :500

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

  2008 : 1000   **2009** :1000   **2010** : 1000   **2011** :1000   **2012** :1000

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

  2008 :6   **2009** :6   **2010** : 4   **2011** :4   **2012** :4

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 30000   **2009** : 40000   **2010** : 40000   **2011** :40000   **2012** : 40000

3. Associated Knowledge Area(s)

- 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 Occuring 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 Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :80   **2009 :** 80   **2010 :** 80   **2011 :**80   **2012 :** 80

3. Associated Knowledge Area(s)

- 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 Occuring 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 Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

1. Outcome Target

County Agriculture Response Teams or county agriculture emergency plans created.

2. Outcome Type :   Change in Action Outcome Measure

2008 :20   **2009 :** 20   **2010 :** 20   **2011 :**20   **2012 :** 20

3. Associated Knowledge Area(s)

- 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 Occuring 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 Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The number and scope of Natural disasters as well as the economy can affect this program by raising or lowering the perceived need by the public for agrosecurity. Tightening of public policy and government regulations because of increasing concerns about agro-and bio-security can define education content related to this program. Competing programatic challenges can affect the program by diluting agrosecurity into its constituent pieces instead of presenting it as a cohesive program. Population changes can affect the turnover in and numbers of responders that need to be changed, as well as the cultural content of the educational material.

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

1. Evaluation Studies Planned

- Before-After (before and after program)

Description

Training programs are generally accompanied by before and after evaluations to measure changes in education.

2. Data Collection Methods

- Tests
- On-Site
- Mail

Description

Primarily mail surveys, on-site surveys, and tests will be used to collect data relevant to the program.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Animal Production and Protection

2. Brief summary about Planned Program

This planned program will serve to educate the animal production industry on the proper management, nutrition, and health.

Beef cattle, sheep and goat producers will be educated in the best practices to improve genetics and profitability. Research to improve the reproductive efficiency of animal producers will be part of this program, along with genetic research projects. Through educational demonstration, this program will show the value of producer records to enhance cattle production through improved genetics.

The animal nutrition program assesses the quality of native forages and the improvement of their nutritional value with dietary supplements. The development of new forages and grains for cattle producers will improve performance and efficiency. New management / nutrition systems will be developed.

The program will strive to improve reproductive management, as well as milk production in dairy herds. Using the Dairy Business Analysis Project (DBAP), university faculty will seek to improve the financial management for dairy farms in Georgia. Research and educational efforts will be targeted toward the prevention of mastitis.

Pest management is a concern for all animal operations. Extension will offer a substantial educational program on pest management. This program will permit Georgians to have up-to-date recommendations for effectively controlling pests of livestock.

Research programs on swine focus on feeding behavior with the objective to gain a greater understanding of how nutrients are used and the signals that the animal uses to determine level and type of intake.

The development of new forages and grains for cattle producers will improve performance and efficiency. New management/nutrition systems will be developed.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 301 16% Reproductive Performance of Animals
- 302 15% Nutrient Utilization in Animals
- 303 16% Genetic   Improvement of Animals
- 305 8% Animal Physiological Processes
- 306 5% Environmental Stress in Animals
- 307 23% Animal Management Systems
- 311 8% Animal Diseases
- 312 3% External Parasites and Pests of Animals
- 313 3% Internal Parasites in Animals
- 315 3% Animal Welfare/Well-Being and Protection

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

To be competitive, producers must understand existing management practices as well as become informed of new technologies as they are developed. Producers need a reliable scientific basis for selecting genetically superior animals. Producers need programs

they can participate in to evaluate their animals to identify superior genetics. In addition, carcass data is becoming increasingly important in establishing the value of animal at slaughter. Producers need production protocols that can be used successfully on their operations to properly manage their animals to maximize profitability.

Feed continues to account for the majority of the cost of production in meat animals. A greater understanding of intake, its regulation and efficiency of nutrient utilization not only impacts cost of production, but can also affect the impact of animal agriculture on the environment.

Mastitis in dairy cattle is a leading cause in the reduction in milk yield and milk quality worldwide. In the US alone, losses to dairymen approach $2 billion annually. Pests produce significant losses in animal agriculture, affecting productivity and requiring outlays for control.

Reproductive efficiency is 15 times more economically important to an individual animal producer than carcass quality, and 10 times more economically important than weaning weights. This means that 70% of every dollar a producer makes is directly attributable to the reproductive efficiency of his or her herd or flock. Failure of animals to initiate estrous cycles and become pregnant during the breeding season is one of the primary causes of economic loss to animal producers today.

Current heat detection levels in Georgia dairy animals are very low, and eliminating some of the need for heat detection could be extremely beneficial to producers and improve overall reproductive efficiency. Much more research is needed to evaluate a productive and cost effective synchronization program.

2. Scope of the Program

- Integrated Research and Extension
- Multistate Extension
- In-State Extension
- In-State Research
- Multistate Research
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Livestock producers need and want improved management practices. They want to increase profitability through the use of best practices and improved inputs.

Producers will learn to identify livestock that excel in performance. Producers will learn production practices required to properly raise performance and will learn through educational opportunities provided.

Improving reproductive efficiency will lower costly days open by lowering calving intervals and increasing annual milk production. Producers must see more heats, increase conception rates and lower post partum breeding policy.

Successful control of mastitis by eliminating ongoing infections and preventing new cases by appropriate antimicrobial therapy will reduce incidence of this disease, improve milk quality, enhance animal health and well-being, and improve milk safety for the consumer.

Livestock depend on green forages for economical calf production and quality hay to reduce winter feeding expenses. Improved hay quality, improved forage varieties, increased use of by-product feeds and poultry litter as feeds may reduce costs. Improved management programs may increase productivity of cattle production.

2. Ultimate goal(s) of this Program

A goal of this program is establishing multi-departmental, multi-college programming that offers in-depth, advanced educational programming which allows producers to understand existing technologies and become familiar with developing technologies.

The programs will educate the animal production industry on correct production practices required to improve economic returns. The programs will identify animals with superior genetics. The program will improve reproductive efficiency in livestock. Development of a forage or forage system that will supply year-round high quality forage is the goal.

In the dairy industry, this program will improve breeding efficiency & effectiveness. Successful control of mastitis will increase economic returns to the producer and provide a wholesome and safe product to the consumer. Financial management research and educational programs will improve the business functions of the dairy industry. A database will be used to establish benchmarks and to provide reports to the cooperating dairy with suggestions for financial improvement.

Faculty will keep all livestock producers apprised of changes in available products, efficacy, pest resistances and recommendations for pest management. Nutrition research aspects of the program will further investigate how animals are able to monitor changes in physiological demand for nutrients and nutrient supply from the diet. It will be to investigate differences in the efficiency of nitrogen and phosphorous utilization and to determine if it is feasible to select for improved utilization of these nutrients.

Overall this program will increase animal agriculture value through reduced losses and enhanced health/productivity.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	4.5	0.3	3.0	0.8
2009	4.5	0.3	3.0	0.8
2010	4.5	0.3	3.0	0.8
2011	4.5	0.3	3.0	0.8
2012	4.5	0.3	3.0	0.8

V(F). Planned Program (Activity)

1. Activity for the Program

A bull testing program and heifer evaluation program will be conducted at two locations per year in Georgia. The Georgia Beef Challenge will evaluate calves for feedlot performance and carcass evaluation in commercial feedlots located in Iowa.

The University of Georgia's "Beef Team" will offer the Master Cattlemen's Program. This program involves detailed, in-depth educational seminars related to beef cattle. A maximum of two programs will be offered annually throughout the state.

Faculty will maintain a web site for the International Dairy Heat Stress Consortium. Regional workshops will be held for producers and are conducted as requested by extension personnel across Georgia. Faculty will assist with the Commercial & Purebred Dairy Projects as well as other 4-H & FFA activities, including dairy evaluation & dairy quiz bowl. Dairy farms in Georgia will participate in a financial research study. The financial performance results of this program will be published and shared in an effort to increase farm profitability.

Studies will be conducted to examine swine intake regulation. These will add to our understanding of the key regulatory points that can be applied in the industry to improve efficiency and reduce cost of production. Studies examining the efficiency of nitrogen and phosphorous utilization will be conducted concurrently that have the potential to reduce the environmental impact of animal agriculture.

Annually this program will update Extension agents and clientele in pest control, through one-on-one discussions, meetings, or publications. It will provide pest overviews for organizations such as the Georgia Cattlemen's Association. Every year faculty will update eleven sections of the Georgia Pest Management Handbook and provide biennial estimation of pest losses in livestock and dairy production.

Research will continue that compares different bahiagrass and bermudagrass. Evaluation of new forages including Coastcross II for grazing and hay quality; and, pigeon peas for grazing and for grain production for cattle feeding will continue. By-product feeds will be evaluated for nutritional and economic value in beef production systems.

New scientific information will be made available to scientific peers through the publication of original research articles in scientific journals. More applied knowledge will be disseminated to the audience at large (producers, practicing veterinarians, extension personnel) by publishing results in journal articles or departmental research reports and by coordinating presentations with extension personnel.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- One-on-One Intervention - Demonstrations - Education Class - Group Discussion	- Newsletters - Web sites - Other 1 (Popular Press Articles)

3. Description of targeted audience

The target audience is sheep, goat, beef & pork producers, dairymen, county agents, veterinarians, and industry professionals.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	2500	20000	400	1600
2009	2500	20000	400	1600
2010	2500	20000	400	1600
2011	2500	20000	400	1600
2012	2500	20000	400	1600

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 0   **2010 :** 0   **2011 :** 0   **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

● Number of significant publications including referred journal articles, bulletin and extension publications.

2008 :12   **2009** :14   **2010** : 14   **2011** :14   **2012** :14

● Number of educatinal contact hours generated from formal educational programs or presentations for county extension agents.

2008 :525   **2009** :550   **2010** : 550   **2011** :550   **2012** :550

● Number of educational contact hours generated from formal eduational programs or presentations for clinentele.

2008 :1500   **2009** :1550   **2010** : 1550   **2011** :1550   **2012** :1550

V(I). State Defined Outcome

1. Outcome Target

Number of additiional 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. Outcome Type :   Change in Knowledge Outcome Measure

2008 :29000   **2009** : 30000   **2010** : 31000   **2011** :31000   **2012** : 31000

3. Associated Knowledge Area(s)

● 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

1. Outcome Target

Number of Master Cattlemen certifications granted through this planned program.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 60   **2009 :** 65   **2010 :** 65   **2011 :** 65   **2012 :** 65

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 1048   **2009 :** 1079   **2010 :** 1111   **2011 :** 1145   **2012 :** 1145

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 7   **2009 :** 8   **2010 :** 8   **2011 :** 8   **2012 :** 8

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Percentage of program participants reporting increased knowledge after program particpation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 75   **2009 :** 75   **2010 :** 75   **2011 :** 75   **2012 :** 75

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Percentage of program participants responding to follow-up survey that indicate changing at least one production practice as a result of this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 60   **2009 :** 60   **2010 :** 60   **2011 :** 60   **2012 :** 60

3. Associated Knowledge Area(s)

- 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

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Weather disasters are a major factor affecting animal production. Drought conditions can cause reductions in the number of cattle due to feeding pressures. Forage production for hay and grazing depends on weather conditions--drought could diminish expected productivity of new and experimental forages, affect stands, ultimately affect livestock production and profitability. Heat stress is responsible for large declines in pregnancy rates of dairy cattle during hot months throughout much of the United States.

A decrease in cattle prices or the overall economy would have great impact on this program. If the price drops substantially, producers may be less willing to focus on beef production and allocate their priorities and time towards other commodities.

Changing laws and EPA regulatory intervention affect how pests are managed, what products are available, and limitations on options available to producers.

Reduced public funding for fundamental forage and livestock production research could depress initiative to conduct needed high-quality research. Competing programs may force abandonment of on-going research programs.

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

1. Evaluation Studies Planned

- Time series (multiple points before and after program)
- Retrospective (post program)
- During (during program)
- After Only (post program)

Description

The HERD Program will be evaluated to determine if any new testing procedures should be implemented or educational materials developed to maintain the most current information for producers to use when determining the value of cattle.

Master Cattleman: An evaluation of the Master Cattlemen program will be done after the completion of each final session. This will help to determine how the next program can be improved. One year after the program, a post-meeting survey is mailed to the participants who completed the program and assesses any changes they may have made and the overall financial impacts as a result of the program.

Research on mastitis in dairy cattle will involve several approaches. After the program is shown to be successful under experimental research conditions and results disseminated to end users, a determination to what extent producers are utilizing the new technology will be done. Comparisons between program participants will involve performing a field trial using dairymen who employ the new technology verses those who do not and determine if the new technology is successful.

Faculty working with new forages will gather input from producers concerning problems encountered before research is conducted, then demonstrate results in university tours/demonstrations/presentations/on-farm demonstrations. Then, after producers apply all or part of programs or initiate stands of new forages, ask for producer and county extension agent reporting of results. They will provide input gathering meetings and opportunities for producers to reveal their results with new forages or management programs. Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to access change in behavior or practice.

2. Data Collection Methods

- On-Site
- Tests
- Observation
- Case Study
- Mail

Description

Sampling and observation will be used by the HERD activity. Animals in the evaluation programs will be subjected to the following measurements: weight gain, reproductive tract traits, pregnancy status, frame size, and carcass traits utilizing both ultrasound and post-harvest carcass measurements. Animals will be evaluated for disposition, coat color, and structural abnormalities

An after the program evaluation will be used by many faculty. One example is the Master Cattlemen Program where data will be collected after the completion of the final session.

Data from breeding and pregnancy treatments will be maintained, as well as blood and milk samples for analysis. Production records will be monitored before and after trainings. Milk sample from cases of mastitis before and after treatment with experimental product will support mastitis research.Forage ad hay samples will be gathered from demonstration sites and farmer fields, analyzed for quality to verify and compare with test results. Discussion with producers relative to their evaluation of forages is critical to acceptance and adaptation of new forages and management practices. Observation of on-site fields, hay production and management will provide incite into how well producers are doing with new forages or management.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Aquaculture

2. Brief summary about Planned Program

This planned program includes a component that addresses the aquaculture industry development and technology transfer. Faculty will conduct site visits and individual meetings to assist with business plan development and implementation. Proposals will be written to assist the development of a premium catfish distribution effort in Bainbridge and a catfish/freshwater prawn farm in Sparta. Training of catfish processing plant personnel in processing techniques and flavor checking will be conducted. Marketing efforts include catfish fillet sample distribution at the Sunbelt Exposition. UGA and FVSU will collaborate with Auburn University and Kentucky State University to enable this project to benefit from expertise in other institutions. Workshops will be held to train producers in technology related to freshwater prawn production and catfish production.

The planned program also includes a component to address aquatic animal health management. Diseases and water quality problems continue to plague the aquaculture industry. Producers need support in the diagnosis of diseases and identification of some water quality problems and aquatic weeds. Aquatic animal disease diagnostic services will be provided to producers so that they can bring their sick and/or dying animals to the Georgia Center for Aquaculture Development (GCAD) for diagnosis and treatment advice. Aquatic animal health management plans are critical to successful aquaculture enterprises. Workshops will be held on aquatic animal health, water quality management, and newsletters and publications will be produced on health issues.

Different types of demonstration re-circulating aquaculture systems (RAS) will be evaluated at the Georgia Center for Aquaculture Development (GCAD). Mono- and polycultures of fish, prawns, shrimp and other aquatic organisms will be grown in the systems to determine the optimum feeds, stocking densities, and water quality management protocols. Research will be conducted with different RAS component options and the integration of different species to reuse nutrients to prevent the accumulation of waste nutrients or effluents.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 123 12% Management and Sustainability of Forest Resources
- 131 18% Alternative Uses of Land
- 307 27% Animal Management Systems
- 311 15% Animal Diseases
- 312 10% External Parasites and Pests of Animals
- 601 11% Economics of Agricultural Production and Farm Management
- 604 7% Marketing and Distribution Practices

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Even as aquaculture has grown rapidly globally, each year diseases in aquatic animals cause losses valued at 1 billion dollars. Although disease in aquaculture is a great problem in the United States, there are only a small number of chemotherapeutics available to producers. Treating diseases can be expensive, treatments don't always work, and the loss of animals and production is always costly. The best strategy is developing aquatic animal health management plans and using treatments to enhance health and disease resistance.

Existing aquaculture business is expanding and many Georgians are looking for alternative income activities and are interested in aquaculture enterprises. Species specific production or processing information is needed and can be provided by the Extension Aquaculture Specialist. Training in all aspects of the aquaculture industry is needed as potential producers evaluate the industry

and as established producers evaluate new technology. As catfish prices return to profitable ranges, information is needed to assist farmers who are entering the catfish industry for the first time. The freshwater prawn farming enterprise continues to create a high level of interest in Georgia.

The demand for seafood products in the US is rapidly growing and it is predicted that an additional 1.81 billion kg of seafood will be needed to meet the demand by 2020. Aquaculture will need to meet this demand since most of the world's ocean capture fisheries are depleted and overexploited, and not likely to recover to meet the demand. Aquaculture is the fastest growing form of agriculture and represents an attractive alternative enterprise for Georgians.

2. Scope of the Program

- Multistate Integrated Research and Extension
- In-State Research
- Multistate Research
- Integrated Research and Extension
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Aquaculture enterprises, particularly catfish and freshwater prawn production, are viable activities for Georgia farms.
Producers and processors need technology and marketing assistance.
Aquaculture can be an alternate land use in Georgia that improves farm sustainability.
Aquaculture enterprises are management and capital intensive and new producers and processors need detailed assistance.
The demand for aquaculture products will continue to grow.

