

2008 Alabama A&M University and Tuskegee University and Auburn University Combined Research Plan of Work

I. Plan Overview

1. Brief Summary about Plan Of Work

Alabama is fortunate to have three land-grant universities - Alabama A&M University, Auburn University, and Tuskegee University - with distinct programs at each institution based on clientele needs. As administrators of the Alabama Agricultural Research Program (AARP), we are working cooperatively to enhance partnerships among our universities in all areas of research, education, and extension; with other universities in the region, with other national and international institutions; and with state and federal laboratories and agencies. Alabama's three land-grant universities have played key roles in the development of agricultural enterprises in Alabama. The agricultural research programs of these universities have formed a partnership, via a memorandum of understanding, known as the Alabama Agricultural Land-Grant Alliance (AALGA) to better address critical issues in food, agriculture, and natural resources in the state, region, and nation through multidisciplinary, multi-institutional, science-based teams that focus on the opportunities and the challenges facing farmers, consumers and agribusinesses. AALGA also seeks to provide quality education that prepares professionals for career opportunities in food, agriculture, and natural resources. AALGA has received state funding in support of this partnership on an annual basis since FY 2002. Five program areas have been designed to address the most important component of the economy of Alabama--agriculture. Within each of the planned program areas, attention will be given to addressing rural issues, citizen diversity, and sustainability. Research programs at each of our institutions are closely linked to the Alabama Cooperative Extension System.

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

Year	Extension		Research	
	1862	1890	1862	1890
2008	6.9	0.0	92.5	56.3
2009	6.9	0.0	92.5	56.3
2010	6.9	0.0	92.5	56.3
2011	6.9	0.0	92.5	56.3
2012	6.9	0.0	92.5	56.3

II. Merit Review Process

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

- Internal University Panel

2. Brief Explanation

Merit evaluations are conducted annually on each project by a panel of faculty, department chairs and administrators as appropriate. Programs that encompass several projects, particularly those with identified funding sources (i.e., the 'Ag Initiatives') are evaluated by an administrative panel on an annual basis and for continued funding.

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?

Within each of the planned programs are some FTEs addressing one or more aspects of critical issues that have been identified by stakeholders. Other portions of planned programs are on-going in order to meet continuing demand for research and information, for example crop variety trial evaluations. Through listening sessions conducted for the Alabama Agricultural Experiment Station (AAES); AALGA joint discussions and planning meetings, focus groups, conferences, field days and selected advisory boards; several topics were identified by stakeholders as worthy of additional state funding and research efforts. These

topics are poultry waste handling, inland aquacultures, dealing with invasive species, and eco-tourism.

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

As part of each of the planned programs, specific projects focus on varying needs of small-scale producers which tend to be under-served and under-represented populations in Alabama.

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

Overall, the outcome measures and expected impacts are to demonstrate that agricultural research at our three institutions contribute to maintenance or growth in agricultural productivity, and in ag-related industries and endeavors. Specified outcome measures are data collected by state and federal agencies, and reflect demographic trends.

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

Each of the planned programs address state and national needs, and will ultimately contribute to efficiencies and effectiveness in agriculture and agriculturally related issues. Through the planned programs, knowledge gaps and areas in which critical research is needed will be identified, emerging technologies will be identified, and new approaches and technologies will be developed. Relative to all activities, programs will be communicated in varying ways to stakeholders so that improvements can be adopted as appropriate.

IV. Stakeholder Input

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

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

Brief explanation.

Over 3 preceding yrs (fall 2003 through winter 2005), the AAES in conjunction with AALGA and its partners has hosted "listening sessions" at key locations across the state. These sessions were advertised in varying ways to reach as broad an audience as possible; they were open to the general public. Participants identified several strategic areas which are in need of additional resources and effort (i.e., research and extension). These areas are noted in this plan of work. Regular input is also received from stakeholders through commodity group leaders, from advisory boards, formal and informal surveys, focus groups, field days, conferences and through discussion and feedback from state leaders on agricultural boards.

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 External Focus Groups
- Use Internal Focus Groups
- Use Surveys
- Open Listening Sessions
- Use Advisory Committees

Brief explanation.

