

Sent  
7/14/99



**ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY**

**NORMAL, ALABAMA 35762**

SCHOOL OF AGRICULTURAL AND  
ENVIRONMENTAL SCIENCES  
OFFICE OF THE RESEARCH DIRECTOR  
June 30, 1999

POST OFFICE BOX 1087  
TELEPHONE: (205) 851-5781  
FAX: (205) 851-5906  
E-MAIL: aammaf01@asnaam.aamu.edu

Partnerships/POW  
Cooperative State Research, Education, and Extension Service  
U. S. Department of Agriculture  
Stop 2214  
1400 Independence Avenue, S. W.  
Washington, D.C. 20250-2214

Dear Sir:

Please find enclosed the State of Alabama Research Plan of Work as required by the Agricultural Research, Extension, and Education Reform Act of 1998. This Plan of Work is a comprehensive statement of intended research activities for the next five (1999-2004) years for the agricultural research programs at Alabama A&M University (AAMU), Auburn University (AU), and Tuskegee University (TU).

This plan is jointly submitted by Drs. Luther Waters (AU), Walter Hill (TU) and McArthur Floyd (AAMU). Although questions and other comments regarding the document can be directed to any of us, technical concerns should be addressed to me, as I am providing the leadership in this effort.

Respectfully submitted,

McArthur Floyd  
Professor and Research Director

Enclosure

# **PLAN OF WORK**

for

**Alabama Agricultural Research Programs  
(AARP)**

at the

**Alabama Agricultural Experiment Station  
(Auburn University)**

and

**The Winfred Thomas Agricultural Research Station  
(Alabama A&M University)**

and

**The George Washington Carver Agricultural Experiment Station  
(Tuskegee University)**

for

**Federal Fiscal Years**

2000-2004

**July 15, 1999**

## Table of Contents

<b>EXECUTIVE SUMMARY</b> .....	1
<b>POINT OF CONTACT</b> .....	2
Adoptions by Reference.....	2
<b>PLANNED PROGRAMS</b> .....	3
State Program 1: Attain Globally Competitive Alabama Agricultural and Forestry Production Systems .....	3
State Program 2: Enhance Food Safety, Quality and Processing Technologies.....	3
State Program 3: Improve Human Nutrition and Health .....	3
State Program 4: Develop and Enhance Sustainable Ecosystems to Protect Natural Resources and Bio-diversity .....	3
State Program 5: Ensure Socioeconomic and Self-Empowerment of Families and Communities .....	4
<b>PARTICIPATION OF UNIVERSITIES BY GOALS</b> .....	4
<b>STAKEHOLDER INPUT PROCESS</b> .....	4
<b>PROGRAM DESCRIPTIONS</b> .....	5
Goal 1 – An Agricultural System that is Highly Competitive in the Global Economy.....	5
Planned State Program 1	
Statement of the Issues	
Performance Goals	
Output Indicators	
Outcome Indicators	
Key Program Components	
Internal and External Linkages	
Target Audiences	
Program Duration	
Allocated Resources	
Goal 2 – A Safe and Secure Food and Fiber System.....	7
Planned State Program 2	
Statement of the Issues	
Performance Goals	
Output Indicators	
Outcome Indicators	
Key Program Components	
Internal and External Linkages	
Target Audiences	
Program Duration	
Allocated Resources	
Goal 3 – A Healthy, Well-nourished Population .....	8
Planned State Program 3	
Statement of the Issues	
Performance Goals	
Output Indicators	

**Table of Contents - continued**

Outcome Indicators  
Key Program Components  
Internal and External Linkages  
Target Audiences  
Program Duration  
Allocated Resources  
Goal 4 – Greater Harmony between Agriculture and the Environment..... 10  
Planned State Program 4  
Statement of the Issues  
Performance Goals  
Output Indicators  
Outcome Indicators  
Key Program Components  
Internal and External Linkages  
Target Audiences  
Program Duration  
Allocated Resources  
Goal 5 – Enhance Economic Opportunity and Quality of Life for Americans..... 11  
Planned State Program 5  
Statement of the Issues  
Performance Goals  
Output Indicators  
Outcome Indicators  
Key Program Components  
Internal and External Linkages  
Target Audiences  
Program Duration  
Allocated Resources