2. Ultimate goal(s) of this Program

Increase the acceptance of Georgia consumers of products produced by aquaculture.
Increase the number of acres in aquaculture, number of fish or prawns produced per acre per year, or value per unit of production.
Assist producers with disease and water quality problems and treatment.
Provide information, training and technology transfer that assists and supports potential and existing producers in creating and maintaining profitable aquaculture enterprises.
Increase awareness and knowledge of Georgians on the potential of aquaculture as a viable alternative crop.
Development of integrated aquaculture production systems with optimum target species and maximum nutrient utilization resulting in ultimate production.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.8	0.8	0.0	0.5
2009	0.8	0.8	0.0	0.5
2010	0.8	0.8	0.0	0.5
2011	0.8	0.8	0.0	0.5
2012	0.8	0.8	0.0	0.5

V(F). Planned Program (Activity)

1. Activity for the Program

Workshops will be held on the topics of catfish production and freshwater prawn production that include distribution of detailed reference material. Publications will be written to update existing catfish production and freshwater prawn production literature.

Assistance will be given to at least 4 catfish processors in Georgia for plant development, market development, or supply development. Aquaculture product promotion and marketing will be conducted to more than 6,000 consumers at the Sunbelt Exposition. The Georgia Aquaculture Association newsletter will be edited and published biannually. The UGA Aquaculture website will be maintained to include aquaculture information and events.

Disease diagnosis services will be provided to producers. Disease diagnosis and treatment recommendations will be given along with informative publications. Water quality and aquatic weed identification services will also be provided. Workshops, presentations, newsletters, agriculture field days and tours of the greenhouse facilities will be centered on the issues of aquatic animal disease, identification, treatment and prevention.

Workshops will be held on different types of aquaculture production systems, especially re-circulating aquaculture systems (RAS). Workshops will be held on best management practices for RAS, water quality management, aquatic animal health management, nutrition and feeding in RAS. Training on cage culture system management, species and site selection, water quality management, aeration and other topics will also be conducted. Training material, fact sheets, newsletters and other publications will be prepared on the management and culture of aquatic animals in different aquaculture production systems.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • One-on-One Intervention • Group Discussion • Demonstrations • Education Class	• Newsletters • Web sites • Public Service Announcement

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	120	600	800	0
2009	120	600	800	0
2010	120	600	800	0
2011	120	600	800	0
2012	120	600	800	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009 :**0   **2010 :** 0   **2011 :**0   **2012 :**0

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3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :4   **2009 :**4   **2010 :** 4   **2011 :**4   **2012 :**4

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

  2008 :80   **2009 :**80   **2010 :** 80   **2011 :**80   **2012 :**80

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

  2008 :20   **2009 :**20   **2010 :** 20   **2011 :**20   **2012 :**20

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

  2008 :700   **2009 :** 750   **2010 :** 750   **2011 :**750   **2012 :** 750

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type :   Change in Action Outcome Measure

  2008 :2   **2009 :** 2   **2010 :** 2   **2011 :**2   **2012 :** 2

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Percentage of program participants reporting an increase in skills proficiency in aquatic animal management and apuatic production systems.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :75   **2009 :** 75   **2010 :** 75   **2011 :**75   **2012 :** 75

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Percentage of program participants who indicated a plan to adopt one or more of the practices recommended for proper aquatic management.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :65   **2009 :** 65   **2010 :** 65   **2011 :**65   **2012 :** 65

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

2008 :2400   **2009 :** 2500   **2010 :** 2600   **2011 :**2700   **2012 :** 2700

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources

- 131 - Alternative Uses of Land

- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

2008 :0   **2009 :** 0   **2010 :** 0   **2011 :**0   **2012 :** 0

3. Associated Knowledge Area(s)

- 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

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Hurricanes may damage aquaculture facilities or otherwise affect the program directly. Economic recessions have led to reduction in aquaculture market prices, public policy related to tariffs may improve the aquaculture marketing environment, and government policy relating to aquaculture may increase costs of production. Competing public priorities may reduce the resources needed for aquaculture development. Competing programs have reduced resources needed for this extension effort in the past. Fuel costs will cause fish feed costs to increase and also add to the final cost to the consumer which may reduce the demand for aquaculture products over time.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Description

Programs are evaluated by following the activities of participants after the programs. Georgia production is compared to the national average. Value of each development activity is evaluated on its own merits.

Evaluation studies conducted will depend on each particular development project. Some projects will be evaluated by charting the progress of participants as their aquaculture enterprise develops. Each extension or research program will be evaluated with

different processes and data collection methods. Workshop attendees will have surveys either before and after the workshop or just after the workshop. Surveys will also be mailed to workshop attendees as a follow-up to determine what type of aquaculture production they may have initiated. The survey will also try to determine what aquaculture training, workshops and development work is still required.

2. Data Collection Methods

- Sampling
- Observation
- Unstructured
- On-Site
- Mail

Description

Each extension or research program will be evaluated with different data collection methods. The success of different aquaculture production systems will be evaluated using net production, production efficiency, feed conversion ratios, water quality measurements and economics of the system. Surveys will be mailed to program participants. Surveys will determine if workshop attendees have incorporated training into starting or continuing aquaculture operations.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Biorefinery and Carbon Cycling Program

2. Brief summary about Planned Program

The development of an integrated biorefinery industry in Georgia will stimulate our rural economies, sustain our core forest and agriculture industries, increase our tax revenues, improve our environment, and contribute to addressing the critical problem of global warming. Thus, the State of Georgia has begun investing in Research, Development, Outreach, and Technology Transfer through the University of Georgia that is providing statewide leadership required to develop and implement this biorefinery industry.

Research projects will be developed and conducted to improve on existing technologies and identify new and emerging technologies. New markets will be established for biomass resources. New fuels for transportation will be developed along with new bio-based products.

3. Program existence :   New (One year or less)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 133 33% Pollution Prevention and Mitigation
- 403 33% Waste Disposal, Recycling, and Reuse
- 605 34% Natural Resource and Environmental Economics

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Biomass resources are not efficiently utilized in the region. Energy costs are increasing, national security is threatened, rural economies are in decline, climate change is affecting quality of life.
Although many of the individual sub-process technologies have been previously in development (e.g. Pyrolysis Process, Biodiesel and Fisher-Tropsch Process) and some are in commercial operation, they have not been integrated in a manner to provide maximum biorefining. In addition, opportunities exist that will allow the development of new products and the improvement of existing processes making them commercially viable. Some of the information gaps identified and overall directions of research and outreach are listed below.

Biomass Pre-treatment: Biomass (e.g. wood wastes, forest residues, agricultural residues) is found in different locations and in different forms. The ability to use these in a general-purpose integrated biorefinery is dependent on appropriate pretreatment options that convert them to a flexible feedstock.
Process Development: Although a part of process development is complete, there are areas for improvements that will benefit efforts before scale up. Maximizing efficiency of the process will be achieved by completing some technical tasks.
Product Diversity: A significant thrust to develop new products and markets for these products will improve economics of conversion technologies.
Demonstrations and Technology Transfer: Scaled-up demonstration is the most important step towards rapid commercialization. These tasks will ensure technology development is complete, provide data for further improvements in process scale up, and provide a source from which private industry (entrepreneurs) will draw encouragement and technical help to pursue the development of this industry in Georgia.

2. Scope of the Program

- In-State Extension
- Integrated Research and Extension
- In-State Research
- Multistate Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Technology solutions exist to mitigate problems identified in this planned program. Biomass resources are abundant in Georgia and the region. And the use of biomass resources can provide economic growth.

The program assumes the need for alternative fuels will increase. It assumes government regulations and funding will support future research and development.

2. Ultimate goal(s) of this Program

The development of an integrated biorefinery industry in Georgia that will stimulate our rural economies, sustain our core forest and agriculture industries, increase our tax revenues, improve our environment, and contribute to addressing the critical problem of global warming.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	1.0	0.0	2.0	0.0
2009	1.0	0.0	2.0	0.0
2010	1.0	0.0	2.0	0.0
2011	1.0	0.0	2.0	0.0
2012	1.0	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research projects will be developed and conducted to improve on existing technologies and identify new and emerging technologies. Examples of research projects under development or implementation are discussed below. Many projects are currently underway or in the planning stages.

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

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

The transesterfication of oils and fats to produce biodiesel is being studied. This work evaluates new sources of oils and fast that could be substrates for producing biodiesel. Once developed, the biodiesel will be tested for properties and behavior in engine testing. Georgia grasses are being hydrolyzed through a hot water extraction process to generate fermentable sugars. These will be further broken down before fermentation. The final sugar solution will be fermented for producing ethanol.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Demonstrations • One-on-One Intervention • Workshop • Group Discussion • Education Class	• TV Media Programs • Public Service Announcement • Web sites

3. Description of targeted audience

Farmers, agribusiness, community leaders, entrepreneurs

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

Year	Direct Contacts Adults Target	Indirect Contacts Adults Target	Direct Contacts Youth Target	Indirect Contacts Youth Target
2008	500	1000	0	0
2009	700	1400	0	0
2010	900	1800	0	0
2011	1100	2200	0	0
2012	1100	2200	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :5	**2009** :5	**2010** : 9	**2011** :9	**2012** :9

3. Expected Peer Review Publications

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Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

• Number of Significant Publications

2008 :15	**2009** :20	**2010** : 25	**2011** :30	**2012** :30

● Number of educational contact hours generated from formal programs for county agent in-service training.

| **2008** :50 | **2009** :100 | **2010** : 150 | **2011** :200 | **2012** :200 |

● Number of educational contact hours generated from programs or workshop presented directly to clientele.

| **2008** :600 | **2009** :700 | **2010** : 800 | **2011** :900 | **2012** :900 |

V(I). State Defined Outcome

1. Outcome Target

Percentage of program particpants reporting increased knowledge after program particpation

2. Outcome Type :   Change in Knowledge Outcome Measure

| **2008** :75 | **2009** : 75 | **2010** : 75 | **2011** :75 | **2012** : 75 |

3. Associated Knowledge Area(s)

● 133 - Pollution Prevention and Mitigation

● 403 - Waste Disposal, Recycling, and Reuse

● 605 - Natural Resource and Environmental Economics

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

| **2008** :0 | **2009** : 0 | **2010** : 0 | **2011** :0 | **2012** : 0 |

3. Associated Knowledge Area(s)

● 133 - Pollution Prevention and Mitigation

● 403 - Waste Disposal, Recycling, and Reuse

● 605 - Natural Resource and Environmental Economics

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Government regulation and policies will directly impact the sucess of this program. The price of and availability of traditional energy sources can affect the amont of resources directed to this program.

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

1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study

Description

Particpants in educational programs will be evaluated for knowledge gained through program surveys.

2. Data Collection Methods

- Journals
- Case Study
- On-Site
- Unstructured
- Sampling
- Observation
- Tests

Description
{NO DATA ENTERED}

V(A). Planned Program (Summary)

1. Name of the Planned Program

Chronic Disease Prevention / Healthy Lifestyles

2. Brief summary about Planned Program

This planned program has a major research and extension component to address human nutrition and health.

Extension Specialists will train agents to provide training to adults and youth on nutrition and lifestyle choices that will reduce or control chronic disease. Specialists will also develop curricula, print media and on-line consumer resources, and program evaluations.

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

Plant extracts and other natural substances will continue to be investigated for their ability to induce apoptosis, primary in cancer cells. Some of these are especially interesting because they also have been shown to have antidiabetic effects and/or have direct effects on adipose tissue. In particular, green tea extracts, garlic compounds and conjugated linoleic acid (CLA) have been shown to cause weight loss and reduce body fat in experimental animals and humans. CLA, a group of positional and geometric isomers of linoleic acid, has received considerable attention because of its many purported health benefits. In addition to anticarcinogenic, antiatherogenic, and antidiabetic effects, dietary CLA can induce body fat loss in several species.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 703 40% Nutrition Education and Behavior
- 724 35% Healthy Lifestyle
- 806 25% Youth Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Two thirds of adults are overweight or obese. Obesity contributes to the development of many chronic diseases including diabetes, hypertension, cardiovascular disease and cancer. Three-quarters of Georgians are inactive which also contributes to these chronic diseases. Twenty percent of Georgia's children are also overweight or at risk for becoming overweight. Direct and indirect costs of these weight-related problems were $117 billion in the year 2000. In the U.S., 20.8 million people have diabetes and 41 million have pre-diabetes. In Georgia, nearly 7 percent of the population has diabetes and it is currently the 6th leading cause of death. Both diabetes and pre-diabetes increase risk for cardiovascular disease. People of African, Asian and Latino/Hispanic heritage are 2-4 times more likely to develop diabetes. The economic impact of diabetes may be close to $4 billion per year. The developments of an estimated 20-40% of cancers are affected by dietary choices. Eating more fruits and vegetables, drinking more fluids, eating more whole grains, consuming more non-fat and low fat dairy foods and being more physically active may help reduce risk for numerous cancers.

In Georgia, nearly 42 percent of 4th graders are either overweight or at risk of becoming overweight according to a study conducted by Dr. Richard Lewis, UGA College of Family and Consumer Sciences. The study also showed that 38 percent of eighth graders were also overweight or at risk of being overweight. For eleventh graders, the percentage was nearly 36%. Obesity prevention and education should begin as early as possible, by emphasizing healthful diets, good nutrition, and physical activity in early childhood.

Despite the rising worldwide epidemic of obesity and the $100 billion a year spent on weight loss and weight control products, there are only a few prescription anti-obesity drugs available today. Strategies for developing medications for weight loss have traditionally focused on agents that act in the brain to reduce hunger, agents that act in the gastrointestinal tract to inhibit digestion and absorption of fat or carbohydrate, and agents that increase metabolic rate. None of the currently available weight loss medications are highly effective, and all have reports of serious side effects.

2. Scope of the Program

- In-State Extension
- In-State Research
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Making better dietary choices, being physically active on a daily basis and controlling body weight may reduce risk or help control most chronic diseases. Making positive lifestyle changes can prolong life and improve quality of life.

Researchers in this program assume the induction of adipose tissue apoptosis could be a non-surgical approach for reducing total adipose tissue mass and longer-term maintenance of weight loss. The expectation of longer-term maintenance of weight loss associated with adipose tissue apoptosis in obese people is supported by the high percentage of people who retained a large proportion of the initial weight loss one year after liposuction.

2. Ultimate goal(s) of this Program

The goal is to reduce the rising rates of chronic disease and to improve the quality of life of those who already suffer from these diseases. Georgia's citizens will be healthier resulting in lower health-care costs and an improved quality of life because of this program.

Researchers strive to find formulations of active components from natural sources that, when taken orally, will induce fat mobilization and apoptosis of fat cells resulting in weight loss and enhanced bone density. These products will be health supplements that will be part of solutions to problems associated with obesity or osteoporosis in humans and companion animals.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	2.0	0.0	4.0	0.0
2009	2.0	0.0	4.0	0.0
2010	2.0	0.0	4.0	0.0
2011	2.0	0.0	4.0	0.0
2012	2.0	0.0	4.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Disseminate fact sheets on weight control, physical activity, diabetes management and prevention, cardiovascular disease prevention and cancer prevention. Provide training about chronic disease prevention and control to agents and selected clientele. Provide information to be disseminated by agents to media outlets.

Conduct in school classes in a majority of Georgia's Counties. Conduct Food Product Development contest and local practice sessions as part of the 4-H program. Conduct Statewide youth meetings focused on Healthy Lifestyles. As part of a new program, Healthy Lifestyles Ambassadors will be trained on research and relevant information. 4-H Summer Camp Healthy Lifestyle classes will be conducted.

Faculty will conduct weight loss research.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • One-on-One Intervention • Education Class • Demonstrations	• Newsletters • Web sites

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
2008	600	2000	2025	10000
2009	600	2000	1050	10000
2010	600	2000	1080	10000
2011	600	2000	1080	10000
2012	600	2000	1080	10000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009** :0   **2010** : 0   **2011** :0   **2012** : 0

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 20   **2009** : 20   **2010** : 20   **2011** : 20   **2012** : 20

● Number of educational contact hours generated from formal educational programs or presentations for county extension agents

2008 : 260   **2009** : 260   **2010** : 260   **2011** : 260   **2012** : 260

● Number of educational contact hours generated from formal educational programs or presentations conducted for clientele.

2008 : 105   **2009** : 105   **2010** : 110   **2011** : 110   **2012** : 110

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 14000   **2009** : 14500   **2010** : 14500   **2011** : 14500   **2012** : 14500

3. Associated Knowledge Area(s)

● 703 - Nutrition Education and Behavior

● 724 - Healthy Lifestyle

● 806 - Youth Development

1. Outcome Target

Percent of people affected by diabetes that chose a lower fat, lower sodium or lower sugar food ingredient.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 75   **2009** : 75   **2010** : 75   **2011** : 75   **2012** : 75

3. Associated Knowledge Area(s)

● 703 - Nutrition Education and Behavior

● 724 - Healthy Lifestyle

● 806 - Youth Development

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 50   **2009** : 50   **2010** : 50   **2011** : 50   **2012** : 50

3. Associated Knowledge Area(s)

● 703 - Nutrition Education and Behavior

● 724 - Healthy Lifestyle

● 806 - Youth Development

1. Outcome Target

Amount of additional resources leveraged because of program success.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 0   **2009** : 0   **2010** : 0   **2011** : 0   **2012** : 0

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

- 724 - Healthy Lifestyle

- 806 - Youth Development

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type : Change in Knowledge Outcome Measure

| **2008 :**2 | **2009 :** 2 | **2010 :** 2 | **2011 :**2 | **2012 :** 2 |

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

- 724 - Healthy Lifestyle

- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Funding sources have been decreasing at both the federal, state and private levels. This could impact how many new materials, trainings and programs specialists and agents can provide. Also Medicare, Medicaid and private healthy insurance benefits have been fluctuating so access to care may prevent some individuals from implementing self-care and lifestyle recommendations. Also more funds and efforts may need to be directed toward the Hispanic/Latino population.