Several groups have been established, and are continuing, to provide input to AAES programs and on stakeholder representation. These groups include advisory committees which we consider as encompassing grower and consumer groups. Surveys are conducted through various AAES newsletters, as needed, in order to seek input from the general public.

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

Brief explanation

A number of stakeholder groups have previously been identified, and input is collected through regular meetings with discussion and feedback. For example, at Auburn University, several commodity groups have committees to evaluate on-going research and new research proposals. Direct feedback to researchers and AARP administration is through the projects that get funding and through discussion about new and emerging issues.

3. A statement of how the input will be considered

- To Identify Emerging Issues
- In the Staff Hiring Process
- To Set Priorities
- Redirect Research Programs

Brief explanation.

Input from stakeholders are used to set program priorities and for identifying emerging issues relevant to agricultural activities.

V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Assuring the safety, security and abundance of our food supply
2	Maintaining agricultural production systems that are highly competitive in the global economy
3	Promoting a healthy, well-nourished population
4	Supporting and enhancing economic opportunities and self-empowerment for families and communities
5	Sustaining greater harmony between agriculture and the environment

V(A). Planned Program (Summary)

1. Name of the Planned Program

Assuring the safety, security and abundance of our food supply

2. Brief summary about Planned Program

Research will be conducted on microbial and toxic contaminants of food and food products, and storage conditions and economics affecting food and fiber availability. Concerns to be addressed include the abundance and consistent availability of food and fiber to consumers in society, the safety of food that is consumed, minimization of food losses due to degradation, detection of contaminants, and market forces that affect food and fiber distribution and availability.

3. Program existence : Mature (More than 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

- 502 18% New and Improved Food Products
- 503 15% Quality Maintenance in Storing and Marketing Food Products
- 601 25% Economics of Agricultural Production and Farm Management
- 603 14% Market Economics
- 712 28% Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

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

1. Situation and priorities

Recent world events have demonstrated the need for the protection and continual monitoring of our food supplies. In Alabama, vulnerability exists particularly in the poultry industry and in fruits and vegetables for fresh market.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Poultry and specialty crops are major agricultural industries in the state. Microbial contaminants can shift, and knowledge and technology will remain abreast of these changes. Imports will remain a viable component of our food supply. Resources will remain sufficient for continuation of the program efforts.

2. Ultimate goal(s) of this Program

Build knowledge of and capacity for food safety and quality.

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	1.9	0.0	6.8	10.4
2009	1.9	0.0	6.8	10.4
2010	1.9	0.0	6.8	10.4
2011	1.9	0.0	6.8	10.4
2012	1.9	0.0	6.8	10.4

V(F). Planned Program (Activity)

1. Activity for the Program

Research will include technology development to monitor food contaminants and evaluate means to manage food quality from the farm through processing to markets. Results are shared with extension personnel for further dissemination, particularly to county agents, processors and consumers. Additional dissemination of results are through direct contact (such as demonstrations and commodity meetings), through publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Workshop ● Demonstrations 	<ul style="list-style-type: none"> ● Newsletters ● Web sites

3. Description of targeted audience

Extension specialists, county agents, producers (particularly those that are innovative), processors, food industry personnel, students (both K-12 and at our institutions), all state citizens.

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	700	1100	120	700
2009	700	1100	120	700
2010	700	1100	120	700
2011	700	1100	120	700
2012	700	1100	120	700

2. (Standard Research Target) Number of Patents

Expected Patents

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

3. Expected Peer Review Publications

Year	Research Target	Extension Target
2008	8	0
2009	8	0
2010	8	0
2011	8	0
2012	8	0

V(H). State Defined Outputs

1. Output Target

- publications

2008 :10 2009 :10 2010 : 10 2011 :10 2012 :10

V(I). State Defined Outcome

1. Outcome Target

Decreased incidence of cases of food poisoning (AL state stats, % deaths from Salmonella and other intestinal infections in 2004 = 1.6%). Program success will be indicated by a decline or no change in this incidence. (Short-term outcome)

2. Outcome Type : Change in Knowledge 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
- 712 - Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxins

1. Outcome Target

New technology(-ies) developed to monitor microbial contaminants. (Medium term outcome)

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

1. Outcome Target

New professionals in workforce with training in food safety and security. (Long-term)

2. Outcome Type : Change in Condition Outcome Measure

2008 :13 2009 : 17 2010 : 23 2011 :31 2012 : 0

3. Associated Knowledge Area(s)

- 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
- 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

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

Description

Food supply systems are complex and easily affected by each of the external factors that are indicated.