**SCIENTIFIC MERIT REVIEW PROCESS ..... 14**

**MULTI-INSTITUTIONAL, MULTI-DISCIPLINARY, MULTI-STATE and INTEGRATED  
ACTIVITIES ..... 14**

**CERTIFICATION..... 15**

## EXECUTIVE SUMMARY

Alabama is fortunate to have three land-grant universities - Alabama A&M University (AAMU), Auburn University (AU), and Tuskegee University (TU) - with distinct programs at each institution based on clientele needs. However, our universities will increasingly collaborate on research in areas where the needs of our clientele (producers, processors, agribusinesses, consumers, stakeholders, alumni, students, and others) merge. As the administrators of 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, nationally and internationally; and with state and federal laboratories and agencies. Effective partnerships will be the springboard for efficient use of our resources, both human and fiscal, to meet the needs of our state clientele and the nation. 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 recently formed the Alabama Agricultural Land-Grant Alliance (AALGA) to better address critical issues in food, agricultural and natural resources in the state, region and nation through multidisciplinary, multi-institutional, science-based teams that focus on opportunities and challenges facing farmers, consumers and agribusinesses. The AALGA also seeks to provide quality education that prepares professionals for career opportunities in food, agriculture and natural resources.

In recognition of the importance of international agriculture programs in promoting the competitiveness of U.S. Agriculture in the global market place, Alabama's agricultural research programs support and will participate in efforts of International Program Offices on each campus to promote international market development and other international initiatives that strengthen U.S. economic competitiveness and provide professional and cross-cultural experiential learning opportunities for students, staff, and faculty.

This Plan of Work is a comprehensive statement of intended research activities for the next five years for these three institutions as required by AREERA (Agricultural Research, Extension and Education Reform Act) of 1998. This report is primarily based on the Alabama Agricultural Research Plan for the 21<sup>st</sup> Century.

Five State Programs are planned in the Five-Year Plan of Work under the various REE goals, namely:

- State Program 1: Attain Globally Competitive Alabama Agricultural and Forestry Production Systems**
- State Program 2: Enhance Food Safety, Quality and Processing Technologies**
- State Program 3: Improve Human Nutrition and Health**
- State Program 4: Develop and Enhance Sustainable Ecosystems to Protect Natural Resources and Bio-diversity**
- State Program 5: Ensure Socioeconomic and Self-Empowerment of Families and Communities**

Several multi-disciplinary research projects are grouped under the Key Program Components associated with each state program.

**RESEARCH PLAN OF WORK FOR AGRICULTURAL RESEARCH PROGRAMS  
IN THE STATE OF ALABAMA**

**POINT of CONTACT:** This plan is jointly submitted by: Dr. Luther Waters (Auburn University), Dr. Walter Hill (Tuskegee University) and Dr. McArthur Floyd (Alabama A&M University). Although questions and other comments regarding the document can be directed to any of us, technical concerns should be addressed to McArthur Floyd, who is providing leadership in this effort.

**Dr. Luther Waters**

Dean and Director  
College of Agriculture, and Alabama Agricultural Experiment Station  
Comer Hall, Room 107  
Auburn University, AL 36849-5401  
Phone: 334/844-2237 FAX: 334/844-2937

**Dr. Walter Hill**

Dean and Research Director  
College of Agricultural, Environmental and Natural Sciences  
Campbell Hall, Room 100  
Tuskegee, AL 36088  
Phone: 334/727-8157 FAX: 334/727-8493

**Dr. McArthur Floyd**

Research Director  
School of Agricultural and Environmental Sciences  
James I. Dawson Building, Room 300B  
Post Office Box 1087  
Normal, AL 35762  
Phone: 256/851-5781 FAX: 256/851-5906

**Adoptions by Reference:**

- Alabama Agricultural Research Plan for the 21<sup>st</sup> Century
- Programs School of Agricultural and Environmental Sciences
- Handbook for Research Project Leaders for the Alabama Agricultural Experiment Station
- Administrative Manual for Evans-Allen Cooperative Agricultural Research-Project Approval
- Globalizing Agricultural Science and Education Programs for America (GASEPA)

## **PLANNED PROGRAMS:**

Five State-wide Programs have been designed based on identified need and stakeholder input.