Changes in the regulation of natural products could impact research programs within this plan, as well as the use of these products by consumers.

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- After Only (post program)

Description

For Extension programs evaluation materials will be provide for program participants. Pre- and post knowledge and behavior evaluations will be used.

2. Data Collection Methods

- Whole population
- Tests
- Sampling

Description

Extension program participants complete pre-and post tests after lessons and fill out behavior change grids to show stages of change. All are self-report evaluations.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Consumer Economics and Financial Literacy

2. Brief summary about Planned Program

Extension specialists will train agents to provide financial literacy programs for youth, individuals in bankruptcy, and other adults based on identified needs. Specialists will also develop curricula, print media and online consumer resources, and program evaluation.

Faculty will promote and provide access to financial and consumer education tools and activities that will assist all Georgians in making wiser decisions and choices in all areas of personal finance management, with special emphasis on early intervention, basic financial literacy, saving/asset building, credit management and rehabilitation, workforce preparedness and bankruptcy.

An apparel and textiles program is designed to help low-income and limited-resource families improve their decision-making skills when making apparel and textile purchases. The program will provide up-to-date information on recent trends and issues in the apparel, textiles and related areas. This program will focus on apparel selection, care, performance, labeling requirements, and new developments in textile fibers. The program will also focus on enhancing the physical well-being, grooming, social skills, and other factors involved in personal appearance. The program is designed for low-income women seeking employment. Participants will develop a positive self-image and develop good wardrobe communication skills.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 607 48% Consumer Economics
- 801 35% Individual and Family Resource Management
- 802 10% Human Development and Family Well-Being
- 804 7% Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Competency in managing money appears to be a skill that does not come naturally to everyone. Unless a person is exposed to the practice of money management, he/she is less likely to understand how it works and its long term benefits. It is easy to develop poor spending and financial habits resulting in significant negative consequences.

An increasingly sophisticated financial marketplace, a dramatic shift from defined benefit to defined contribution retirement plans, and longer life spans make it vitally important for Georgia families to understand and implement sound financial management skills and practices. Georgia maintains one of the highest levels of personal bankruptcy in the nation, 4th in 2005. Georgia ranks 14th in the percentage of adults over 25 without a high school diploma; 18th in the number of persons below poverty level (2003); 34th in personal per capita income (2004); and 36th for unemployment (2004).

Financial literacy can also break the cycle of poverty, which is often associated with those individuals who do not have the necessary tools and skills needed to "handle their money." Providing financial literacy is not a one-size-fits-all effort. Financial literacy is most clearly divided into four categories: early intervention, basic literacy, credit rehabilitation and long term planning or asset building.

2. Scope of the Program

- Multistate Extension
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

All Georgians, especially limited resource and low income families, face not only the problem of economic survival, they face the social and psychological consequences of underemployment, unemployment and decimation. The best consumer practices cannot solve the problems of poverty which many families endure. However, effective consumer practices, provision of consumer education and access to financial literacy are important in alleviating many obstructive aspects of poverty. Extreme inequality of income and wealth has weakened the sense of community and common purpose essential to the quality of life in many Georgia communities. Over a hundred thousand residents of Georgia have a need to know and understand financial literacy.

2. Ultimate goal(s) of this Program

The goal is to improve personal financial management skills, practices, and knowledge to enhance economic well-being for Georgia families. This is done directly by specialists and through training of agents to deliver research-based best information.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	1.0	1.1	0.0	0.0
2009	1.0	1.1	0.0	0.0
2010	1.0	1.1	0.0	0.0
2011	1.0	1.1	0.0	0.0
2012	1.0	1.1	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

In this program, UGA specialists will disseminate personal financial literacy fact sheets, provide personal financial management education classes to agents and select clientele, and provide information to be disseminated by agents to media outlets.

In collaboration with our extension partners and stakeholders FVSU faculty will develop a long range plan for early intervention in financial, literacy and consumer education in targeted areas throughout the state of Georgia.

Monthly training of trainers in financial literacy and consumer education will be conducted. Resources and materials from like-minded consumer advocacy organizations will be disseminated as appropriate. The program will target consumer advocacy organizations and form partnerships with approximately fifty (50) additional collaborators for program goal enhancement, program funding and coalition.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Group Discussion • One-on-One Intervention • Demonstrations • Workshop • Education Class	• Newsletters • Public Service Announcement • Web sites • Other 1 (Exhibits)

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	775	3000	200	500
2009	775	3000	200	500
2010	780	3000	200	500
2011	780	3000	200	500
2012	780	3000	200	500

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009 :**0   **2010 :** 0   **2011 :**0   **2012 :** 0

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :150   **2009 :**200   **2010 :** 200   **2011 :**200   **2012 :**200

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

  2008 :66   **2009 :**70   **2010 :** 70   **2011 :**70   **2012 :**70

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

| **2008** :7 | **2009** :8 | **2010** : 8 | **2011** :8 | **2012** :8 |

V(I). State Defined Outcome

1. Outcome Target

Percentage of program participants reporting an increase in skills proficiency in financial management and consumer education.

2. Outcome Type :   Change in Knowledge Outcome Measure

| **2008** :75 | **2009** : 75 | **2010** : 75 | **2011** :75 | **2012** : 75 |

3. Associated Knowledge Area(s)

- 607 - Consumer Economics

- 801 - Individual and Family Resource Management

1. Outcome Target

Percentage of program participants reporting behavioral changes in financial literacy skills, knowledge and aptitude.

2. Outcome Type :   Change in Action Outcome Measure

| **2008** :65 | **2009** : 65 | **2010** : 65 | **2011** :65 | **2012** : 65 |

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

| **2008** :6500 | **2009** : 6500 | **2010** : 6500 | **2011** :6500 | **2012** : 6500 |

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type :   Change in Action Outcome Measure

| **2008** :2 | **2009** : 2 | **2010** : 2 | **2011** :2 | **2012** : 2 |

3. Associated Knowledge Area(s)

- 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(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Family finances may be affected by natural disasters, either directly (i.e., loss of property) or indirectly (i.e., impact of weather on cost of home energy). Changes in the economy such as rising interest rates or inflation may also impact family financial security. Public policy changes in the areas of taxes, healthcare, financial services, and other areas can also impact family economic well-being.

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

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- Retrospective (post program)
- Case Study
- Time series (multiple points before and after program)

Description

Agent knowledge will be assessed by evaluation tools specific to the content provided. The evaluation database will be used to assess changes in knowledge and intent to change behavior by those reached through county agents.

The FVSU-CEP Resource management program with make use of the most appropriate evaluation and appraisal methodologies to assess, monitor, compare and follow-up the program's improvements, successes and readjustments. Initially, strengths and needs assessments will be conducted with internal and external stakeholders, targeted clientele, clientele receiving direct training and populations indirectly affected by our financial literacy and consumer education programming. All evaluations will involve the following process: Pre-project evaluation; formative/on-going/concurrent evaluation; summative/terminal evaluation and impact/ex-post evaluation. Evaluation of all FVSU-CEP Resource Management programming will be continuous, participatory and constructive.

2. Data Collection Methods

- Tests
- Sampling
- Whole population
- Case Study
- On-Site
- Mail

Description

Most data collection will be obtained at the time of the educational intervention via questionnaire.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Food Processing, Protection & Safety

2. Brief summary about Planned Program

Concerns about food safety, food security, and their effects on human health have been expressed for decades. CDC reports that there are more than 38 million cases of illness caused by known pathogens annually. Among these cases, about 14 million are considered to actually be foodborne. The USDA estimates the annual cost of human illness for six foodborne pathogens has reached between $2.9 and $6.7 billion and of these costs, meat and poultry account for 80 percent.

This planned program will examine several major meat products and the corresponding supply system. Portions of this program will serve the under served communities, and will partially fulfill the responsibility of the institution to these communities and function as an important complement to the current food safety research. This research matches CSREES strategic objectives of examining the risk factors, costs of diseases, and cost-effective scenarios through the important meat supply chain. This program integrates knowledge and methods from animal science, food science, economics, and computer science. The findings will have important implication for formatting the competitiveness of U.S. agricultural products in both domestic and international markets.

One industry this planned program will focus upon is the dairy goat industry. This industry has a serious inherent problem against its growth and sustainability. Development of a competitive and economically viable dairy goat industry is an enormously challenging task for dairy goat farmers due to the seasonal production of goat milk and their limited capital and other resources. Other constraints of dairy goat production include difficulties in production of uniform quality and quantity of the products, and lack of positive consumer perception. This program is intended to enhance the profitability and sustainability of the dairy goat industry by developing year-round quality dairy goat products through an innovative technological approach to processing the surplus goat milk produced during the peak season.

To disseminate the research-based information concerning the food industry, faculty will offer federally mandated/recommended food safety training for meat, poultry, seafood, juices, fresh produce and fresh-cut produce industries. Faculty will offer educational programs of best practices for all levels of the food industry. Projects will contribute to an improved information base to ensure a safe, nutritious, dependable, and affordable food supply for U.S. consumers. Faculty will assess the benefits and costs of public policies and government regulations affecting health, nutrition, and food safety. Overall, this program will encourage an increase of multidisciplinary analysis of food science issues.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 501 12% New and Improved Food Processing Technologies
- 503 13% Quality Maintenance in Storing and Marketing Food Products
- 601 4% Economics of Agricultural Production and Farm Management
- 607 2% Consumer Economics
- 609 5% Economic Theory and Methods
- 711 4% Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 712 24% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins
- 722 4% Zoonotic Diseases and Parasites Affecting Humans
- 723 32% Hazards to Human Health and Safety

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Consumer demand has changed to reflect accelerated lifestyles, nutrition and health awareness, needs for greater convenience, and a more diverse population. These changes underscore the need for an improved information base to ensure a safe, nutritious, dependable, and affordable food supply for U.S. consumers. Research has also shown that the incidence of foodborne illness has declined dramatically, especially in the meat and poultry industry. This has largely been due to ongoing training and research applications.

The U.S. government has put great emphasis on food-safety, particularly on the hazards and foods that present the greatest risks to public health and impose the greatest economic burden on the nation. The Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), the Food Safety and Inspection Service (FSIS), and the Agricultural Research Service (ARS), have worked aggressively to reduce bacteria contamination of meat and foodborne diseases. They emphasize preventive controls of the risks and embark upon exploring ways to strengthen surveillance, inspections, and risk assessment to improve the safety of the nation's food supply. The Hazard Analysis and Critical Control Point (HACCP) system represents a successful program in controlling zoonotic pathogens. Despite these efforts, the understanding of pathogens and their transmission along the food supply chain is still limited.

The development of the dairy goat industry has lagged behind its cow dairy counterpart. It is a priority of the state to enhance economic viability and sustainability of the limited resource dairy goat farmers who have long struggled for their survival and business profitability by developing year-round marketable dairy goat products.

2. Scope of the Program

- In-State Research
- In-State Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The plans for this program assume that faculty will be funded at current levels. It also assumes that current food industry regulations will continue without major restructuring. HACCP was federally mandated for the seafood, meat and poultry industries in 1998. Since that time other industries have been required to develop mandatory HACCP programs, including the juice industry in 2001. FDA is in the process of developing a food safety guidance document for the fresh-cut produce industry, which may lead to mandatory compliance in the near future.

Assumptions also assume that food safety and corresponding social costs will remain a public concern in coming years; there will be more in-depth studies on pathogen transition along the meat supply chain; food safety will come to be a major factor affecting the competitiveness of foods domestically and abroad; and finally uncertainty and risks of pathogen contamination will continue to characterize the process of food production and supply system.

2. Ultimate goal(s) of this Program

The goals of this program are to:
Assess consumer preferences and demands, and their implications for production and marketing practices in the food system.
Find ways to monitor, control, and reduce hazard and risk in the Farm to Table food supply chain.
Decrease the incidence of foodborne illness through ongoing training and research application programs.
To enhance the sustainability and profitability of the dairy goat industry and limited resources farmers who have been economically underserved and struggled in the state and across the nation for a long period of time.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	4.0	0.0	0.0	0.5
2009	4.0	0.0	0.0	0.5
2010	4.0	0.0	0.0	0.5
2011	4.0	0.0	0.0	0.5
2012	4.0	0.0	0.0	0.5

V(F). Planned Program (Activity)

1. Activity for the Program

The activities of this planned program include:
Projects to analyze consumer demand for food
Workshops and short courses for food industry
Research studies of food processing industry
Development of models
Publishing of journal papers and other media.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Workshop - Education Class - One-on-One Intervention	- Web sites - Newsletters

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	250	30	0	0
2009	250	30	0	0
2010	300	40	0	0
2011	500	50	0	0
2012	500	50	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

| **2008** :0 | **2009** :0 | **2010** : 0 | **2011** :0 | **2012** :0 |

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Educational contacts hours (number of students X teaching hours) from workshops to clientele

  2008 :6000   **2009** :6500   **2010** : 6800   **2011** :7000   **2012** :7000

- Number of significant publications

  2008 :8   **2009** :10   **2010** : 11   **2011** :11   **2012** :11

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

  2008 :2   **2009** :2   **2010** : 1   **2011** :1   **2012** :1

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

  2008 :685   **2009** :700   **2010** : 715   **2011** :750   **2012** :685

V(I). State Defined Outcome

1. Outcome Target

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

2. Outcome Type :   Change in Action Outcome Measure

| **2008** :0 | **2009** : 0 | **2010** : 0 | **2011** :0 | **2012** : 0 |

3. Associated Knowledge Area(s)

- 503 - Quality Maintenance in Storing and Marketing Food Products

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

2008 :1   **2009 :** 2   **2010 :** 2   **2011 :**2   **2012 :** 2

3. Associated Knowledge Area(s)

- 501 - New and Improved Food Processing Technologies

- 503 - Quality Maintenance in Storing and Marketing Food Products

- 601 - Economics of Agricultural Production and Farm Management

- 607 - Consumer Economics

- 609 - Economic Theory and Methods

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

1. Outcome Target

Number of invited presentations at professional society meetings

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :1   **2009 :** 2   **2010 :** 2   **2011 :**2   **2012 :** 0

3. Associated Knowledge Area(s)

- 501 - New and Improved Food Processing Technologies

- 503 - Quality Maintenance in Storing and Marketing Food Products

- 601 - Economics of Agricultural Production and Farm Management

- 607 - Consumer Economics

- 609 - Economic Theory and Methods

- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

- 722 - Zoonotic Diseases and Parasites Affecting Humans

- 723 - Hazards to Human Health and Safety

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Government Regulations
- Competing Programatic Challenges
- Competing Public priorities
- Public Policy changes
- Appropriations changes

Description

Changes in governemnt mandates for food safety will dramatically increase the need for this planning program. Poor economy will decrease the number of people particpating in the planned program.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- During (during program)
- Case Study
- Before-After (before and after program)

Description

Idendified evaluation studies to be part of the planned program include both research and extension components. Some of the research studies attempting to identify ways to monitor, control, and reduce hazard and risk in the food supply chain will use during and post evaluation studies. Case study evaluation will be used to examine changing food demand. Scientists working with the dairy goat industry willconduct consumer acceptability studites at local retail outlet stores. Extesion specialist conducting HACCP workshop will use particpation evaluations as a guide for future program develement efforts.

2. Data Collection Methods

- Observation
- On-Site
- Sampling
- Structured
- Case Study
- Tests

Description

Data will be collected from journal publications. Delphi surveys will be used to gather data from panel of experts. Surveys of limited resource goat farmers after specific parts of the planned program. Survey consumers about demand for food.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Housing and the Near Environment

2. Brief summary about Planned Program

This program will include education in maintaining a safe, clean and healthy home environment. Faculty will provide training on indoor air quality. They will teach consumers how to reduce exposure to indoor air quality contaminants in the home. Faculty will provide classes and educational information in water and energy conservation, waste reduction and recycling, particularly hazardous waste disposal.

Through the homebuyer education program, faculty will help consumers gain the knowledge they will need to become successful homeowners. This includes ensuring that participants have an understanding of the buying process, mortgages, financial management, and how to prevent foreclosure and default.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 801 30% Individual and Family Resource Management
- 804 70% Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In Georgia, many of the existing sanitary landfills are nearing capacity, causing concern for the disposal of household waste. In rural communities, many homes depend on underground water supplies which may be contaminated. Demand for energy continues to increase, in spite of rising costs.

Indoor air quality problems are caused by indoor contaminants including, but not limited to, radon, environmental tobacco smoke, biological contaminants, combustion by-products, household products, volatile organic compounds, pesticides, asbestos, and lead. Health effects of these contaminants range from allergic reaction in sensitive populations to death. Additionally, health effects of some contaminants are unknown at this time.

The goal of homeownership for many consumers is unattainable. Housing is an essential need for all persons. Not only is it a place for shelter, but it also has deep psychological and emotional influences on people, providing them with a feeling of safety and security. Many consumers are overwhelmed by the home buying process. A severe shortage of affordable housing for Georgia's workforce exists. One in four households earning less than 80 percent of the area median income spend 50 percent or more on housing. Once in a home, families often encounter an overwhelming number of home repairs and maintenance demands. When affordable housing is unavailable to low-income households, family resources needed for food, medical care, and other necessities are diverted to housing costs.