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

1. Evaluation Studies Planned

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

Description

Specific projects that comprise the Planned Program are evaluated annually by dept. leaders. Overview of programs is by institution leaders.

2. Data Collection Methods

- Sampling
- Observation

Description

Data to demonstrate program success will be obtained primarily from national and state agencies. Use of such data will avoid duplication of data collection efforts, and provide a broader understanding changes occurring in these systems. Additional information and data will be obtained through observation, by sampling and from reporting in professional journals. For example, a survey of food processing facilities, in which E. coli may be tracked, could demonstrate greater improvements in food safety than otherwise documented.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Maintaining agricultural production systems that are highly competitive in the global economy

2. Brief summary about Planned Program

Research program is aimed at maintaining and improving agricultural production efficiency. Evaluations of production technologies, from a holistic problem solving approach, will be emphasized in order to achieve sustainable profitability of Alabama agriculture.

3. Program existence : Mature (More than 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

- 125 4% Agroforestry
- 202 15% Plant Genetic Resources
- 205 19% Plant Management Systems
- 216 20% Integrated Pest Management Systems
- 302 20% Nutrient Utilization in Animals
- 311 10% Animal Diseases
- 402 4% Engineering Systems and Equipment
- 502 3% New and Improved Food Products
- 601 5% Economics of Agricultural Production and Farm Management

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

1. Situation and priorities

With 45% of Alabama's population residing in rural areas, there is a substantial (though frequently indirect) dependency on net returns from agricultural production. Alabama's producers range in size from small-scale, limited resource and/or family farms to corporately owned entities. All farmers and agricultural producers face declining returns from traditional crops and practices, and from increasing energy costs. Priorities are to develop or identify and evaluate new and improved production of high value, alternative/speciality, and energy crops or energy sources, and to facilitate adaptation of the best most efficient crop and animal management systems, and to transfer knowledge of these crops and systems to extension personnel, growers and other interested state citizens.

2. Scope of the Program

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

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

1. Assumptions made for the Program

The largest agricultural industries in AL are forestry, poultry, cattle, and greenhouse and nursery crop production. Agriculture will remain an important component of the economy of the state of Alabama. Greater production efficiency is possible. Producers will adapt new management strategies or technologies that are shown to improve profit. Resources will remain sufficient to continue these planned program efforts.

2. Ultimate goal(s) of this Program

To promote the production of agricultural products and practices with sustained economic return to producers.

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	0.5	51.1	20.6
2009	2.0	0.5	51.1	20.6
2010	2.0	0.5	51.1	20.6
2011	2.0	0.5	51.1	20.6
2012	2.0	0.5	51.1	20.6

V(F). Planned Program (Activity)

1. Activity for the Program

Researchers will investigate improved production methods such as new pesticides and cultivars in plant production systems, and nutritional strategies in animal production systems. Research will explore innovative means to generate energy. Evaluations may include methods to reduce energy costs and economic analyses of markets. Research results are shared with extension personnel for further dissemination, particularly to county agents and producers. Additional dissemination of results are through direct grower contact (such as at field days and demonstrations, and commodity meetings), through publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Workshop ● One-on-One Intervention ● Group Discussion ● Demonstrations ● Education Class 	<ul style="list-style-type: none"> ● Web sites ● Newsletters

3. Description of targeted audience

Extension specialists, county agents, producers (particularly those that are innovative), all producers in the state, students (both K-12 and at our institutions), all state citizens. 48,000 people are said to be directly involved in farming; while Alabama's agribusiness industries account for 476,000 jobs.