### ***State Program 1: Attain Globally Competitive Alabama Agricultural and Forestry Production Systems***

#### **Key Program Components:**

1. Economics
2. Improved Machinery and Engineering Systems
3. Value Added Food and Fiber
4. Improved Crop, Animal and Poultry Systems
5. Integrated Pest Management
6. Development of Alternative Food, Animal & Specialty Crops
7. Fisheries and Aquaculture
8. Water Quality and Waste Management
9. Economics & Social Well-being of All Families and Farmers
10. Recruitment and Education of Individuals for Career Professions in the Food and Agricultural Sciences
11. International Collaborations

### ***State Program 2: Enhance Food Safety, Quality and Processing Technologies***

#### **Key Program Components:**

1. Food Safety and Risk Analysis
2. Genetic and Biochemical Modification of Foods
3. International Phyto-Sanitary Standards

### ***State Program 3: Improve Human Nutrition and Health***

#### **Key Program Components:**

1. Nutrient Composition of Foods
2. Nutrition Education
3. Diet Modification for Targeted Populations

### ***State Program 4: Develop and Enhance Sustainable Ecosystems to Protect Natural Resources and Bio-diversity***

#### **Key Program Components:**

1. Water Quality and Waste Management
2. Soil Conservation, Quality and Bio-indicators
3. Remote Sensing, Geographical Information Systems and Precision Agriculture
4. Urban/Rural Social Change Issues and the Environment
5. Wetland Restoration and Best Management Practices (BMP)

***State Program 5: Ensure Socioeconomic and Self-Empowerment of Families and Communities***

**Key Program Components:**

1. Rural Restructuring
2. Economic Viability and Sustainable Communities
3. Small and Family Farms
4. Families and Children
5. Information Delivery to Unserved Populations
6. Distance Learning to Unserved and Underserved Populations

**PARTICIPATION OF UNIVERSITIES BY GOALS:**

<b>RESEARCH</b>	<b>GOAL 1</b>	<b>GOAL 2</b>	<b>GOAL 3</b>	<b>GOAL 4</b>	<b>GOAL 5</b>
	Key Research Component	Key Research Component	Key Research Component	Key Research Component	Key Research Component
1862 Research (ALA)*	1, 2, 3, 4, 5, 6, 7, 8, 9, 11	1, 2, 3	1, 2, 3	1, 2, 3, 4, 5	1, 2, 4
1890 Research (ALAX)*	1, 3, 4, 6, 8, 9, 10, 11	1, 2	1, 2, 3	1, 2, 3, 4, 5	2, 3, 4, 5, 6
1890 Research (ALX)*	3, 4, 5, 6, 8, 9, 10, 11	1, 2,	1, 2, 3	1, 2, 3, 4, 6	2, 3, 4, 5, 6

*\* Auburn University, Alabama A&M University and Tuskegee University, respectively*

**STAKEHOLDER INPUT PROCESS:**

Stakeholder input into the planning and priority setting of Alabama’s Agricultural Research Programs (AARP) is both continuous and include formal and non-formal processes. The formal process includes conducting a state-wide survey of citizens, commodity and advisory groups, farmers, urban and rural families, faculty and students, and policy makers to develop the Alabama Agricultural Research Plan for the 21<sup>st</sup> Century. Additionally, input is sought through the Annual Farmers’ Conference, the Professional Agricultural Workers Conference, the Annual Agriculture Week, Advisory Councils, and the five Research and Extension Centers throughout the state in conjunction with the Alabama Cooperative Extension System (ACES) including the Tuskegee University Extension Program. Furthermore, the Director of the Alabama Agricultural Experiment Station (AAES) has appointed a Faculty / Industry Council which meets periodically throughout the year to address issues of agricultural concern. The role of the Council is to advise the Director with regard to priorities which are used to formulate future plans for the AAES. Farmers and other key constituent groups have input via their respective associations / commodity groups. The Associate Directors of the AAES (including selected associated academic schools and colleges at Auburn University), and the Research Directors at Alabama A&M University, and Tuskegee University, have



their own Advisory Councils who provide counsel on research program directions.