Residential instability results as families are forced to move frequently, live with other families in overcrowded conditions, or experience periods of homelessness. Residential instability is associated with children's poor attendance and performance in school, no primary source of medical care, lack of preventive health services, various acute and chronic medical conditions, sexual assault and violence. Additionally, the access to homebuyer education in rural counties is often unavailable and, if provided, may require travel to a location outside of the county. The University of Georgia's (UGA) Workforce Housing in Georgia report states, "Georgia must increase the consumer literacy of its workforce by educating them and community leadership regarding existing housing programs and resources should be available in the state." UGA's Housing and Demographics Research Center indicated, "The state should provide education and outreach to the community regarding affordable housing types, development practices, and the availability of funds to assist homebuyers; promote existing housing programs through outreach seminars, and provide

homebuyer education." The report also concluded that, "consumers are not aware of choices and what is needed to participate in the housing market. Persons in the workforce who are potentially eligible know little about available housing programs, including first-time homebuyer programs."

2. Scope of the Program

● In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

By controlling sources of indoor air quality contamination and ensuring adequate ventilation, consumers can successfully reduce risks. Providing education and information to consumers on water and energy conservation can positively impact their behaviors.

By developing a no cost program that covers various topics surrounding the issues of homeownership, people will attend and the program will be more successful. Additionally, we make the assumption that this program will help raise educational awareness on the programs available in the state to assist with homeownership. As long as the Georgia Department of Community Affairs continues to provide financial support for the Georgia Dream program, and the economy stays consistent, people will still enroll in our homebuyer education classes and the program will be successful.

2. Ultimate goal(s) of this Program

The goal of this planned program is to improve the quality of the home environment through improved air quality and better environmental resource management.

The goals of this program are to increase the homeownership rates among limited resource clientele living in rural Georgia, to provide educational programs that enable families and individuals of all ages to attain a sustainable living environment through affordable, safe and decent housing.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	1.0	1.0	0.0	0.0
2009	1.0	1.0	0.0	0.0
2010	1.0	1.0	0.0	0.0
2011	1.0	1.0	0.0	0.0
2012	1.0	1.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Faculty will develop and disseminate information on indoor air quality, water quality, waste management and energy management.

The homebuyer education program will help consumers gain the knowledge they will need to become successful homeowners. This includes ensuring that participants have an understanding of the buying process, mortgages, financial management, and how to prevent foreclosure and default. The program also includes education in maintaining a safe, clean and healthy home environment. All graduates of the classes receive a certificate of completion that is recognized by state agencies as a tool for them to qualify for down payment and mortgage assistance. An additional component of this program is to also disseminate information to our target audience on various resources available to assist our target audience transition from a rental to homeownership relationship, in addition to helping this audience overcome self-imposed barriers that can prevent them from transitioning.

Faculty will also develop training and educational materials for non-federally funded agents to utilize with clients in their communities on home buying. Faculty will develop and disseminate information on indoor air quality, water quality, waste management and energy management. Faculty will promote Extension as a resource for housing education information to housing and community organizations.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Group Discussion - Workshop - Education Class - One-on-One Intervention	- Newsletters - Web sites - Public Service Announcement

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
2008	410	15000	60	0
2009	410	15000	60	0
2010	425	15000	60	0
2011	425	15000	60	0
2012	425	15000	60	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 0   **2010 :** 0   **2011 :** 0   **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :860   **2009 :**860   **2010 :** 900   **2011 :**900   **2012 :**900

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

  2008 :100   **2009 :**100   **2010 :** 100   **2011 :**100   **2012 :**100

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

  2008 :12   **2009 :**12   **2010 :** 12   **2011 :**12   **2012 :**12

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 120000   **2009 :** 120000   **2010 :** 120000   **2011 :**120000   **2012 :** 120000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :80   **2009 :** 80   **2010 :** 80   **2011 :**80   **2012 :** 80

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

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. Outcome Type :   Change in Action Outcome Measure

2008 :40   **2009 :** 42   **2010 :** 42   **2011 :**45   **2012 :** 45

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

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

2. Outcome Type :   Change in Action Outcome Measure

2008 : 42   **2009 :** 42   **2010 :** 45   **2011 :** 45   **2012 :** 45

3. Associated Knowledge Area(s)

● 801 - Individual and Family Resource Management

● 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

1. Outcome Target

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

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 10   **2009 :** 10   **2010 :** 12   **2011 :** 12   **2012 :** 12

3. Associated Knowledge Area(s)

● 801 - Individual and Family Resource Management

● 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters can impact the immediate need for information and resources to reach the community. Home energy costs are greatly impacted by rising fuel costs, which has resulted in a tax credit for homeowners who improve the energy efficiency of their home. Increases in the population and density influence water quality, energy use and waste management.

Indoor Air Quality programs may be impacted by a natural disaster, which may increase in a particular IAQ issue. Changes in economic conditions and policies may impact available funding for programs and staff.

Housing education programs may be impacted by economic conditions such as an increase in interest rates or job layoffs. Changes in federal, state and local regulations and housing policies can affect housing development. Population growth changes the demand for housings.

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

1. Evaluation Studies Planned

● Before-After (before and after program)
● After Only (post program)
● Case Study

Description

The level of knowledge of the agents will be assessed by evaluation tools specific to the training content. An evaluation database provides tools to assess changes in knowledge and the intent to change behavior. Case studies may be used when piloting a new program.

At the beginning and at the conclusion of each homebuyer education series, a test will be administered beforehand to gauge their knowledge prior to completing the class, and then the same test will be given at the conclusion of the series to see if the test scores increase.

2. Data Collection Methods

- Whole population
- Unstructured
- Mail
- Sampling
- Tests

Description

Most data collection will be obtained at the time of the educational intervention via questionnaire. In some instances a mail survey will be sent out as follow-up.

Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to assess change in behavior or practice.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Managing Water, Energy, Waste and Air Quality in Agriculture

2. Brief summary about Planned Program

This planned program is designed to provide leadership in research, teaching, and extension activities related to the inventory, management, protection, and enhancement of natural resources on which the human civilization relies for food, clean water, and clean air.

This program works with all parts of plant production from row crops to greenhouse production. Water availability for irrigation is an increasing problem for agriculture due to increased water demands. This makes it necessary to use irrigation water as efficiently as possible. The goal of this program is to develop more efficient irrigation systems. The program is also involved with managing water runoff from agricultural operations. This program encompasses the Southern Regional Water Quality program that is focused on delivering integrated research and extension information on water resources to clientele throughout the region.

AWARE stands for Animal Waste Awareness in Research and Extension. Much of the program's efforts in animal waste management and pollution prevention for animal agriculture fall under the auspices of AWARE. While based in the departments of Biological and Agricultural Engineering and Animal and Dairy Science, AWARE is really a team of scientists and educators from various departments. Stakeholders and contributors include farmers, consultants, faculty from other universities, state and federal government agencies, agricultural associations and businesses. This team or program provides ongoing technical assistance and education, as well as conducting applied research.

Reducing the ecological footprint of concentrated livestock or poultry production is an important part of this program. Faculty members will continue the development and performance evaluation of process-level strategies and tactics to reduce environmental pollution at the process level from confined animal feeding operations. The program will work to develop methods of managing and ultimately reducing ammonia emissions from poultry houses. Faculty members will develop methods of reducing phosphorous excretion in poultry through nutrition and genetics. It will also develop and apply methods of managing phosphorous in poultry manure in order to minimize detrimental environmental effects.

Faculty members will develop and implement quantitative and qualitative assessment tools of nonmarket/environmental goods. They will analyze regulatory options to discern advantages and disadvantages of various approaches.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 101 4% Appraisal of Soil Resources
- 102 7% Soil, Plant, Water, Nutrient Relationships
- 104 7% Protect Soil from Harmful Effects of Natural Elements
- 111 13% Conservation and Efficient Use of Water
- 112 17% Watershed Protection and Management
- 131 7% Alternative Uses of Land
- 133 21% Pollution Prevention and Mitigation
- 141 7% Air Resource Protection and Management
- 403 13% Waste Disposal, Recycling, and Reuse
- 511 4% New and Improved Non-Food Products and Processes

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The protection and enhancement of natural resources are key issues in the long-term survival of the human civilization. As world population increases, so does the pressure on natural resources to provide food, clean water, and clean air, and to assimilate wastes produced by the ever increasing population. Research programs in this area are aimed at identifying and understanding processes that lead to resource degradation so that management practices can be developed to minimize the impacts of those processes. Priorities are set based on local and national needs including rational utilization of agricultural/industrial/urban wastes, wastewater, by-products, and development of agricultural practices that protect soil, water, and air resources. Increased population growth and changing production patterns in agriculture have resulted in the degradation of soil, air, and water in some areas. Concerns about the management and control of natural resources and sustainable agricultural systems have come to the forefront, especially in the increasing numbers of areas where the urban-rural interface is most intense. These concerns have led to the need of analyses of the legislative and regulatory choices for addressing environmental problems incorporating economic efficiency criteria. Another issue has involved increased public pressure for information about the value of non-market goods, such as environmental amenities, and the costs and benefits of government regulations. There is a continuing need for improved and innovative processes for treatment and resource recovery from animal residuals in order to protect both the natural environment and the viability of animal production systems. Both the increasing regulation of animal production residuals and the increasing costs of fossil energy to deal with these residuals make the situation a high priority. The two equal priorities will be prevention of release of contaminated water to the environment and recovery of economically useful products from animal manure. Water resource issues are critical to the future of Georgia. Water quantity is limiting growth and development in some areas of the State and new water conservation regulations will require extensive public education. Water quality issues are requiring urban and rural communities to assess current practices and develop long term plans for returning impaired waters to their natural state. Priority issues include sedimentation, nutrients, pathogens, organics, metals, pesticides, and habitat impacts.

2. Scope of the Program

- Multistate Integrated Research and Extension
- Integrated Research and Extension
- In-State Research
- In-State Extension
- Multistate Extension
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The protection and enhancement of natural resources are key issues in the long-term survival of the human civilization. As world population increases, so does the pressure on natural resources to provide food, clean water, and clean air, and to assimilate wastes produced by the ever increasing population. Research programs in this area are aimed at identifying and understanding processes that lead to resource degradation so that management practices can be developed to minimize the impacts of those processes. Priorities are set based on local and national needs including rational utilization of agricultural/industrial/urban wastes, wastewater, by-products, and development of agricultural practices that protect soil, water, and air resources.

Increased population growth and changing production patterns in agriculture have resulted in the degradation of soil, air, and water in some areas. Concerns about the management and control of natural resources and sustainable agricultural systems have come to the forefront, especially in the increasing numbers of areas where the urban-rural interface is most intense. These concerns have led to the need of analyses of the legislative and regulatory choices for addressing environmental problems incorporating economic efficiency criteria. Another issue has involved increased public pressure for information about the value of non-market goods, such as environmental amenities, and the costs and benefits of government regulations.

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Water resource issues are critical to the future of Georgia. Water quantity is limiting growth and development in some areas of the State and new water conservation regulations will require extensive public education. Water quality issues are requiring urban and rural communities to assess current practices and develop long term plans for returning impaired waters to their natural state. Priority issues include sedimentation, nutrients, pathogens, organics, metals, pesticides, and habitat impacts.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to protect, and if possible, enhance the natural resources on which the human civilization depends for food, clean water, and clean air. The goal of the program is to protect the natural environment by developing processes that enhance the economic viability of the agricultural production of plants and animals without harm to our natural resources.

Extension goals are to develop education programs and materials that enhance public understanding of environmental issues and management practices that minimize potential degradation of soil and water resources.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	8.5	0.5	11.0	1.2
2009	8.5	0.5	11.0	1.2
2010	8.5	0.5	11.0	1.2
2011	8.5	0.5	11.0	1.2
2012	8.5	0.5	11.0	1.2

V(F). Planned Program (Activity)

1. Activity for the Program

Knowledge in environmental sciences will be improved by applied and basic research studies and by dissemination of results through journal articles, conferences, and professional meetings. Extension outputs to improve public understanding of environmental management will consist of bulletins, flyers, short courses, meetings, and web pages related to implementation of environmental management programs.

Georgia will be actively involved in regional and national efforts consistent with the goals of our water quality programs. We will lead the regional efforts in animal waste management and be involved with numerous state, regional, and national efforts in this area. Research projects and educational efforts will be developed to address nutrient management, animal waste management and irrigation water management under the agricultural pollution control program. In the rural environmental protection area, drinking water will be a primary focus along with wastewater management. There will also be focus on watershed management. Many parts of the water quality program will reach audiences beyond the agricultural community including support for communities and local governments.

Both new and enhanced processes for treatment and utilization of animal manures will be provided to producers through extension and continuing education activities. Applied research projects will be conducted to develop methods to manage or reduce ammonia emissions in poultry production.

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 target audiences at the local level.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• One-on-One Intervention • Demonstrations • Group Discussion • Education Class • Workshop	• TV Media Programs • Web sites • Public Service Announcement • Newsletters

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
2008	3500	15000	100	100
2009	3500	15000	100	100
2010	3700	15000	100	100
2011	3700	15000	100	100
2012	3700	15000	100	100

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 1   **2009 :** 2   **2010 :** 1   **2011 :** 2   **2012 :** 2

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 310   **2009 :** 310   **2010 :** 350   **2011 :** 400   **2012 :** 400

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

2008 : 2900   **2009 :** 3100   **2010 :** 3100   **2011 :** 3500   **2012 :** 3500

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

2008 : 68   **2009 :** 70   **2010 :** 70   **2011 :** 70   **2012 :** 70

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type : Change in Knowledge Outcome Measure

2008 : 12000   **2009 :** 12500   **2010 :** 13000   **2011 :** 13500   **2012 :** 13500

3. Associated Knowledge Area(s)

● 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

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type : Change in Knowledge Outcome Measure

2008 : 80   **2009 :** 80   **2010 :** 80   **2011 :** 80   **2012 :** 80

3. Associated Knowledge Area(s)

● 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

1. Outcome Target

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

2. Outcome Type :   Change in Action Outcome Measure

2008 : 55   **2009 :** 55   **2010 :** 55   **2011 :** 55   **2012 :** 55

3. Associated Knowledge Area(s)

- 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(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Regulations and environmental compliance is based on typical conditions, severe weather may alter how regulations are enforced. Emergency situations may change environmental priorities. Our educational programs will try to address this as much as possible. Economics drive the investment and resources that can be put into environmental management. The government can change regulations which may alter the way this program needs to be delivered. Government regulations and pubic policy may speed up the adoption of conservation measures.

Policy changes affecting conservation and management of soil and water resources could increase or decrease the need, demand, and effectiveness of research and extension activities. Similarly, changes in government regulations and funding may either increase or decrease the need for research and extension programs in the environmental sciences.

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

1. Evaluation Studies Planned

- Case Study
- During (during program)
- Retrospective (post program)
- After Only (post program)

Description

Ongoing feedback from commodity associations, county agents, external agency employees and other stakeholders will help determine needs and provide evaluation. College program planning and evaluation will also dictate programming in this area.

Evaluation of research, teaching, and extension activities in the environmental sciences will be continuously evaluated by amount of grant funding received, numbers of peer reviewed publications, student surveys, alumni surveys, short course and training session evaluations, and evaluations of public meetings.

Evaluation will be done through field trials and real world comparisons of production such as poultry houses with and without ammonia management/reduction strategies.

Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to access change in behavior or practice.

2. Data Collection Methods

- On-Site
- Unstructured
- Tests
- Sampling
- Case Study

Description

Outcome will be measured by evaluation of amount of grant funding, numbers of peer reviewed publications, student surveys, alumni surveys, short course and training session evaluations, and evaluations of public meetings.

Surveys of participants in formal programs will be collected. Agents will be surveyed or tested on knowledge gained.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Meat and Dairy Goat Production and Processing

2. Brief summary about Planned Program

Goat production is a nontraditional business in the south. It has great potential of increase in production capability and in market demand. However, there are problems remaining in production, obstacles in the goat meat market, and uncertainty factors in the determination of consumers' purchase decisions. Up to now, goat production has been characterized by small scale and low profits, and ineffective marketing channels, and niche markets which are not fully developed.

This program is to examine goat production, chevon supply and demand, and impacts of goat industry on the development of the regional economy. The study will use economic theory and methods, start with a large scale sample survey at 11 southern states, systematically examine the series of problems in the development of the industry, and focus more on the issues related to marketing. The findings of this program will have important implication for energizing local economy, for improving the living standards of small farmer in southern states, and for providing the decision support to policy makers at various levels of USDA.

Goat meat (chevon) is one of the most widely consumed meats in the world. Although the palatability of chevon is considered to be low among American consumers, the importation of goat meat into the US has constantly increased mainly due to increased demand by ethnic consumers. Goat meat is low in fat content compared to other red meats and it has an excellent ratio of polyunsaturated to saturated fats making it a very healthy choice of meat. There is a strong need for research to improve acceptability and nutraceutical aspects, as well as the public perception of chevon. Developing value-added products using the resulting chevon may expand the existing market and increase health benefits to humans.