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	2000	12000	2000	8000
2009	2000	12000	2000	8000
2010	2000	12000	2000	8000
2011	2000	12000	2000	8000
2012	2000	12000	2000	8000

2. (Standard Research Target) Number of Patents

Expected Patents

2008 :0 2009 :1 2010 : 1 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

- Publications

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

V(I). State Defined Outcome

1. Outcome Target

Market value of agricultural products (\$ billion) (2002 = \$3.26 bil). Program success will be indicated if market value of AL ag products stay level or increase. (Medium term outcome)

2. Outcome Type : Change in Action Outcome Measure

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

3. Associated Knowledge Area(s)

- 125 - Agroforestry
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems
- 402 - Engineering Systems and Equipment

- 502 - New and Improved Food Products

1. Outcome Target

Number of producers (ALFA cites 48,000, Apr. 2006). Program success will be reflected by little or no change in size of the population of producers. (Long-term)

2. Outcome Type : Change in Condition Outcome Measure

2008 :47900 2009 : 47900 2010 : 47900 2011 :47900 2012 : 0

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 302 - Nutrient Utilization in Animals
- 601 - Economics of Agricultural Production and Farm Management

1. Outcome Target

Average producer age (2002 = 56.6). Program success will be indicated by declining or no change in the average producer age. (Long-term)

2. Outcome Type : Change in Condition Outcome Measure

2008 :56 2009 : 55 2010 : 55 2011 :54 2012 : 0

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 302 - Nutrient Utilization in Animals
- 502 - New and Improved Food Products

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Agricultural systems are complex and easily affected by each of the external factors that are indicated.

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

1. Evaluation Studies Planned

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

Description

Specific projects that comprise the Planned Program are evaluated annually by dept. leaders. Overview of programs is by institution leaders.

2. Data Collection Methods

- Observation
- Journals
- Other (state and national statistics)
- Sampling

Description

Data to demonstrate program success will be obtained primarily from national and state agencies. Use of such data will avoid duplication of data collection effort, and provide a broader perspective of changes. Additional information and data will be obtained through observation, sampling and reporting for professional journals. For example, a survey of the citizenry about their personal food production (i.e., home-grown tomatoes) could demonstrate greater producer numbers than otherwise documented.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Promoting a healthy, well-nourished population

2. Brief summary about Planned Program

Obesity and related health problems are concerns to all Alabama citizens. Research conducted for this program will address issues of food choice, life style choice, and these choices as related to community sustainability. Research will also address means of delivering or producing healthier food products.

3. Program existence : Mature (More than 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

- 701 29% Nutrient Composition of Food
- 702 25% Requirements and Function of Nutrients and Other Food Components
- 703 19% Nutrition Education and Behavior
- 711 2% Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 721 17% Insects and Other Pests Affecting Humans
- 724 8% Healthy Lifestyle

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

1. Situation and priorities

In the U.S., the population of Alabama ranks high for obesity, hypertension, and related health problems, especially in minority groups. However, all citizens are vulnerable to these problems. Also related to this is an insufficient level of physical activity (sedentary lifestyle) by state citizens. Research priorities are to elucidate factors that contribute to unhealthy diet and lifestyle choices. Efforts are also being made to produce healthier plant- and animal-based foods (e.g., lower fat, higher vitamin content).

2. Scope of the Program

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

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

1. Assumptions made for the Program

Good health is valued by humans and is beneficial to community sustainability and the state's economy. Resources continue to be sufficient to conduct program. Results of research on improving eating habits and healthy lifestyles can be measured. Improvements can start on the farm, during food production.

2. Ultimate goal(s) of this Program

Improve the health status of state citizens.