In addition to the stakeholder-input mechanisms currently in place, the Director of AAES is in the process of establishing a Futuring Task Force (FTF), which will be made up of literally hundreds of stakeholders around the state. These individuals will identify opportunities that will be available to the State's agroindustrial complex to the year 2025 and discuss and recommend programmatic directions for the AAES as well as provide evaluation and assessment of current programs.

## **PROGRAM DESCRIPTIONS:**

Following is the Alabama five-year Plan of Work based on the five national goals within the Research, Education and Economics (REE) Mission Area of USDA:

*Goal 1 – An Agricultural System that is Highly Competitive in the Global Economy*

Planned State Program 1 – Attain Globally Competitive Alabama Agricultural and Forestry Production Systems

### Statement of the Issues:

Effective functioning of America's agricultural system in a highly competitive globalized economy is a major contributor to the national economic growth and well-being of the American people. Markets for Alabama's farm and forest products are international in scope, are dynamic, and require careful study if Alabamians are to benefit from changes in trade policies, immigration laws, labor relations, human capital, transportation, communications technology, consumer preferences, and other forces shaping the national and international markets for Alabama's food, fiber, ornamental horticulture, and forest products. To keep the agricultural industry in Alabama competitive, we need to understand the basic processes associated with the production and marketing systems.

Our research will focus on the areas of: international market evaluation; farm level economics; improved machinery systems; improved crop and animal health; improved textiles and apparel; fisheries and aquaculture; food safety; development of alternative food and specialty vegetable crops; poultry science; water quality; waste management; and rural/family restructuring. The three universities will also place high emphasis on providing experiential learning and graduate education opportunities for undergraduate and graduate students enrolled in their academic programs.

### Performance Goals:

- ◆ Increased market shares for Alabama agricultural products
- ◆ Increased human capacity in Agriculture and related fields

#### Output Indicators:

- ◆ Increased opportunities for Alabama's agribusiness concerns and farmers
- ◆ Increase in value added agricultural and forestry products

#### Outcome Indicators:

- ◆ Increase in gross revenue from Alabama agricultural products
- ◆ Database for key markets for Alabama agricultural and forestry products developed
- ◆ Sustainable and environmentally sound crop and animal production systems developed

#### Key Program Components:

1. Economics
2. Improved Machinery and Engineering Systems
3. Value Added Food and Fiber
4. Improved Crop, Animal and Poultry Systems
5. Integrated Pest Management
6. Development of Alternative Food, Animal & Specialty Crops
7. Fisheries and Aquaculture
8. Water Quality and Waste Management
9. Economics & Social Well-being of All Families and Farmers
10. Recruitment and Education of Individuals for Career Professions in the Food and Agricultural Sciences
11. International Collaborations

#### Internal and External Linkages:

Collaborations have been established and will continue within and among various departments and schools at each University and among the three land-grant institutions, key international institutions, and with Extension, Federal and State Laboratories, and non-government organizations (i.e., Agribusinesses, private food and community based organizations) to fulfill this goal.

#### Target Audiences:

We will continue to target the needs of the farmer and the consumer in meeting this goal. Our research will benefit the small, medium and large, including minority, farmers and the underserved populations of Alabama, and the region.

#### Program Duration:

This program, of approximately 84 total projects (AU- 73, TU – 4 and AAMU – 7), will continue for the 5-year life of this plan and beyond.

Allocated Resources (\$) and scientists years (SY).