The dairy goat industry has a serious inherent problem against its growth and sustainability. Development of a competitive and economically viable dairy goat industry is an enormously challenging task for dairy goat farmers due to the seasonal production of goat milk and their limited capital and other resources. Other constrains of dairy goat production include difficulties in production of uniform quality and quantity of the products, and lack of positive consumer perception. This program is to enhance the profitability and sustainability of the dairy goat industry by developing year-round quality dairy goat products through an innovative technological approach to processing the surplus goat milk produced during the peak season. The dairy goat industry and limited resource dairy goat farmers have been seldom supported by the government, industry and academia. Technological and market innovations are essential for the dairy goat industry. We will perform the proposed research to strengthen local economy of dairy goat farmers and accomplish much needed scientific information on this area.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 307 20% Animal Management Systems
- 308 5% Improved Animal Products (Before Harvest)
- 311 15% Animal Diseases
- 501 5% New and Improved Food Processing Technologies
- 502 5% New and Improved Food Products
- 503 10% Quality Maintenance in Storing and Marketing Food Products
- 601 5% Economics of Agricultural Production and Farm Management
- 603 5% Market Economics
- 609 20% Economic Theory and Methods
- 712 10% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The past decades have experienced substantial changes in meat demand. The declining demand for beef, fast growing demand for poultry, and leveling-off demand for pork in the meat market characterized the well-known consumption shift from red to white meat (USDA/ERS). A same remarkable change is that some specific attributes of meat products carried more weight in consumers' purchasing choices. The broad discussion on the meat market evolution is well documented and could be found in a large body of literature.

Consumer preferences for some specific attributes have nurtured a favorable market for goat meat. There has been no divisiveness of awareness that there is a good match between attributes of goat meat and the current preferences of consumers. It becomes clear that goat production plays a role in the operation of small farms, and chevon becomes increasing important in the daily consumption of various ethnic groups.

Researchers are increasingly attentive to the goat meat market, and studies on goat meat supply and influencing factors could be found in the literature. Yet, in contrast to studies on other meats products, the goat meat market remains the one less examined. We conducted a thorough literature search, but ended up with only a short publication list. Many issues of importance, such as demand potential, consumer preferences, and niche markets are still distant away from a thorough examination. In addition, the general lacking or unavailability of data on goat supply and demand has been a major obstacle to conducting serious studies in the field. Thereby, the appreciation of studies regarding goat meat demand and additional data gathering are warranted.

Goat carcasses have low intramuscular fat and high levels of linoleic acid compared to lamb or beef. Despite these nutritional advantages, chevon is considered to be lower in quality than beef, pork, or lamb, primarily due to its perceived lower palatability. Thus, there is a strong need for research to improve acceptability, nutraceutical properties and public perception of chevon.

The development of the dairy goat industry has lagged behind its cow dairy counterpart. It is a priority of the state to enhance economic viability and sustainability of the limited resource dairy goat farmers who have been long struggled for their survival and business profitability by developing year-round marketable dairy goat products.

2. Scope of the Program

- In-State Research
- Multistate Research
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Immigrants will impact the potential audience for this program. Agro-forestry and other agricultural byproducts make it possible for substantial increase in domestic goat production. The program assumes that the data of chevon supply and demand at various levels of government will not be complete in the next few years. Negative factors affecting the consumption of other red meat, such as mad cow disease may not be eliminated soon from the production system.

The program assumes that funding will remain constant or increase. Attractive quality goat milk products will be developed and marketed consistently throughout the year. Meat goat farmers are expected to adopt the preharvest management strategies that result in a nutritious and safe product.

2. Ultimate goal(s) of this Program

The ultimate goal of the program is to improve the status quo of in-depth studies on the goat meat market. This program is also aimed to provide goat producers with substantial information on what consumers want, who drive the niche market, what are effective market channels.

The program will provide consumers an alternative meat product that is safe, nutritious, and superior in palatability.

The program will enhance the sustainability and profitability of the dairy goat industry and limited resources farmers who have been economically underserved and struggled in the state and across the nation for a long period of time.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.0	0.8	0.0	4.0
2009	0.0	0.8	0.0	4.0
2010	0.0	0.8	0.0	4.0
2011	0.0	0.8	0.0	4.0
2012	0.0	0.8	0.0	4.0

V(F). Planned Program (Activity)

1. Activity for the Program

This program will attempt to identify the niche market of goat meat. It will identify the attributes and types of goat meat products. The program will tap efficient marketing channels of goat meat supply chain and evaluate the production efficiency. Studies will be conducted to examine the impact of goal production on a local economy.

Studies will be conducted to determine the effects of preslaughter dietary treatments on oxidation rate as well as nutritional, physicochemical and organoleptic properties of chevon-based value-added products. Additionally these studies will determine the effects of preslaughter diet and duration of feeding on Escherichia coli and other enteric bacterial populations in rumen and rectum, and contamination of skin and carcass in goats. Studies will be conducted to determine the effects of preharvest spray washing on skin and carcass bacterial counts in goats and the effects of preharvest diet, feed deprivation, and spray washing on blood hormone and metabolite concentrations. Faculty will disseminate the research findings through scientific and extension meetings, as well as through publications in journals and newsletters.

As a part of this program goat milk cheeses (i.e., Cheddar and Monterey Jack type), reduced fat/cholesterol cheeses, and infant formulas will be developed. Food quality parameters and nutrient availability of the dairy goat products will be evaluated. Faculty will share the results of the research by disseminating findings to the target audience including the scientific community in food and agricultural sciences, extension workers, goat enthusiasts, dairy producers and consumers through training courses, seminars, workshops, goat field day, and e-mail communications, etc.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Demonstrations - Education Class - Group Discussion	- Web sites - Public Service Announcement

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	50	100	0	0
2009	50	100	0	0
2010	50	100	0	0
2011	50	100	0	0
2012	50	100	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 1   **2009 :** 0   **2010 :** 1   **2011 :** 0   **2012 :** 1

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 3   **2009 :** 3   **2010 :** 3   **2011 :** 3   **2012 :** 3

V(I). State Defined Outcome

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 2   **2009 :** 2   **2010 :** 1   **2011 :** 1   **2012 :** 1

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems

- 308 - Improved Animal Products (Before Harvest)

- 311 - Animal Diseases

- 501 - New and Improved Food Processing Technologies

- 502 - New and Improved Food Products

- 503 - Quality Maintenance in Storing and Marketing Food Products

- 601 - Economics of Agricultural Production and Farm Management

- 603 - Market Economics

- 609 - Economic Theory and Methods

- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)
- Competing Programatic Challenges

Description

Government funding and government (i.e., FDA) regulations on food safety laws for dairy goat products may be changed. Changes in Government regulations regarding preharvest management of animals may affect the progress of the studies. Consumers, especially the ethnic groups in US population which prefer to buy goat milk products, may be changed.

Natural disasters may affect the health and well-being of experimental animals, which may jeopardize the outcome of the studies. Since chevon is popular among the immigrant populations, any change in Government immigration policies may negatively affect the assumptions of the program. With more non-white immigrants and increasing percentage of old population in the coming years, there will be more demand for goat meat.

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

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

Description

This program will be evaluated during the program and post program. The evaluation during the program will focus on the data and information we collected from various sources. The evaluation post program will be done with workshop, presentation, newsletter, and journal publications.

The progresses of the project shall be evaluated by the appointed committee members for the project. Consumer acceptability studies may be conducted at local retail outlet stores. Descriptive sensory studies on the developed goat products may be conducted at public gathering such as annual Agriculture Expo in Moultrie, GA (annual attendance approximately 200,000) and goat field days and/or workshops.

Preslaughter management methods that showed the best results from our studies will be recommended to commercial farmers. The feedback obtained from producers and processors on the feasibility of these methods on commercial scales will be factored into the assessment of the program.

2. Data Collection Methods

- Sampling
- Telephone
- On-Site
- Journals
- Tests

Description

There is a serious shortage of data in the field that this program will focus on. Therefore, the major data to support this study come from a large scale telephone survey in 11 Southern stats. We will also collect some data from the previous journal publications.

Faculty will estimate the volume of marketing and sale of the developed dairy goat products from this program. They will survey of the economic gains of the limited resources goat farmers after the planned project executed. They will evaluate the number of refereed journal publications from the research project, and also other publications such as bulletin, newsletter, e-mail inquiries for increased new dairy goat businesses.

Statistically valid scientific experiments will be designed and conducted at FVSU research facilities. Consumer surveys will be collected to see trends in chevon consumption. Input from producers will be solicited to help make the necessary changes in our studies.

V(A). Planned Program (Summary)

1. Name of the Planned Program

New Product Development / Genomics and Cultivar Development

2. Brief summary about Planned Program

The overall goal is to establish a continuum of basic and applied research directed towards the discovery and characterization of the genetics behind important plants, and to employ this information to develop new breeding tools. Collectively, the new breeding tools are used to supplement traditional breeding practices, which along with the new genetic information, will facilitate cultivar development. A major objective will be the educating and training of plant breeders.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 4% Soil, Plant, Water, Nutrient Relationships
- 133 4% Pollution Prevention and Mitigation
- 201 8% Plant Genome, Genetics, and Genetic Mechanisms
- 202 31% Plant Genetic Resources
- 203 11% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 11% Plant Product Quality and Utility (Preharvest)
- 205 19% Plant Management Systems
- 206 4% Basic Plant Biology
- 212 8% Pathogens and Nematodes Affecting Plants

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Agriculture takes place in a biologically and economically dynamic context. Biological dynamics refer to the fact that new diseases, insects and weeds arise periodically. Economic dynamics refer to the globalization of the agricultural markets and the need to improve efficiency in costs of production so as to be internationally competitive. Furthermore, it is likely that farmers and nurseries will have to contend with water shortages and increased fuel costs as the population increases.

There is now recognition that to be sustainable, agriculture must contribute to the well-being of the surrounding communities while minimizing its environmental footprint. The development of new cultivars is the most cost effective and environmentally feasible method to achieve this end. While new and improved agronomic practices are essential if sustainable agriculture is to be achieved, so are improved cultivars that require less inputs (e. g., synthetic pesticides or irrigation water) and produce more per unit of input (e.g., fertilizer, land). Accordingly, the priority is to breed cultivars that maximize yield and product quality with a minimum of inputs and to generate the basic knowledge of genetics necessary to breed such cultivars.

In urban areas, population growth and demands have put great pressures on the ornamental horticulture industry. Production and sale of landscape plants continue to increase rapidly. The development of new products can have tremendous impact on water use and pesticide use in urban areas.

2. Scope of the Program

- In-State Research
- Multistate Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The underlying premise is that a greater understanding and effective deployment will be an indispensable component to maintaining agricultural productivity, profitability, and sustainability. The assumptions are that sufficient funding, personnel, and physical facilities will be available to conduct the necessary research.

2. Ultimate goal(s) of this Program

1) Achieve a greater understanding of the plant genome and of the genetics behind important traits
2) Use this information to improve the efficiency of cultivar development programs
3) Breed and deliver new cultivars that embody traits which make them more economical to produce (e. g., have a disease resistance that minimizes the need for pesticide inputs) or have improved quality or value-added traits (e. g., improved persistence in forages or improved oil quality in oilseeds, improved heat or drought tolerance in urban landscapes).

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.0	0.0	7.0	1.5
2009	0.0	0.0	7.0	1.5
2010	0.0	0.0	7.0	1.5
2011	0.0	0.0	7.0	1.5
2012	0.0	0.0	7.0	1.5

V(F). Planned Program (Activity)

1. Activity for the Program

1) 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

2) Develop new cultivars, with emphasis on plants of current or potential importance to Georgia, which manifest improved performance or manifest value-added traits.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Workshop • Education Class • Group Discussion	• Web sites • Newsletters

3. Description of targeted audience

{NO DATA ENTERED}

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 12   **2009 :** 11   **2010 :** 10   **2011 :** 13   **2012 :** 13

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 49   **2009 :** 45   **2010 :** 45   **2011 :** 48   **2012 :** 48

V(I). State Defined Outcome

1. Outcome Target

Release of new cultivars or germplasms

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 15   **2009 :** 15   **2010 :** 15   **2011 :** 15   **2012 :** 15

3. Associated Knowledge Area(s)

- 201 - Plant Genome, Genetics, and Genetic Mechanisms

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Extensive field trials are required to deliver new cultivars. Anything that destroys crops in the field could lead to delays in the target goals. In addition, the underlying basic research is resource-intensive. Anything that decreases the availability of resources (e.g., budget cuts due to economic downturns or competing public priorities) or government regulations that complicate the deployment of new cultivars (e.g., on the use of GMOs) can delay progress.

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

1. Evaluation Studies Planned

- During (during program)

Description

1) Extramural funding and acreage occupied remains as perhaps the best indicator that the research being conducted is relevant and meeting its goals.2) Sales of new cultivars are the best indicator that they embody benefits for the end users.

2. Data Collection Methods

- Sampling
- Journals
- Observation

Description

{NO DATA ENTERED}

V(A). Planned Program (Summary)

1. Name of the Planned Program

Plant Production and Protection

2. Brief summary about Planned Program

The program objectives are to develop and improve plant disease management tactics utilizing the principles of exclusion, eradication, and protection to reduce losses in and improve quality of horticultural crops. Plant diseases are one of, if not the most limiting factors affecting growers of plant crops in Georgia. This program focuses on those diseases that cause the most economic loss and are perennial problems since growers have few tools at their disposal to aid them in suppressing losses.

Crop and weed management objectives of this program will provide leadership, technical guidance and support, research, and educational information development on agronomic commodities, weed management techniques and forages of interest. The program includes insect genetics, immunology, endocrinology, systematics, basic molecular biology of insects, and the genetics and mode of Bt toxins and transgenic plants.

This planned program will evaluate new and existing varieties and their suitability for Georgia. Fertility management and cultural practices including planting practices will also be evaluated. Alternatives for the loss of Methyl Bromide, the occurrence of Tomato Spotted Wilt and Sudden Oak Death are examples of major issues in which faculty are working to find solutions.

The program will develop applied technology and transfer applied technology to agricultural industries in Georgia for which there is the greatest production and crop value. The program will focus on management strategies that will provide the greatest economic returns for the grower and have less impact on the environment.

Research will be conducted at multiple locations around the state. State faculty members will conduct educational programs at the county, state and regional level to provide the latest production information to producers. This programming may involve the presentation of applied research results as well as information disseminated from other sources.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 6% Soil, Plant, Water, Nutrient Relationships
- 203 2% Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 204 6% Plant Product Quality and Utility (Preharvest)
- 205 14% Plant Management Systems
- 206 8% Basic Plant Biology
- 211 7% Insects, Mites, and Other Arthropods Affecting Plants
- 212 27% Pathogens and Nematodes Affecting Plants
- 213 8% Weeds Affecting Plants
- 215 8% Biological Control of Pests Affecting Plants
- 216 14% Integrated Pest Management Systems

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The commercial vegetable industry is one of the most valuable agricultural commodities in the state of Georgia. The industry is constantly changing and constantly faces many challenges regarding crop protection, quality and profitability. Georgia ranks third in vegetable acreage and fourth in value of vegetable production. Row and forage crops in Georgia are valued at more than $1.7

billion. Georgia produces over $165 million in Fruits and Nuts. Georgia is the largest producer of pecans in the country. Cotton is the number one crop with a farm gate value in excess of $600 million. Vidalia onions are a $100 million business in Georgia.

The single largest expense for producers is often fungicides for disease control. Pecan producers lost an average of nearly $17 million between 1999 and 2004 due to reduced yield and disease management. Farmers face major disease control challenges each year. Cotton, peanut and soybean production is limited each year by the attack of diseases and nematodes. Parasitic nematodes are perceived by many to be one of the most under-managed pests in cotton and cost growers tens of millions of dollars each year. Mythyl Bormide was to be banned from use in 2005. Exemptions for its use have been awarded annually, but alternatives must eventually be found.

Insects will continue to have great economic impacts and an effective population management program will be required.

There are approximately 1.8 million acres of turf in Georgia with a maintenance value of $1.85 billion. Disease losses and control cost account for over $250 million annually. (Due to the increase of population, use and popularity of turf species as well as their high aesthetic value, disease losses and control costs are enormous). Turfgrass fungicides are cost-prohibiting and their over-use can be detrimental to the environment.

2. Scope of the Program

- Multistate Extension
- In-State Extension
- Multistate Integrated Research and Extension
- Integrated Research and Extension
- Multistate Research
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Assumptions for this planned program are numerous and varied. It is assumed that the different commodity industries will remain viable and an important industry in the area. The support of all commodity industries is critical and they must be partners in the efforts of this program.

This planned program assumes that all growers are motivated to accept new practices if demonstrated successfully.

Certain economic assumptions are made based on the current federal farm policies. Changes in these policies would affect outcomes. It is also assumed that the population growth in Georgia will continue as predicted, putting additional pressures on plant production and protection.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to reduce disease incidence and severity and to develop management programs for diseases and pests that impact production. To educate producers on new and emerging issues and technology, faculty must help solve problems so growers remain competitive and profitable. It is the goal of faculty to produce the highest quality product that is profitable and sustainable with the least environmental impact.

The goal is to provide timely and useful educational program on management and best practices in support of county faculty and producers in Georgia.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	8.0	0.5	12.0	2.0
2009	8.0	0.5	12.0	2.0
2010	8.0	0.5	12.0	2.0
2011	8.0	0.5	12.0	2.0
2012	8.0	0.5	12.0	2.0

V(F). Planned Program (Activity)

1. Activity for the Program

Publications in the form of journal articles, station bulletins and extension publications will be written. In addition, oral and poster presentations will be made at scientific conferences. Oral presentations, field displays and written reports will be made to growers and other stakeholders at county meetings, statewide field days, and at commodity meetings.