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	6.7	6.5
2009	0.0	0.0	6.7	6.5
2010	0.0	0.0	6.7	6.5
2011	0.0	0.0	6.7	6.5
2012	0.0	0.0	6.7	6.5

V(F). Planned Program (Activity)

1. Activity for the Program

Research will include surveys on lifestyle habits (food choice, exercise, etc.) of citizens, evaluation of underlying reasons for these habits, program development for improvement, and measuring adoption of improved diets and activity levels. Research is also being conducted on, for example, animal production such that meat products are more healthful. In addition, research activities will explore non-traditional means of delivery of nutritive components. Research results are shared with extension personnel for further dissemination, particularly to county agents, consumers, and community leaders. Additional dissemination of results are through direct contact (such as survey participants and community gatherings), through publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● One-on-One Intervention ● Education Class ● Demonstrations ● Workshop 	<ul style="list-style-type: none"> ● Web sites ● Newsletters ● Other 1 (videos shared among groups) ● Public Service Announcement

3. Description of targeted audience

All state citizens, particularly targeted groups of high-risk citizens. Students (K through 12; college groups). Food producers and marketers.

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	2000	18000	3000	7000
2009	2000	18000	3000	7000
2010	2000	18000	3000	7000
2011	2000	18000	3000	7000
2012	2000	18000	3000	7000

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	5	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- publications

2008 :6 2009 :5 2010 :5 2011 :5 2012 :5

V(I). State Defined Outcome

1. Outcome Target

New professionals in the workforce with training in nutrition and in areas related to healthful lifestyle choices. (Medium term outcome)

2. Outcome Type : Change in Action Outcome Measure

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

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 721 - Insects and Other Pests Affecting Humans

- 724 - Healthy Lifestyle

1. Outcome Target

Incidence of hypertension and obesity in teenagers (AL Dept Public Health Stats--incidence of death due to heart disease in 10 - 19 yr olds, 2004 = 6.3%) (Medium term outcome)

2. Outcome Type : Change in Action Outcome Measure

2008 :6 2009 : 6 2010 : 6 2011 :6 2012 : 0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

1. Outcome Target

Life expectancy (AL Dept Public Health special report-- 1998, 74 yrs). Program success will be indicated by maintenance or increase in life expectancy in AL. (Long-term outcome)

2. Outcome Type : Change in Condition Outcome Measure

2008 :75 2009 : 75 2010 : 76 2011 :76 2012 : 0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 703 - Nutrition Education and Behavior
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.
- 721 - Insects and Other Pests Affecting Humans
- 724 - Healthy Lifestyle

1. Outcome Target

New and enhanced product(s) with improved nutritional value. (Medium term outcome)

2. Outcome Type : Change in Action Outcome Measure

2008 :0 2009 : 4 2010 : 7 2011 :7 2012 : 0

3. Associated Knowledge Area(s)

- 701 - Nutrient Composition of Food
- 702 - Requirements and Function of Nutrients and Other Food Components
- 711 - Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources.

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The health status and nourishment of citizens are affected by a number of factors, such as those indicated.

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

1. Evaluation Studies Planned

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

Description

Specific projects that comprise the Planned Program are evaluated annually by dept. leaders. Overview of programs is by institution leaders.

2. Data Collection Methods

- Other (state and national statistics)
- Observation
- Journals
- Sampling

Description

Data to demonstrate program success will be obtained primarily from national and state agencies. Use of such data will avoid duplication of data collection efforts, and provide a broad perspective of (possible) changes. Additional information and data will be obtained through observation, by sampling and reporting in professional journals. For example, a survey of the citizenry about their food choices from a health perspective could reveal information that is not available through other statistical reports.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Supporting and enhancing economic opportunities and self-empowerment for families and communities

2. Brief summary about Planned Program

Research will address family and community issues that ultimately contribute to sustainability.

3. Program existence : Mature (More than 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

- 123 15% Management and Sustainability of Forest Resources
- 134 3% Outdoor Recreation
- 802 25% Human Development and Family Well-Being
- 803 19% Sociological and Technological Change Affecting Individuals, Families and Communities
- 804 8% Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
- 805 11% Community Institutions, Health, and Social Services
- 806 19% Youth Development

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

1. Situation and priorities

Alabama has a high percentage of rural communities which value the potential of each of their citizens. Building sustainability and excellence in communities, through citizen involvement and strengthening of families, is an important priority for enriching human potential. Establishing self-confidence in youth, such that they achieve their full potential, is also a priority.