Inst.	Current 1998		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004	
	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY
1862 (AL)	13,597,336	39	15,468,227	42	15,717,357	42	16,503,225	42	17,328,386	42	18,194,806	42
1890 (ALAX)	1,278,000	7	1,341,900	8	1,408,995	8	1,479,444	8	1,553,416	8	1,631,086	8
1890 (ALX)	744,616	6	781,846	6	820,938	6	861,984	6	905,083	6	950,337	6
<b>Totals</b>	<b>15,619,952</b>	<b>52</b>	<b>17,591,973</b>	<b>56</b>	<b>17,947,290</b>	<b>56</b>	<b>18,844,653</b>	<b>56</b>	<b>19,786,885</b>	<b>56</b>	<b>20,776,229</b>	<b>56</b>

*Goal 2 - A Safe and Secure Food and Fiber System*

Planned State Program 2 – Enhance Food Safety, Quality and Processing Technologies

Statement of the Issues:

The safety of the food supply is a major concern to policy makers, consumers, distributors, processors, producers, and suppliers. Enhancing the quality and safety of our food supply requires continuous innovation in production, processing, packaging, and distribution practices. All of Alabama's land-grant universities are striving to meet those demands and address current and emerging food safety, food quality, nutrition, and health issues, particularly as they relate to consumers, society, industry and regulatory concerns.

Our planned research will focus on: food safety issues such as irradiation of meats; diet analysis; and the study of food-borne pathogens. The latter will include developing technologies for the control of pathogens in both meat and food crop (fruits and vegetables) products. We will also be manipulating and supplementing animal diets to extend the shelf-life of poultry products; examining how irradiation affects the shelf-life, bacteria content, and nutritional quality of processed beef. Producers will use genetic selection and other improved management practices to reduce production cost and provide higher quality pork products. We will seek to improve the production and quality of aquaculture products.

Performance Goals:

Increase number of agricultural products that are safer, less costly, with improved shelf life

Output Indicators:

- ◆ Better detection methods for food-borne illnesses
- ◆ Improved farming technology
- ◆ Better detection of pollutants and microorganisms in rivers and streams
- ◆ Improved food processing and handling techniques

Outcome Indicators:

- ◆ A safer food supply
- ◆ Fewer food-borne illnesses
- ◆ A safer water supply
- ◆ A well-nourished Alabama population

Key Program Components:

1. Food Safety and Risk Analysis
2. Genetic and Biochemical Modification of Foods
3. International Phyto-Sanitary Standards

Internal and External Linkages:

Collaborations have been established and will continue within and among various departments and schools at each University and among the three land-grant institutions, key international institutions, and with Extension, Federal and State Laboratories, and non-government organizations (i.e., Agribusinesses, private food and community based organizations) to fulfill this goal.

Target Audiences:

We will continue to target the needs of the farmers and consumers in meeting this goal. Our research will benefit the small, medium and large, including minority, farmers and the underserved populations of Alabama.

Program Duration:

This program, consisting of approximately 34 total projects (AU – 30, TU – 2, and AAMU – 2), will continue for the 5-year life of this plan and beyond.

Allocated Resources (\$) and scientists years (SY).

Inst.	Current 1998		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004	
	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY
1862 (AL)	4,012,879	13	4,213,523	13	4,424,199	13	4,645,409	13	4,877,680	13	5,121,563	13
1890 (ALAX)	106,000	1	111,300	1	116,865	1	122,708	1	128,843	1	130,285	1
1890 (ALX)	217,661	2	228,544	3	239,971	3	251,969	3	264,567	3	277,795	3
<b>Totals</b>	<b>4,336,540</b>	<b>16</b>	<b>4,553,367</b>	<b>17</b>	<b>4,781,035</b>	<b>17</b>	<b>5,020,086</b>	<b>17</b>	<b>5,271,090</b>	<b>17</b>	<b>5,529,643</b>	<b>17</b>

*Goal 3 - A Healthy, Well-nourished Population*

Planned State Program 3 – Improve Human Nutrition and Health

#### Statement of the Issues:

The socioeconomic status of some Alabama residents restricts their ability to practice healthy dietary habits, including choosing healthy foods and handling food safely. Our research efforts will aim at protecting and enhancing the health of Alabama citizens. Through understanding both societal issues affecting consumers' overall diet-related health and the relationship between diet and specific body function.