Research projects will be carried out in the laboratory, the greenhouse, on experimental farms, and in collaboration with commercial producers. Findings will be published in the peer-reviewed literature and presented at scientific congresses and regional producer-oriented meetings. In collaboration with extension faculty, new management guidelines will be developed, evaluated and disseminated.

In this program, specialists will disseminate information on new procedures and technologies through education classes to agents and select clientele, and provide information to be disseminated by county extension agents to media outlets.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- One-on-One Intervention - Group Discussion - Demonstrations - Workshop - Education Class	- Newsletters - Web sites

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

Year	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
	Target	Target	Target	Target
2008	19750	50000	0	0
2009	20000	50000	0	0
2010	20000	50000	0	0
2011	20000	50000	0	0
2012	20000	50000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :5   **2009** :5   **2010** : 5   **2011** :5   **2012** :5

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :225   **2009** :230   **2010** : 230   **2011** :230   **2012** :230

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

  2008 :1140   **2009** :1200   **2010** : 1200   **2011** :1200   **2012** :1200

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

  2008 :2200   **2009** :2300   **2010** : 2300   **2011** :2300   **2012** :2300

- Number of disease samples processed by diagnostic laboratory.

  2008 :6000   **2009** :7000   **2010** : 7000   **2011** :7000   **2012** :7000

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 110000   **2009 :** 120000   **2010 :** 120000   **2011 :** 120000   **2012 :** 120000

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 20   **2009 :** 20   **2010 :** 20   **2011 :** 20   **2012 :** 20

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of Master Gardener certifications granted through this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 500   **2009 :** 600   **2010 :** 600   **2011 :** 650   **2012 :** 650

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Increase in farm gate value of row and forage crops in Georgia. Reported annually in millions of dollars.

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 1792   **2009 :** 1845   **2010 :** 1901   **2011 :** 1958   **2012 :** 1958

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Increase in farm gate value of fruit and nut crops in Georgia. Reported annually in millions of dollars.

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 233   **2009 :** 240   **2010 :** 248   **2011 :** 255   **2012 :** 255

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Increase in farm gate value of vegetable crops in Georgia. Reported annually in millions of dollars.

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 746   **2009 :** 769   **2010 :** 792   **2011 :** 815   **2012 :** 815

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Increase in farm gate value of ornamental horticulture crops in Georgia. Reported annually in millions of dollars.

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 675   **2009 :** 695   **2010 :** 716   **2011 :** 738   **2012 :** 738

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :80   **2009 :** 80   **2010 :** 80   **2011 :**80   **2012 :** 80

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :65   **2009 :** 65   **2010 :** 65   **2011 :**65   **2012 :** 65

3. Associated Knowledge Area(s)

- 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(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Severe drought or excessive rainfall may prevent successful evaluations in particular locations. These conditions will also affect disease severity each year.

Changes in the Federal Farm Policy could drastically change our basic economic assumptions. Government regulations can greatly impact this program.

Changes in population growth will impact plant production and demand for products.

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

1. Evaluation Studies Planned

- After Only (post program)
- Case Study
- Before-After (before and after program)
- Time series (multiple points before and after program)

Description

Periodical surveys of growers on production practices will be distriburted and collected.

Research will be evaluated by acceptance of publications in the scientific community and by impact of the research on agricultural production in Georgia.
Fungal fermentation products will be screened against plant parasitic nematodes in laboratory, greenhouse and field studies.

Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to access change in behavior or practice.

2. Data Collection Methods

- Observation
- Sampling
- Mail
- On-Site
- Case Study
- Tests
- Portfolio Reviews
- Journals

Description

Surveys of different commodity growers will be made periodically at county production meetings.

Data will be collected from commercial fields by doing on-farm studies. Standard scientific practices associated with the various protocols used will be employed.

Direct questions, surveys and test of training participants.

Number of references, citations, published articles will be tracked.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Poultry Production and Protection

2. Brief summary about Planned Program

The program will support the continued success of Georgia's poultry industry by addressing critical needs. It will develop methods to improve reproductive efficiency in broiler breeds and extend those methods to poultry producers. The program will develop energy conservation methods applicable to poultry production and assist poultry farmers in adopting these methods. And finally, this program will specifically train poultry growers to prevent the entry of AI into commercial flocks. To provide security in this industry faculty must provide poultry farmers with information to protect their flocks, themselves, their families and the public.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 301 20% Reproductive Performance of Animals
- 305 10% Animal Physiological Processes
- 306 10% Environmental Stress in Animals
- 307 30% Animal Management Systems
- 311 20% Animal Diseases
- 315 10% Animal Welfare/Well-Being and Protection

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The Georgia poultry industry is threatened by avian influenza (AI). If this deadly virus gains a foothold in the poultry industry, massive economic losses to the state will be unavoidable. The Georgia poultry industry contributes over $13 billion in economic activity to Georgia annually. AI outbreaks in the state would cause significant disruption, not only to the poultry production, but in almost all aspects of daily life due to quarantines, inability to move animals and equipment, processing plant shutdowns, loss of consumer confidence, etc. Poultry farmers are the first line of defense in regard to disease prevention. The H5N1 avian influenza subtype will likely be brought to the US by migratory birds sometime in 2006 or 2007. However, other subtypes of avian influenza have been identified in the US for decades. Avian influenza has been, and will continue to be, a poultry health concern for years to come.

The success of the industry has also created additional challenges. Because of genetic selection for increased growth rate, broiler breeders have acquired reduced reproductive traits including decreased egg production, decreased sperm volume/motility/mobility, and reduced hatchability. Georgia poultry farmers are faced with ever-increasing heating and cooling costs due to spiraling energy costs. It is critical to develop new methods of heating and cooling poultry houses more efficiently. Likewise, it is critical that poultry farmers be made aware of energy saving technologies and methods.

2. Scope of the Program

- In-State Research
- In-State Extension
- Integrated Research and Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The negative occurrence of avian influenza in Georgia poultry flocks or the quick and complete elimination of avian influenza from individual infected flocks without the disease spreading must be considered as successes. In addition, the protection of farmers,

poultry workers and their families from being infected with avian influenza will be considered a success.

Since growth rate continues to be the primary selection factor utilized in broiler breeder selection, reproductive performance will continue to decline. Preventing, minimizing or eliminating the decline would all be considered successes.

Energy prices are likely to continue to increase in the foreseeable future. Increased energy expenditures by poultry farmers will not necessarily mean that they have not saved money by implementing conservation methods.

2. Ultimate goal(s) of this Program

An important goal of this program is to provide 100% of the poultry farmers in the state with relevant information on the critical role they play in avian influenza prevention in commercial poultry flocks. In addition, they will be provided accurate information on human health concerns in regard to avian influenza.

The goal of this program is to assure Georgia poultry producers remain highly competitive in broiler breeder egg numbers, fertility and hatchability, and to assure Georgia poultry farmers remain highly competitive in terms of using energy efficiently to heat and cool their poultry houses.

The ultimate goal of the program is to keep this industry secure and profitable in the state of Georgia.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	1890	1862	1890
2008	1.5	0.0	2.0	0.0
2009	1.5	0.0	2.0	0.0
2010	1.5	0.0	2.0	0.0
2011	1.5	0.0	2.0	0.0
2012	1.5	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Field research will be conducted to develop improved energy efficiency techniques. Educational meetings will be conducted with poultry farmers and poultry industry representatives. Educational materials concerning energy efficiency and conservation will be prepared to distribute directly to every poultry producer in Georgia.

Educational meetings about bird health will be conducted with poultry farmers and poultry industry representatives. Educational materials will be prepared to distribute directly to every poultry producer in Georgia. Mass media information will be prepared to educate the public about the risk, or lack thereof, of avian influenza and human health.

Through research, faculty will develop management methods to improve egg production, fertility and hatchability. New information on management methods will be extended to the Georgia poultry industry.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Demonstrations • One-on-One Intervention • Workshop	• Newsletters

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
2008	175	1200	200	0
2009	175	1200	200	0
2010	175	1200	200	0
2011	175	1200	200	0
2012	175	1200	200	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 0   **2010 :** 0   **2011 :** 0   **2012 :** 0

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

| **2008** :50 | **2009** :50 | **2010** : 50 | **2011** :50 | **2012** :50 |

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

| **2008** :150 | **2009** :150 | **2010** : 150 | **2011** :150 | **2012** :150 |

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

| **2008** :7 | **2009** :8 | **2010** : 8 | **2011** :8 | **2012** :8 |

V(I). State Defined Outcome

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type : Change in Knowledge Outcome Measure

| **2008** :75 | **2009** : 75 | **2010** : 75 | **2011** :75 | **2012** : 75 |

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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

2. Outcome Type : Change in Knowledge Outcome Measure

| **2008** :65 | **2009** : 65 | **2010** : 65 | **2011** :65 | **2012** : 65 |

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Number of invited presentations by faculty as a direct result of the success of this program.

2. Outcome Type : Change in Action Outcome Measure

| **2008** :4 | **2009** : 4 | **2010** : 4 | **2011** :4 | **2012** : 4 |

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

Increase in the farm gate value of poultry production in Georgia. Value reported annually in millions of dollars.

2. Outcome Type :   Change in Condition Outcome Measure

2008 : 4892   **2009 :** 5039   **2010 :** 5190   **2011 :** 5346   **2012 :** 5346

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals

- 305 - Animal Physiological Processes

- 307 - Animal Management Systems

- 311 - Animal Diseases

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Competing Programatic Challenges

Description

Reduced staffing has stretched existing resources. Further reductions could prevent this program from being successful. Extreme weather conditions and economic factors can greatly influence the sucess of poultry production. Disasters such as an outbreak of avian influenza would impact the success of this program.

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

1. Evaluation Studies Planned

- During (during program)
- Case Study
- After Only (post program)

Description

New management methods will be evaluated and validated in the field. Adoption of methods by poultry producers will be considered proof that the program was successful.

Evaluation for avian influenza will be based on the absence of AI in Georgia poultry flocks.

Training participants will be evaluated for understanding and knowledge gained.

2. Data Collection Methods

- On-Site
- Case Study
- Observation
- Sampling

Description

Data will be collected from participants in trainings. Management and health records will be collected from the industry.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Quality Caregiving for Children and Youth

2. Brief summary about Planned Program

This planned program will provide educational opportunities for parents/caregivers, children and professionals with the most up-to-date and researched-based concepts of family coping strategies, positive development, and basic life skill information. The family life coping strategies will provide ideas and concepts on decisive decision making. For positive development the program helps participants find ways to improve critical thinking, creative abilities and better communication skills. The life skill information will provide participants with ideas for lifelong, productive participation in society. These character building initiatives will provide children the self confidence to become caring and responsible adults for a thriving community.

In addition to direct contacts, Extension specialists will train county agents to provide parenting and care-giving education classes for parents, grandparents, child care providers, and other caregivers based on identified needs. Specialists will also develop curricula, print and online consumer resources, and program evaluations.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 801 6% Individual and Family Resource Management
- 802 72% Human Development and Family Well-Being
- 803 5% Sociological and Technological Change Affecting Individuals, Families and Communities
- 805 5% Community Institutions, Health, and Social Services
- 806 12% Youth Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Positive care-giving skills can be learned. Learning and using positive care-giving skills can help parents and caregivers provide more sensitive, nurturing care for children. Sensitive care, in turn, can decrease the incidence of child abuse and create a high-quality learning environment that supports the healthy development of children and youth.

2. Scope of the Program

- Multistate Extension
- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Human development programs that focus on nurturing the individual ensure that economic security will be maintained. The assumption made for the Family Life Program is that it will be a catalyst in providing participants with the needed information to make informed decisions for the betterment of their family to ultimately enhance society.

2. Ultimate goal(s) of this Program

The goals are to improve care-giving knowledge and practice, both among parents and non-parental caregivers, and to reduce the rates of child abuse and neglect in Georgia through training of agents to deliver research-based information on positive care-giving skills.

The goals of the family life area of this program are to improve parents/caregivers abilities to strengthen family sufficiency and to

provide youth with character building skills.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	1.0	1.4	0.0	0.0
2009	1.0	1.4	0.0	0.0
2010	1.0	1.4	0.0	0.0
2011	1.0	1.4	0.0	0.0
2012	1.0	1.4	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

The planned program will offer various programs on enhancing parenting/caregiving skills and provide information on health, home maintenance and community services. The program will also offer conferences for senior citizens, childcare providers and youth. The family life program will work with other local, state and federal programs to disseminate information to the public.

The planned program will disseminate parenting fact sheets, age-paced newsletters, and information on early brain development, provide parenting and child care provider education classes to agents and to select clientele based on identified needs. It will provide information to be disseminated by agents to print and broadcast media outlets.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Group Discussion • One-on-One Intervention • Education Class • Workshop	• Web sites • Newsletters • Public Service Announcement

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	165	225	220	25
2009	180	250	250	50
2010	200	275	275	75
2011	200	325	325	75
2012	200	325	325	75

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009** :0   **2010** : 0   **2011** :0   **2012** :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :200   **2009** :200   **2010** : 200   **2011** :200   **2012** :200

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

  2008 :3   **2009** :3   **2010** : 3   **2011** :3   **2012** :3

V(I). State Defined Outcome

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 75   **2009** : 75   **2010** : 75   **2011** : 75   **2012** : 75

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :65   **2009 :** 65   **2010 :** 65   **2011 :**65   **2012 :** 65

3. Associated Knowledge Area(s)

- 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

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 :20000   **2009 :** 20000   **2010 :** 20000   **2011 :**20000   **2012 :** 20000

3. Associated Knowledge Area(s)

- 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(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Parenting and child care provider education may be affected by changes in federal and state budget priorities, legislation related to marriage and divorce, foster care changes, child care licensing requirements, changes to federally-funded programs such as Head Start, and changes in immigration patterns.

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

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

Description

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.

Agent knowledge will be assessed by evaluation tools specific to the content provided. The evaluation database will be used to assess changes in knowledge and intent to change behavior by those reached through county agents.

2. Data Collection Methods

- Tests
- Observation
- Mail
- On-Site

Description

Data collection methods will occur by tests 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.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Speciality Plants Technology

2. Brief summary about Planned Program

Research activities on specialty plants biotechnology to benefit wholesome healthcare and balanced nutrition are geared for identification of medicinal plants via phytochemical screening, application of biotechnology to enhance value- added traits, and biomedical research. We also plan to emphasize conservation of these plants for their sustainable uses. The introduction of nutraceutical plants for health benefits and developing them as premium crop for growers will be a major focus.

Biofuel Research for lowering dependence on foreign oil is timely. Plants are a rich source of non-edible oil (for biodiesel) and starch (that can be fermented into ethanol). This research aims at screening plants for rapid biomass production, oil yield and ways to convert the high sugar sreserve trapped as cellulose into ethanol.

This research focusing on the 'Bioville', which denotes a sustainable self- supporting concept for limited resource farms, aims at improving the quality of life of Americans by presenting them a model of a biological community that produces a majority of items required for basic needs for healthy living in their surroundings. This will especially help the limited resource farmers.

Biofuel Research may lower dependence on foreign oil. Plants are a rich source of non edible oil (for bio-diesel) and starch (that can be fermented into ethanol). Research is required to screen plants for rapid biomass production, oil yield and ways to convert the reserve of sugars trapped in the form of cellulose into ethanol.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Use of plants to supply food / fiber / energy, and medicines predates civilization. Only a small portion of nearly 500,000 plant species has been investigated for their specialty attributes, including medicinal, nutraceutical and exceptional purpose. Plant-based medicines play a significant role in the primary health care of 80% of the world's population. Chemicals from plant sources account for 25% of today's prescription drugs. Plants are also a rich source of energy. Thus, there is an increasing need to explore native wild plants and introduce exotic germplasm to meet an increasing demand for alternate medicine/nutraceuticals and energy sources. Specialty plants technology research at the Fort Valley State University will serve the limited resource farmers to produce bioactive and energy rich plants for a niche market. Furthermore, opportunities exist for collaborative research with the institutions that introduce, maintain, study biological activities, chemically analyze, clinically test, evaluate for industrial applications, and market products from bioactive plant species. The socio-demographic changes have created opportunities for the

American farmers to grow high value specialty crops. It is anticipated that research outlined in this program will attract extramural funding, quality faculty, graduate and undergraduate students, and support lasting linkages of mutual benefit.

2. Scope of the Program

- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The funding for research will stay steady and/or increase. Research facilities will be advanced and modernized. The scientific pool of researchers will be maintained at current level or enhanced. Administrative support for this research will be encouraging.

2. Ultimate goal(s) of this Program

Specialty plants biotechnology research - For wholesome healthcare and balanced nutrition.
Biofuel research for biodiesel and Ethanol - For lowering dependence on the foreign oil.
The Bioville - A sustainable self-supporting system of agricultural production for limited resource farms.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.0	0.0	0.0	2.0
2009	0.0	0.0	0.0	2.0
2010	0.0	0.0	0.0	3.0
2011	0.0	0.0	0.0	3.0
2012	0.0	0.0	0.0	3.0

V(F). Planned Program (Activity)

1. Activity for the Program

Natural disasters can disrupt research activities. Economic stress would hamper resource availability. Public policy changes may affect research direction. Government regulations may influence product usage. Competing public priorities can affect our funding. Competing programmatic challenges may change course of the research activities.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Workshop - Education Class - Group Discussion	- Web sites - Newsletters

3. Description of targeted audience

{NO DATA ENTERED}

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 1   **2010 :** 1   **2011 :** 1   **2012 :** 1

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 2   **2009 :** 2   **2010 :** 3   **2011 :** 3   **2012 :** 3

V(I). State Defined Outcome

1. Outcome Target

{NO DATA ENTERED}

2. Outcome Type :

: {NO DATA ENTERED}   : {NO DATA ENTERED}   : {NO DATA ENTERED}   {NO DATA ENTERED}   : {NO DATA ENTERED}

3. Associated Knowledge Area(s)

- {NO DATA ENTERED}

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Natural disasters can disrupt research activities. Economic stress would hamper resource availability. Public policy changes may affect research direction. Government regulations may influence product usage. Competing public priorities can affect our funding. Competing programatic challenges may change course of the research activities.