2. Scope of the Program

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

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

1. Assumptions made for the Program

Retention and training of youth and young citizens in communities have a positive effect on those communities, as well as on family stability and economic growth. Resources will continue to be available for conducting this program.

2. Ultimate goal(s) of this Program

Skill enhancement; entrepreneurship; sustained rural communities; identification of factors that affect family and community sustainability and self-empowerment.

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	5.8	8.8
2009	0.0	0.0	5.8	8.8
2010	0.0	0.0	5.8	8.8
2011	0.0	0.0	5.8	8.8
2012	0.0	0.0	6.0	9.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research will assess such things as the impact of: technological and sociological changes on family and communities, family interactions on success of youth, and the availability and accessibility of health and social services to rural families and communities. Research results are shared with extension personnel for further dissemination, particularly to community leaders and educators and through leadership training. Additional dissemination of results are through direct contact (such as at school and community meetings), publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● One-on-One Intervention ● Workshop ● Group Discussion 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites

3. Description of targeted audience

Extension personnel, community leaders, educators, 4H, youth centers.

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	1100	33000	900	3300
2009	1100	33000	900	3300
2010	1100	33000	900	3300
2011	1100	33000	900	3300
2012	1100	33000	900	3300

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	5	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- publications

2008 :6 2009 :5 2010 :5 2011 :5 2012 :5

V(I). State Defined Outcome

1. Outcome Target

High school graduation rate (88.8% AL Dept. Educ. 2004-2005, from drop-out rate = 11.18%). Improvements in community and family integrity should increase this (medium term outcome).

2. Outcome Type : Change in Action Outcome Measure

2008 :90 2009 : 91 2010 : 91 2011 :91 2012 : 0

3. Associated Knowledge Area(s)

- 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

Educational attainment (post secondary) (AL Dept Educ., Fall 2005, 55.8% of all high school graduates were enrolled in AL colleges). Success of this program should increase this (long-term outcome).

2. Outcome Type : Change in Condition Outcome Measure

2008 :57 2009 : 58 2010 : 58 2011 :58 2012 : 0

3. Associated Knowledge Area(s)

- 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

The number of small businesses should increase with success of this program. In 2001, US Bureau of Labor states that 229.7 (in thousands) 'non-employer' firms were existent in AL (medium term outcome).

2. Outcome Type : Change in Action Outcome Measure

2008 :230 **2009 :** 231 **2010 :** 231 **2011 :**231 **2012 :** 0

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 804 - Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures
- 805 - Community Institutions, Health, and Social Services

1. Outcome Target

AL Dept. Health notes that 4 of Alabama's 67 counties have fewer than 3 physicians per 10,000 residents. Success of this program should increase this (medium term outcome).

2. Outcome Type : Change in Action Outcome Measure

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

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families and Communities
- 805 - Community Institutions, Health, and Social Services

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Steady progress in improving economic opportunities for families and communities can be easily de-railed by each of the external factors that are indicated.

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

1. Evaluation Studies Planned

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

Description

Specific projects that comprise the Planned Program are evaluated annually by dept. leaders. Overview of program is by institution leaders.

2. Data Collection Methods

- Observation
- Sampling

Description

Data to demonstrate program success will be obtained primarily from national and state agencies. Use of such data will avoid

duplication of data collection efforts, as well as provide a broader perspective of family and community 'health.' Additional information and data may be obtained through observation, by sampling and from reports in professional journals. For example, a survey of the citizenry about their perception of opportunities may reveal a different situation than are interpreted from the statistics.

V(A). Planned Program (Summary)

1. Name of the Planned Program

Sustaining greater harmony between agriculture and the environment

2. Brief summary about Planned Program

Research will address the complex interrelations between agricultural production, environmental and natural resources (including those that are merely aesthetic), and human populations.

3. Program existence : Mature (More than 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 5% Appraisal of Soil Resources
- 102 6% Soil, Plant, Water, Nutrient Relationships
- 112 16% Watershed Protection and Management
- 125 4% Agroforestry
- 133 15% Pollution Prevention and Mitigation
- 135 20% Aquatic and Terrestrial Wildlife
- 216 21% Integrated Pest Management Systems
- 403 8% Waste Disposal, Recycling, and Reuse
- 610 5% Domestic Policy Analysis

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

1. Situation and priorities

The abundant natural resources of Alabama must be maintained for future populations. Priorities include waste management, natural resource management, water quality and quantity, eco-tourism and intelligent pest management.