We will focus on the development of: novel food products that will substantially reduce the serum cholesterol level; evaluation of the production of high quality and healthier small ruminant food-animal meat products; improved encapsulation and food fortification technologies to produce more available/digestible products with increased shelf-life; development of nutritional intervention and food choice programs to control cardiovascular diseases and better quality diets; increased utilization of food crops; and development of dietary guidelines based on ethnicity, age and consumption preferences.

#### Performance goals:

Increase of the health status of all Alabamians

#### Output indicators:

- ◆ Increase in awareness of food safety measures and nutrition needs
- ◆ Biochemical and bio-engineered modification of food produced in Alabama

#### Outcome indicators:

- ◆ Increase in well balanced food products in Alabama markets.
- ◆ Fewer food-borne illnesses in Alabama
- ◆ Reduced malnutrition in the rural and urban poor populations in Alabama

#### Key Program Components:

1. Nutrient Composition of Foods
2. Nutrition Education
3. Diet Modification for Targeted Populations

#### Internal and External Linkages:

Collaborations have been established and will continue within and among various departments and schools at each University and among the three land-grant institutions, with Extension, Federal and State Laboratories, and non-government organizations (i.e., Agribusinesses, private food and community based organizations) to fulfill this goal.

#### Target Audiences:

The target audience for this goal is the entire citizenry of Alabama, and the region.

**Program Duration:**

This program, consisting of approximately 28 total projects (AU – 25, TU – 2, and AAMU – 1), will continue for the 5-year life of this plan and beyond.

**Allocated Resources (\$) and scientists years (SY).**

Inst.	Current 1998		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004	
	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY
1862 (AL)	2,957,117	10	2,262,202	10	2,392,964	10	2,502,652	10	2,628,118	10	2,463,300	10
1890 (ALAX)	127,000	1	133,350	1	140,017	1	147,017	1	154,367	1	162,085	1
1890 (ALX)	158,222	1	166,133	2	174,439	2	183,160	2	192,318	2	201,933	2
<b>Totals</b>	<b>3,242,339</b>	<b>12</b>	<b>2,561,685</b>	<b>13</b>	<b>2,707,420</b>	<b>13</b>	<b>2,832,829</b>	<b>13</b>	<b>2,974,803</b>	<b>13</b>	<b>2,827,318</b>	<b>13</b>

*Goal 4 - Greater Harmony between Agriculture and the Environment*

**Planned State Program 4 – Develop and Enhance Sustainable Ecosystems to Protect Natural Resources and Bio-diversity**

**Statement of the Issues:**

Society demands that our quality of air, water, and soil be protected. Contamination of these resources and food, threatens the continued existence of many plant and animal species. Sustained productivity of Alabama’s agricultural, silvicultural, and other natural resource-dependent industries will require immediate and long-term efforts to maintain quality.

Our research projects are designed to focus on: technology for managing wildlife; animal waste; improved soil management techniques to include the impact of animal waste and residues on water quality and soil health; reduction of soil erosion and increased sustainability through land-use planning and management; the reduction of chemical inputs for maximum production; and pest control of crops. Research projects will also focus on the areas of economic impact analysis of changes in agriculture legislation; development of ecosystem models; precision farming; and water quality.