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

1. Evaluation Studies Planned

- During (during program)
- Retrospective (post program)

Description

Planned evaluation studies will be carried out annually during the research program period with the final evaluation studies to be conducted after the project termination.

2. Data Collection Methods

- Whole population
- Sampling
- Tests
- Observation

Description

Data collection methods will vary depending on individual research objectives and will utilize sampling as well as whole population of research materials used.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Sustainability and Profitability of Agriculture

2. Brief summary about Planned Program

This planned program is designed to promote sustainable agricultural practices for all farms and farmers, whether it is helping small farms with alternative enterprises, organic production and niche markets, or helping large farms move toward IPM and conservation tillage systems. The program will enhance agriculture professionals' effectiveness in an effort to make farms, rural communities and urban communities more sustainable. The program will promote the development and adoption of production methods using sustainable agriculture research and education findings. The program will research and promote alternative farming or production systems and encourage practices that are compatible with sustained human and environmental well-being.

Parts of this program will focus on small farm enterprises where profit margins are low. Successful high-value agricultural products that return a higher gross margin per units of available resources (land, labor, capital) than traditional products within a given location and context will be investigated.

Faculty will provide economic analyses to increase farm income, improve productivity, and reduce risk. Faculty will analyze the relationship between value added for agricultural commodities and new product development, producer profitability, risk and market access.

A Center for Urban Agriculture will be supported to enhance the sustainability and profitability of agricultural production for use in or grown in the urban area. The center will provide an organizational structure designed to facilitate scientific cross-fertilization among investigators, extension agents, industry and homeowners.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 4% Soil, Plant, Water, Nutrient Relationships
- 205 10% Plant Management Systems
- 307 10% Animal Management Systems
- 601 20% Economics of Agricultural Production and Farm Management
- 602 10% Business Management, Finance, and Taxation
- 603 20% Market Economics
- 604 10% Marketing and Distribution Practices
- 605 10% Natural Resource and Environmental Economics
- 610 3% Domestic Policy Analysis
- 611 3% Foreign Policy and Programs

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

Concerns about farm income and risk management have been heightened by changes in regulations, domestic farm policies, international trade polices, and rising input prices. Producers are being subjected to greater volatility of commodity prices, and risk bearing is being shifted from the public sector to the private sector. For some producers, changes regarding the traceability of products, environmental reporting, and immigration policies are increasing costs. Synthesizing information, evaluating options, improving expectations, and effectively managing new and traditional sources of risk are essential to the long-term viability and performance of farm businesses.

The population of Georgia has grown 26.4% from 1990 to 2000 (US Census), making it one of the fastest growing states in the country. In order to remain vital and relevant to the state, agricultural programs must focus resources and talents on the issues involved in urbanization and the needs of Georgia's increasing urban and suburban populations. This growth affects traditional agricultural sustainability as increasing populations put additional pressures and burdens on the agricultural industry.

2. Scope of the Program

- Multistate Integrated Research and Extension
- Integrated Research and Extension
- In-State Extension
- Multistate Research
- In-State Research
- Multistate Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

The population of Georgia will continue to grow. Urbanization obviously impacts agricultural industries. In addition to the loss of traditional farm land, urbanization can result in conflicts between the industry and the growing public. This population growth will continue to increase pressures on agriculture. Governmental policies and international markets will continue to influence agricultural production. Finally, environmental concerns and expense will continue to increase the cost of production.

2. Ultimate goal(s) of this Program

The goal of this planned program is to increase the sustainability and profitability of agricultural systems. It is the goal of the program to improve farm income and risk management tools. Another goal is to assess the ways to measure and manage risk in a globalized, vertically coordinated food system for an expanded clientele base. The goal is to analyze the forces driving structural change and concentration, and their impacts on the economic performances of agribusiness firms. It is the goal of this program to identify niche markets, value-added opportunities and improved efficiencies.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	6.0	0.9	4.0	2.5
2009	6.0	0.9	4.0	2.5
2010	6.0	0.9	4.0	2.5
2011	6.0	0.9	4.0	2.5
2012	6.0	0.9	4.0	2.5

V(F). Planned Program (Activity)

1. Activity for the Program

Faculty will analyze specific management strategies, improve financial accounting and reporting systems, examine the impacts of change in farm structure and public policies.

Faculty will investigate alternate cultural practices that will protect, improve and maintain soil fertility required for sustainable crop production. Minimum tillage and cover crops will be tested as alternatives to conventional tillage and commercial fertilizers.

The Center for Urban Agriculture will identify and address issues concerning agriculture that evolve within the urban community. They will investigate issues and form collaborations of faculty to address the issues.

Faculty will investigate and disseminate information on value-added products or production practices that can improve sustainability and profitability.

Faculty will investigate niche markets. An example will be the development of a niche market in Georgia for goat meat. Some faculty will be working on specialty plants with medicinal, nutrceutical and biofuel values.

Faculty will provide educational information, training materials and resources to county extension agents used in their county programs. As research faculty develop new products, new technology or better management practices, the communication and understanding of this information becomes a critical component of future sustainability.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Group Discussion - Workshop - One-on-One Intervention - Education Class - Demonstrations	- Newsletters - Web sites

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	8200	10000	0	0
2009	8500	10000	0	0
2010	8500	10000	0	0
2011	8500	10000	0	0
2012	8500	10000	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 0   **2010 :** 0   **2011 :** 0   **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :600   **2009** :600   **2010** : 600   **2011** :650   **2012** :650

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

  2008 :400   **2009** :400   **2010** : 400   **2011** :450   **2012** :450

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

  2008 :14   **2009** :18   **2010** : 15   **2011** :15   **2012** :15

V(I). State Defined Outcome

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

  2008 :75   **2009** : 75   **2010** : 75   **2011** :75   **2012** : 75

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships

- 205 - Plant Management Systems

- 307 - Animal Management Systems

- 601 - Economics of Agricultural Production and Farm Management

- 602 - Business Management, Finance, and Taxation

- 603 - Market Economics

- 604 - Marketing and Distribution Practices

- 605 - Natural Resource and Environmental Economics

- 610 - Domestic Policy Analysis

- 611 - Foreign Policy and Programs

1. Outcome Target

Percentage of program participants responding to follow-up survey that have adopt one or more of the practices recommended in this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 55   **2009 :** 55   **2010 :** 55   **2011 :** 55   **2012 :** 55

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 205 - Plant Management Systems
- 307 - Animal Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics
- 610 - Domestic Policy Analysis
- 611 - Foreign Policy and Programs

1. Outcome Target

Percentage of program participants responding to survey that indicated an increase in income using information from this program.

2. Outcome Type :   Change in Action Outcome Measure

2008 : 50   **2009 :** 50   **2010 :** 50   **2011 :** 50   **2012 :** 50

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 205 - Plant Management Systems
- 307 - Animal Management Systems
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation
- 603 - Market Economics
- 604 - Marketing and Distribution Practices
- 605 - Natural Resource and Environmental Economics
- 610 - Domestic Policy Analysis
- 611 - Foreign Policy and Programs

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Prices of inputs and outputs impact profitability of production agriculture firms. Changes in government regulations impact profitability. Natural disasters can cause crop loss or economic forces that impact the ability of this program to analysis

sustainability issues.

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

1. Evaluation Studies Planned

- After Only (post program)
- Case Study

Description

Evaluate programs using actual outputs and outcomes. Analyze impacts of income and sustainability of agricultural production. Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to access change in behavior or practice.

2. Data Collection Methods

- Mail
- Case Study

Description

Gather information on profitability by direct contact with farmers and surveys. Data on investment and income generated as a result of new and expanded production or business will be collected.

V(A). Planned Program (Summary)

1. Name of the Planned Program

TEAM Success Program

2. Brief summary about Planned Program

In 2006, the Fort Valley State University Cooperative Extension Program started a program called TEAM Success. TEAM is the acronym for teaching, enlightening, achieving and mentoring. The purpose of the TEAM Success Program is to expose high school students to Extension careers, prepare the next generation of Extension personnel, and offer high school students the opportunity to have the professional experience of working in rural and urban areas to address critical problems facing society. Extension county agents and program assistants partner with high school students in their offices, visit local high schools and invite high school students to campus.

3. Program existence : New (One year or less)

4. Program duration : Medium Term (One to five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 806 100% Youth Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The number of young people choosing careers in Extension and agriculture has been on the decline for many years. Extension professionals in agriculture and natural resources and family and consumer sciences are exploring ways to offer opportunities to young people to expose them to the many careers and professional opportunities. The Fort Valley State University Cooperative Extension Program TEAM Success Program will partner with high school students through mentoring, career day and local school visits.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

High school students will learn about the career opportunities offered in the Fort Valley State University Cooperative Extension Program and will be empowered to pursue educational programs to become Extension professionals.

2. Ultimate goal(s) of this Program

High school students will choose to work as Extension professionals and will explore the many educational opportunities in higher education in agriculture and natural resources and family and consumer sciences to become Extension professionals.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.0	1.0	0.0	0.0
2009	0.0	1.0	0.0	0.0
2010	0.0	1.5	0.0	0.0
2011	0.0	1.5	0.0	0.0
2012	0.0	2.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

High school students will work side by side with and be mentored by Extension county agents and program assistants for two months/eight weeks in their local county, learn about the educational programs that will prepare them for Extension professional positions, and share their Extension experiences with others. Extension specialists will share their professional experiences and educational backgrounds.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
• Education Class • Group Discussion • One-on-One Intervention	• Newsletters • TV Media Programs

3. Description of targeted audience

High school students entering the 10th through 12th grades with a 2.0 grade point average who are interested in Extension work or a similar field.

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	0	0	300	600
2009	0	0	300	600
2010	0	0	500	1000
2011	0	0	500	1000
2012	0	0	700	1400

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0	**2009** :0	**2010** : 0	**2011** :0	**2012** :0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Educational Contact Hours of formal programming directly to target audience

2008 :30	**2009** :30	**2010** : 30	**2011** :30	**2012** :30

- Educational Contact Hours of formal programming to faculty/staff in support of local programming.

2008 :20	**2009** :20	**2010** : 20	**2011** :20	**2012** :20

- TEAM Success Mentoring Program
  · Number of Applications

2008 :9	**2009** :12	**2010** : 12	**2011** :15	**2012** :15

- Team Success Career Day/Campus
  Number of Flyers
  News Releases

2008 :300	**2009** :300	**2010** : 500	**2011** :500	**2012** :700

- TEAM Success High School Visitation/Career Day
  Number of Visits

2008 :2	**2009** :5	**2010** : 5	**2011** :8	**2012** :8

V(I). State Defined Outcome

1. Outcome Target

TEAM Success Mentoring Program
Number of students who expressed an interest in Extension
Number of students who decided to pursue Extension careers

2. Outcome Type :   Change in Action Outcome Measure

2008 :2	**2009** : 3	**2010** : 3	**2011** :4	**2012** : 4

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

TEAM Success Career Day/Campus
Number of students who expressed an interest in Extension
Number of students who decided to pursue Extension careers

2. Outcome Type : Change in Action Outcome Measure

| **2008 :**30 | **2009 :** 30 | **2010 :** 50 | **2011 :**50 | **2012 :** 70 |

3. Associated Knowledge Area(s)

- 806 - Youth Development

1. Outcome Target

TEAM Success High School Visitations/County
Number of students who expressed an interest in Extension
Number of students who decided to pursue Extension careers

2. Outcome Type : Change in Action Outcome Measure

| **2008 :**4 | **2009 :** 5 | **2010 :** 5 | **2011 :**6 | **2012 :** 6 |

3. Associated Knowledge Area(s)

- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Populations changes (immigration,new cultural groupings,etc.)
- Government Regulations
- Competing Programatic Challenges
- Appropriations changes

Description

Participation for the mentoring component will be limited to the number of counties where there are Fort Valley State University Cooperative Extension Program county agents and program assistants implementing the TEAM Success Program.

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

1. Evaluation Studies Planned

- During (during program)

Description

Extension county agents and program assistants will complete a performance evaluation on high school students assigned to their county.

2. Data Collection Methods

- Observation
- On-Site
- Structured

Description

Primary data from the high school student will be collected during a face to face meeting with the
Extension county agents and program assistants and secondary data will be collected from counselors,

teachers and parents.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Technology Education for Seniors

2. Brief summary about Planned Program

This program is designed to empower seniors to enhance their lives by learning and applying information technology in their everyday lives. This will be done via a series of low intensity classes offered to senior citizens and retirees residing in Peach, Macon, Taylor, Crawford, Houston, Bibb and other contiguous counties in the middle Georgia area. We will begin with basic computer use and progress through various components of Microsoft Office Suite.

3. Program existence : New (One year or less)

4. Program duration : Medium Term (One to five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 802 50% Human Development and Family Well-Being
- 903 50% Communication, Education, and Information Delivery

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

In a series of six "Falling Through the Net" reports, the US Department of Commerce has examined the use of computers, the Internet, and other information technology tools by the American people. The first of these reports was issued in July 1995 and the sixth was published in September 2004. Even though the digital divide has narrowed for many of the demographic groups, one of the consistent findings is that individuals 50 years of age and older are among the least likely computer/Internet users. Moreover, individuals in this age group who are still in the work force are far more likely to be computer/Internet users than those who are not. The 2000 report ("Falling through the Net: Toward Digital Inclusion") states that "Each year, being digitally connected becomes more critical to economic and educational advancement and community participation." On the local level, there continues to be a need and desire for technology training as evidenced by the number of seniors who have participated or desired to participate in the classes the Mobile Information Technology Center has offered during the past two years.

For the "Introduction to Computers" class that we offered in the spring, we had ten-fold more potential participants than we could accommodate. And those who did participate indicated that they had relatives and friends who wanted to participate. In addition, we continue to receive requests from librarians to provide similar training for their seniors. As the life expectancy of Americans continues to increase and as information technologies are transforming the way we live, work and learn, it is imperative that our seniors are not left off the information super highway. We see this as an excellent opportunity for the Mobile Information Technology Center (MITC) to create an onramp to the information superhighway for seniors and retirees in middle Georgia. In addition, we will continue to access the true need of middle Georgia and indeed the state of Georgia so as to use this information as leverage for additional funding from other agencies. Our first priority will be the counties of Peach, Macon, Taylor and Crawford as the Department of Commerce reports also show that rural areas lag behind central cities and urban areas in computer/Internet use. During the first two years, most of our efforts will be directed toward seeing that every senior in these four counties who wants to learn how to use a computer and the Internet will be provided an opportunity to do so. In the third year attention will be directed toward Bibb and Houston Counties, and more advanced skills in the other four counties.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

1) The Mobile Information Technology Center will be equipped/maintained with cutting edge technologies.
2) There is a great need for technology training for senior citizens in middle Georgia.
3) Seniors/retirees learn best in a none-threatening environment.
4) Seniors/retirees learn best in low intensity classes.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to improve the quality of life and economic vitality of the senior citizens and retirees of middle Georgia.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	0.0	0.5	0.0	0.0
2009	0.0	0.5	0.0	0.0
2010	0.0	0.5	0.0	0.0
2011	0.0	0.5	0.0	0.0
2012	0.0	0.5	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

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

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
● Other 1 (Email) ● One-on-One Intervention ● Education Class	● Web sites

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

Year	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
	Target	Target	Target	Target
2008	50	500	0	0
2009	50	500	0	0
2010	50	500	0	0
2011	40	500	0	0
2012	40	500	0	0

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009** :0   **2010** : 0   **2011** :0   **2012** :0

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- Number of educational contact hours generated from formal programs.

2008 :1080   **2009** :720   **2010** : 500   **2011** :500   **2012** :500

V(I). State Defined Outcome

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 :80   **2009** : 80   **2010** : 80   **2011** :80   **2012** : 80

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

- 903 - Communication, Education, and Information Delivery

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Competing Programatic Challenges
- Appropriations changes
- Populations changes (immigration,new cultural groupings,etc.)

Description

With the exception of Bibb and Houston, the targeted counties are small rural counties; hence, if there are significant decreases in population or if other entities offer similar training, the number of clients served may decrease. Moreover, the proposed program is very resource intensive and maintaining the appropriate resources may be a challenge.

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Retrospective (post program)

Description

Evaluation of this program will be more informal than formal. There will be pre- and post- surveys to ascertain how many participants own computers, how they use their computers, if they are connected to the Internet, and what they do online. Several projects will be completed during the trainings, and participants will be evaluated on the extent to which they are able to complete each project. At the close of each training participants will be asked to provide written feedback relative to the training, and there will be follow-up emails and/or telephone surveys to measure the extent to which they are using the skills developed in the trainings.

2. Data Collection Methods

- On-Site
- Telephone
- Unstructured
- Other (Email)

Description

Surveys will be administered on-site to all program participants to ascertain their and their friends' use of information technologies. After each training, telephone and/or email surveys will be conducted with participants and others they identify who can verify that they are applying what was learned.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Urban Agriculture

2. Brief summary about Planned Program

This planned program will provide research and education in areas that directly benefit urban agriculture. The work in this area is concentrated in four areas. The program will strive to produce better plant materials, improve turf and greenhouse management, develop and disseminate new management tools for the landscape professional and target consumers of urban agriculture to improve practices and protect the environment.