2. Scope of the Program

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

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

1. Assumptions made for the Program

All state citizens are concerned about abundance of natural resources, including water, for future generations. Resources continue to be available for conducting program. Production of waste will continue and amount will increase.

2. Ultimate goal(s) of this Program

Maintain agricultural productivity without disrupting the available quantity and quality of all of Alabama's natural 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	3.0	0.0	22.1	10.0
2009	3.0	0.0	22.1	10.0
2010	3.0	0.0	22.1	10.0
2011	3.0	0.0	22.1	10.0
2012	3.0	0.0	22.0	10.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research will be directed at better ways of: managing agricultural wastes; promoting agro-(or eco-)tourism; and analyzing land and water use patterns and resources. Research results are shared with extension personnel for further dissemination, particularly to county agents, producers, industry leaders, policy-makers, citizens, and related federal agency personnel. Additional dissemination of results are through direct contact (such as demonstrations and community meetings), through publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

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

Extension	
Direct Methods	Indirect Methods
<ul style="list-style-type: none"> ● Education Class ● Demonstrations ● Workshop ● Group Discussion 	<ul style="list-style-type: none"> ● Newsletters ● Web sites

3. Description of targeted audience

Producers, industry leaders, policy-makers, citizens, and related federal agency personnel.

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	1200	9000	300	900
2009	1200	9000	300	900
2010	1200	9000	300	900
2011	1200	9000	300	900
2012	1200	9000	300	900

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	50	0
2009	0	0
2010	0	0
2011	0	0
2012	0	0

V(H). State Defined Outputs

1. Output Target

- publications

2008 :25 2009 :30 2010 :35 2011 :40 2012 :45

V(I). State Defined Outcome

1. Outcome Target

Estimated tourism receipts = \$7.6 billion in 2005. Success of this program will result in maintenance or increase in revenue (medium term outcome).

2. Outcome Type : Change in Action Outcome Measure

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

3. Associated Knowledge Area(s)

- 112 - Watershed Protection and Management
- 610 - Domestic Policy Analysis

1. Outcome Target

Fish consumption advisories in sampled waters = 26 instances in 2004 (ADEM water board). Success of this program will result in decline of water contaminants that accumulate in fish, and consumption advisories will also subsequently decline. (Long-term outcome)

2. Outcome Type : Change in Condition Outcome Measure

2008 :25 2009 : 24 2010 : 24 2011 :23 2012 : 0

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 133 - Pollution Prevention and Mitigation
- 135 - Aquatic and Terrestrial Wildlife
- 403 - Waste Disposal, Recycling, and Reuse

1. Outcome Target

Incidence of ground water contamination of ~ 5000 sampled sites = 20% in 2002-2003. Success of this program will result in a decline of contaminant incidence (medium term outcome).

2. Outcome Type : Change in Action Outcome Measure

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

3. Associated Knowledge Area(s)

- 101 - Appraisal of Soil Resources
- 102 - Soil, Plant, Water, Nutrient Relationships
- 112 - Watershed Protection and Management
- 125 - Agroforestry
- 133 - Pollution Prevention and Mitigation
- 403 - Waste Disposal, Recycling, and Reuse

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Agriculture and the natural environment are complex, interrelated systems --each of which are easily affected by the external factors that are indicated.

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

1. Evaluation Studies Planned

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

Description

Specific projects that comprise the Planned Program are evaluated annually by dept. leaders. Overview of programs is by institution leaders.

2. Data Collection Methods

- Other (state and national statistics)
- Observation
- Sampling

Description

Data to demonstrate program success will be obtained primarily from national and state agencies. Use of such data will avoid duplication of data collection effort, and provide a broader perspective of (possible) changes. Additional information and data will be obtained through observation, sampling and reporting for professional journals.