**Performance goals:**

Increase options available to farmers for sustainable natural resources development and bio-diversity

**Output Indicators:**

- ◆ Methods for planting and harvesting that protect the environment
- ◆ Methods for animal waste management that protect the environment

- ◆ More environmentally friendly methods of fisheries management
- ◆ Methods to ensure a safe water supply

Outcome Indicators:

- ◆ Improved soil health
- ◆ Reduced soil and water pollution
- ◆ Less reliance on chemicals in farming
- ◆ Reduced soil loss

Key Program Components:

1. Water Quality and Waste Management
2. Soil Conservation, Quality and Bio-indicators
3. Remote Sensing, Geographical Information Systems and Precision Agriculture
4. Urban/Rural Social Change Issues and the Environment
5. Wetland Restoration and Best Management Practices (BMP)
6. Integrated Pest management (IMP)

Internal and External Linkages:

Collaborations have been established and will continue within and among various departments and schools at each University and among the three land-grant institutions, with Extension, Federal and State Laboratories, and non-government organizations (i.e., Agribusinesses, private food and community based organizations) to fulfill this goal.

Target Audiences:

The targeted audiences for this goal are the farmers; landowners and users; rural and urban dwellers; food, fiber and chemical industries and citizens of Alabama, as well as the region.

Program Duration:

This program, consisting of approximately 82 total projects (AU – 78, TU – 3, and AAMU – 1), will continue for the 5-year life of this plan and beyond.

Allocated Resources (\$) and scientists years (SY).

Inst.	Current 1998		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004	
	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY	Expenses (\$)	SY
<b>1862 (AL)</b>	1,207,352	38	12,683,319	38	13,317,485	38	13,983,359	38	14,682,527	38	15,416,654	38
<b>1890 (ALAX)</b>	84,000	1	88,200	1	92,610	1	97,240	1	102,101	1	107,207	1
<b>1890 (ALX)</b>	243,460	2	255,633	2	268,414	2	281,834	2	295,925	2	310,721	2
<b>Totals</b>	<b>12,406,812</b>	<b>41</b>	<b>13,027,152</b>	<b>41</b>	<b>13,678,509</b>	<b>41</b>	<b>14,362,433</b>	<b>41</b>	<b>15,080,553</b>	<b>41</b>	<b>15,834,582</b>	<b>41</b>

## *Goal 5 - Enhance Economic Opportunity and Quality of Life for Americans*

### Planned State Program 5 – Ensure Socioeconomic and Self-Empowerment of Families and Communities

#### Statement of the Issues:

One-fourth of the American population lives in rural areas. Alabama is 40% rural, based on 1990 census data. Further, the Black Belt Counties (BBCs) of South Central Alabama, which run from the Georgia border to the east, to the Mississippi border to the west, pose a unique challenge for the land grant system due to the demographical, social, and economical distinction of the region. For example, these counties are heavily rural, ranging from 36 to 100%, versus the national and state averages of 25 and 40%, respectively. The counties have a large non-white population, ranging from 44 to 86%, versus the national and state averages of 17 and 27%. The BBC poverty rate range of 20 to 39% is over twice the state average (19%) and over two and a half times the national average of 15%. The average annual unemployment rate ranges in the BBCs from 7.6 to 18%, versus the national average of 5.4% and the state average of 5.1%. In addition, the median income ranges from \$14,000 to \$24,000 versus the national and state averages of \$31,000 and \$26,000. Finally, the percent of high school graduates ranges from 49-62% in the BBCs, versus the state average of 67%. The well-being and societal contributions of this population hinges on having viable communities, businesses and economies. This viability becomes significantly important in rural communities where the majority of the residents are poor.

Our research will focus on: rural restructuring and social change issues; facilitating health care to low income families; families and adolescent problems and quality of family life; assessing factors, programs and policies that empower rural communities to enhance productivity and well-being and strengthen their viability; developing socio-economics for family farms; develop and provide information on small business opportunities and programs that positively impact communities; providing insight on ways that rural family can nurture one another and improve their own quality of life; and developing distance education technologies to provide information that empower rural and urban communities.

#### Performance Goals:

To increase economic opportunity and quality of life for all Alabama citizens

#### Output Indicators:

- ◆ Methods to Increase family incomes
- ◆ Quality of life improvement interventions

#### Outcome Indicators:

- ◆ An Increase in average family incomes
- ◆ Quality of life improvements
- ◆ Reduced unemployment in rural communities