The program will identify plants better adapted to urban environments, with traits such as pest resistance, heat and drought tolerances, and compact form, all of which are greatly desired by nurseries, landscape contractors, and homeowners. There are approximately 1.8 million acres of turf in Georgia. Disease losses and control costs account for over $250 million annually. Turfgrass fungicides are cost-prohibiting, their over-use can be detrimental to the environment and fungicide resistance is becoming an important issue in Georgia. This program will develop integrated strategies for disease management, as well as educate turfgrass producers, turfgrass professionals, landscape companies' personnel, county faculty, and the general public on disease etiology, epidemiology, and sound and effective disease management strategies on turfgrass.

A program is planned to provide numerous opportunities for greenhouse owners to learn about water management and new technology that aids in greenhouse management. The program will develop tools for the landscape professional. It will develop landscape survey and inventory software compatible with commercially available hand-held PDA's and GPS/PDA units to use for site inventory and mapping. Cost estimating and job bidding are among the most perplexing and time-consuming tasks of professional landscapers, yet they are critical to business success.

This planned program will continue to work with both adult and youth audiences statewide to train volunteers and county agents in serving the environmental horticulture needs of the public. The Master Gardener program is an integral part of this planned program. Faculty members will develop resources and training programs as well as the use of mass media to distribute information.

Finally, an Urban Agriculture Center will be utilized to provide organization structure designed to facilitate scientific cross-fertilization among investigators, agents, industry and homeowners. It will facilitate issue identification and offer continuing education programs that are relevant to the urban environment.

3. Program existence :   Mature (More then five years)

4. Program duration :   Long-Term (More than five years)

5. Expending formula funds or state-matching funds :   Yes

6. Expending other than formula funds or state-matching funds :   Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 102 10% Soil, Plant, Water, Nutrient Relationships
- 111 15% Conservation and Efficient Use of Water
- 124 10% Urban Forestry
- 202 10% Plant Genetic Resources
- 205 10% Plant Management Systems
- 211 10% Insects, Mites, and Other Arthropods Affecting Plants
- 212 10% Pathogens and Nematodes Affecting Plants
- 213 10% Weeds Affecting Plants
- 601 10% Economics of Agricultural Production and Farm Management
- 602 5% Business Management, Finance, and Taxation

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The population of Georgia has grown 26.4% from 1990 to 2000 (US Census), making it one of the fastest-growing states in the country. In order to remain vital and relevant to the state, the College of Agricultural and Environmental Sciences (CAES) must focus resources and talents on the issues involved in urbanization and needs of Georgia's increasing urban and suburban populations. The goal of the Center for Urban Agriculture is to assist in this process.

Due to the increase of population, use and popularity of turf species, as well as their high aesthetic value, disease losses and control costs are enormous. Additionally, golf course superintendents, sod producers and commercial landscape managers use fungicides as the main disease control strategy. Furthermore, a considerable number of homeowners rely on pesticides to control turfgrass diseases. Turfgrass fungicides are cost-prohibiting and their over-use can be detrimental to the environment.

Production and sales of landscape plants continue to increase in Georgia and throughout the U.S. With a rapidly expanding population in the metropolitan Atlanta area, construction of new houses and commercial buildings is escalating. Consequently, the demand for plants to landscape these buildings continues to rise. The downside to this rising use of landscape plants has been increasing demand for water and pollution from pesticide use. Use of plants with pest resistance and heat and drought tolerance will alleviate these problems. To achieve pesticide reduction and improve plant growth and survival, careful selection of both species and cultivars is critical. Many of the popular species and cultivars lack some of these important traits. A need for increased breeding efforts to develop such plants has been expressed by the leaders in the nursery and landscape industries.

Most greenhouses are located near metropolitan areas and hence, utilize the same water resource base as most urban communities. With water conservation a major issue within most urban communities, greenhouse operations must now implement water conservation measures and adapt new technology.

Many commercial landscape firms fail within the first five years because they fail to re-coup all their costs while gaining a reasonable profit. There is a great need for education on best management practices and additional management tools to support this industry.

The latest surveys of the Environmental Horticulture segments report annual revenue of $8.1 million in 2004 from approximately 7,000 firms with almost 80,000 employees. Many of these industries are relatively volatile, with short life spans. Employees may also be transitory, increasing the need for continuing education. Hispanic workers form the backbone of Urban Ag industries supplying 75% of the workforce.

2. Scope of the Program

- In-State Extension
- Multistate Extension
- In-State Research

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Urbanization obviously impacts traditional agriculture industries. In addition to the loss of traditional farm land, urbanization can result in conflicts between traditional Ag producers and their relatively new, non-rural neighbors. Homeowners may object to pesticide application, smells, and dust associated with agriculture while enjoying the rural atmosphere created by farming. Farmers may object to suggestions on land use, and both appreciate and resent increasing land prices associated with urbanization. Urbanization impacts the physical environment in unique and complex ways.

This program will be achievable because there is an infrastructure and human resources that will support the proposed objectives. Disease losses are a major economical burden and industry professionals are motivated to implement new and improved measures of control. Internal and external funds and agents serve as catalysts to achieve the proposed plan.

2. Ultimate goal(s) of this Program

The goal of this planned program is to produce better plant materials, improve turf and greenhouse management and develop and disseminate new management tools for the landscape professional.

Specifically, this program will develop enhanced turfgrass disease management strategies that prevent economic losses, increase efficiency in production and management and promotes a more judicious and timely application of fungicides. It will develop improved plants that will be well-adapted to growth in urban environment landscapes.

The program will educate the consumer on best management practices and thus improve the satisfaction and success of the consumer. Consumer level education can greatly impact the urban agriculture industry, the environment, and the quality of life in urban areas.

The College of Agricultural and Environmental Sciences must focus resources and talents on the issues involved in urbanization and needs of Georgia's increasing urban and suburban populations. The goal of the Center for Urban Agriculture is to assist in this process.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	2.0	0.0	1.0	0.0
2009	2.0	0.0	1.0	0.0
2010	2.0	0.0	1.0	0.0
2011	2.0	0.0	1.0	0.0
2012	2.0	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research will be published in research publications. New information will be shared through the Extension education program. This program will include a breeding program that incorporates variability derived from interspecific hybrids to greatly enhance the genetic pool from which new cultivars can be developed. The genus Abelia contains approximately 30 species that potentially can be crossed to obtain hybrids with desired characteristics. Hybrids have been obtained from several of these species crosses and are undergoing evaluation. Improved cultivars from this program will be released.

Faculty will hold several educational programs that focus not only on water conservation, but on specific examples that will support the economics of technology conversion, specific behavior training for employees, and specific water use monitoring procedures to support management decisions. Trade journal articles will be written for the local area that supports these educational goals. The program hopes to have at least one grower agree to serve as a demonstration location where water conservation technology and training has been implemented.

Faculty will conduct statewide and local trainings, programs on turf diseases identification and management. Publication of electronic and printed materials on turf diseases identification and management will be published. Implementation of research trials to measure efficacy and proper timing of fungicides to control in different diseases will be conducted.

Development of partnerships and research collaborations with commercial companies and educational institutions will be established to support the work of this program. Faculty will develop new cost estimating and job bidding software for landscape installation. New software to use with GPS devices will be developed to support inventory systems.

Faculty will support the Master Gardener program by training county extension agents to conduct local programs. Faculty members will work with local county extension agents to support consumer educational efforts related to urban agriculture.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
- Group Discussion - Education Class - Demonstrations - Workshop	- Public Service Announcement - TV Media Programs - Web sites - Newsletters

3. Description of targeted audience

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

V(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

Year	Direct Contacts Adults Target	Indirect Contacts Adults Target	Direct Contacts Youth Target	Indirect Contacts Youth Target
2008	5000	300000	550	1000
2009	5500	305000	600	1000
2010	5500	305000	600	1000
2011	6000	310000	600	1000
2012	6000	310000	600	1000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 : 0   **2009 :** 0   **2010 :** 0   **2011 :** 0   **2012 :** 0

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

2008 : 700   **2009** : 750   **2010** : 750   **2011** : 800   **2012** : 800

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

2008 : 500   **2009** : 600   **2010** : 700   **2011** : 750   **2012** : 750

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

2008 : 15   **2009** : 15   **2010** : 15   **2011** : 15   **2012** : 15

V(I). State Defined Outcome

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 75   **2009** : 75   **2010** : 75   **2011** : 75   **2012** : 75

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 124 - Urban Forestry
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 601 - Economics of Agricultural Production and Farm Management
- 602 - Business Management, Finance, and Taxation

1. Outcome Target

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

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 55   **2009** : 55   **2010** : 55   **2011** : 55   **2012** : 55

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 124 - Urban Forestry
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

- 601 - Economics of Agricultural Production and Farm Management

- 602 - Business Management, Finance, and Taxation

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Government regulations on certain fungicides can hamper the applicability of those in disease control. Government regulations and public policy may speed up the adoption of conservation measures by ordinance or state law. This may increase or may decrease the actual number of programs/activities per year depending on the actions taken by the policy groups.

Population increases will greatly affect urban programming. An economic change can affect the consumer value of ornamental horticulture and therefore impact this program.

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

1. Evaluation Studies Planned

- During (during program)
- Before-After (before and after program)
- After Only (post program)

Description

Formal programs and workshops will be selected across this program area for in-depth participant evaluation. Participants will be evaluated for knowledge gained. A follow-up survey will be conducted to access change in behavior or practice.
A follow-up survey will be sent to targeted program participants such as Georgia landscape professionals before programs and after programs to determine the extent of knowledge and use of information provided.

Results of research trials will be evaluated. In one part of the program it is planned to document case studies of those who have and have not adopted water conservation technology.

2. Data Collection Methods

- Tests
- On-Site
- Mail
- Journals
- Case Study

Description

Site survey and direct questioning to training participants of proposed control measures will be performed. Detailed observation of site and behaviors of participants will be implemented.

In the inventory project, data will be collected by faculty, and will include site assessments, a survey of technology implementation, an economic analysis of input costs, and a visual assessment of employee training and adoption of conservation behavior.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Youth Life Skill Development

2. Brief summary about Planned Program

The mission of Georgia 4-H is to assist youth in acquiring knowledge, developing life skills, and forming attitudes that will enable them to become self-directing, productive and contributing members of society. The 4-H program uses many activities as a platform to develop life skills necessary for success in life.

This plan specifically targets learning objectives for life skill development across all 4-H program plans. Through club programs and educational activities, this planned program will establish learning objectives and educational curricula to support the development of life skills. More importantly, this program will seek out opportunities for young people to practice new life skills in a positive environment. A major area of concentration will include the development of leadership skills.

The UGA 4-H camping program is a program where all components of life skill development come together in one learning environment. Campers learn and practice skills for five days. The Animal Science Departments at UGA and FVSU collaborate with youth development faculty to offer livestock projects that are designed to teach life skills while the students are also gaining knowledge.

The 4-H and Youth Programs at FVSU are specifically designed to meet the needs and challenge the strengths of youths living in Georgia. These program components focus on initiating success by empowering the minds of our youth to a higher level of thinking through leadership, entrepreneurship and science-based educational projects, activities, and programming for youth. This program will help all participants make the best decisions at all times for themselves in all situations that they may encounter.

The Georgia 4-H program, in conjunction with the Georgia Rural Development, will conduct a youth summit with youth-adult partners from counties throughout Georgia. The summit focuses on youth and adult's civic engagement. Additionally, a new recognition component, Leadership in Action, will recognize 4-H'ers for completion of youth led projects impacting their communities. National 4-H Conference will involve youth in studying community issues and designing plans for youth involvement. 4-H Ambassadors are trained in issue areas to impact their communities and our Operation Military Kids team is charged with effecting change for the sudden military audience located in communities throughout our state.

Many traditional 4-H activities are being redesigned to further enhance the objectives of this planned program.

3. Program existence : Mature (More then five years)

4. Program duration : Long-Term (More than five years)

5. Expending formula funds or state-matching funds : Yes

6. Expending other than formula funds or state-matching funds : Yes

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

- 307 5% Animal Management Systems
- 315 5% Animal Welfare/Well-Being and Protection
- 608 5% Community Resource Planning and Development
- 802 15% Human Development and Family Well-Being
- 806 70% Youth Development

V(C). Planned Program (Situation and Scope)

1. Situation and priorities

The number of our nation's youth exhibiting at-risk behavior points to a lack of skills necessary for adulthood-skills in working with others, understanding self, communicating, making decisions, and leadership. These skills are required by adults for everyday living and are often called leadership life skills. The development of life skills allows youth to cope with their environment by making responsible decisions, having a better understanding of their values, and being better able to communicate and get along with

others.

The lack of Youth Development programs and persistent poverty can become the Pipeline to Prison. While opportunities for getting into trouble abound for all children, growing up in poverty contributes to a greater likelihood of involvement in crime and violence. Studies show that children living in extreme, persistent poverty are more likely to engage in delinquency, especially serious delinquency (Children Defense Fund, January, 2006). Several studies have shown that poor choices made by youths and adults lead to inappropriate actions, which result in negative consequences. Unemployment, poverty, child abuse, drug abuse, unsuccessful parenting, and lack of positive leadership in the home are some of the factors that prohibit youth from developing good decision-making skills. These alarming statistics indicate the need and importance of creating family focused programs to address the problems of at-risk youth living in Georgia and throughout America.

Throughout our communities there are countless examples of decision-making bodies that do not engage the input from their stakeholders. Youth audiences are often left victim to the under-representation. As we look around our communities, adults are at the forefront of discussions focusing on issues in which young people are affected. Decisions are often made without consulting youth in regards to what opinions and thoughts they may have on a particular issue. Too often youth are given a seat on decision making bodies without having a value to the group and therefore skills are not developed. Youth and adults both need opportunities for training and practice in youth serving leadership roles for civic changes.

2. Scope of the Program

- In-State Extension

V(D). Planned Program (Assumptions and Goals)

1. Assumptions made for the Program

Youth development is a process of mental, physical, social and emotional growth during which young people prepare to live a productive and satisfying life within the customs and regulations of their society. People who develop programs and curricula for youth are in the business of providing educational opportunities through which youth can learn information and develop skills they need.

Youth development experiences of high quality don't just happen. The best ones are carefully planned (a) to encourage life skill development while delivering subject matter content and (b) to achieve specific results. It has become increasingly important to be accountable for resources expended by documenting program impact. By clearly stating desired changes as program objectives, youth development experiences can be evaluated more effectively to determine if the program succeeded in making the intended difference in the lives of youth.

Youth serving as positive contributors and within meaningful roles are among the least common experiences for young people. Adults perceive youth as in need of assistance rather than being community assets. The stereotyping of youth and adults by each other can limit potential.

2. Ultimate goal(s) of this Program

The goal of this program is to provide developmentally appropriate opportunities for young people to experience life skills, to practice them until they are learned, and be able to use them as necessary throughout a lifetime. Youth working with adults as partners and serving as leaders will enact positive changes while developing important skills.

V(E). Planned Program (Inputs)

1. Estimated Number of professional FTE/SYs to be budgeted for this Program

Year	Extension		Research	
	1862	**1890**	**1862**	**1890**
2008	2.5	1.2	0.0	0.0
2009	2.5	1.2	0.0	0.0
2010	2.5	1.2	0.0	0.0
2011	2.5	1.2	0.0	0.0
2012	2.5	1.2	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

4-H faculty members will develop curriculum, train and support county extension agents to conduct monthly educational programs for in-school club meetings around the state.

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

The 4-H Youth program will develop curriculum and train staff to conduct a summer camping program that allows young people to learn and practice life skills. Five residential camps are supported through the work of this program.

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

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 youth in their county.

2. Type(s) of methods to be used to reach direct and indirect contacts

Extension	
Direct Methods	**Indirect Methods**
● Education Class ● Group Discussion ● One-on-One Intervention ● Workshop	● Other 1 (Exhibits) ● Web sites

3. Description of targeted 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(G). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons(contacts) to be reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2008	1350	2000	5325	5000
2009	1400	2000	5000	5000
2010	1400	2000	5000	5000
2011	1400	2000	5000	5000
2012	1400	2000	5000	5000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0   **2009** :0   **2010** : 0   **2011** :0   **2012** : 0

3. Expected Peer Review Publications

.

Year	Research Target	Extension Target
2008	0	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

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

  2008 :750   **2009** :750   **2010** : 750   **2011** :750   **2012** :750

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

  2008 :200   **2009** :200   **2010** : 200   **2011** :200   **2012** :200

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

  2008 :7   **2009** :7   **2010** : 6   **2011** :6   **2012** :6

V(I). State Defined Outcome

1. Outcome Target

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. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 150000   **2009 :** 150000   **2010 :** 150000   **2011 :** 150000   **2012 :** 150000

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 315 - Animal Welfare/Well-Being and Protection
- 608 - Community Resource Planning and Development
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

1. Outcome Target

Percentage of program participants reporting increased knowledge after program participation.

2. Outcome Type :   Change in Knowledge Outcome Measure

2008 : 80   **2009 :** 80   **2010 :** 80   **2011 :** 80   **2012 :** 80

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 315 - Animal Welfare/Well-Being and Protection
- 608 - Community Resource Planning and Development
- 802 - Human Development and Family Well-Being
- 806 - Youth Development

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description
{NO DATA ENTERED}

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

1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)

Description
{NO DATA ENTERED}

2. Data Collection Methods

- Observation
- Sampling
- Tests

Description
{NO DATA ENTERED}