

2012 Mississippi State University Combined Research and Extension Plan of Work

Status: Accepted

Date Accepted: 10/04/2011

I. Plan Overview

1. Brief Summary about Plan Of Work

This plan of work is a joint plan of work between the Mississippi State University Extension Service (MSU-ES) and the Mississippi Agricultural and Forestry Experiment Station. The plan therefore includes extension and research from the 1862 land-grant institution in Mississippi.

Mississippi is a diverse state, with a variety of agricultural systems, a large population of ethnic minorities, and families and communities with unique and powerful needs. The land-grant universities meet this challenge with a broad spectrum of programming designed to reach these diverse audiences. Creation and transfer of knowledge to solve problems is the core of these efforts.

MSU-ES provides research-based educational programs and information in agriculture and natural resources, 4-H youth development, family and consumer education and community resource development to improve the economic, social, and cultural well-being of all Mississippians.

The foundation mission of MAFES is the creation of knowledge through fundamental and applied research in the fields of science related to agriculture, food, natural resources, the natural environment, people, and communities. The focus of these research programs is on enhancing and/or developing economically efficient and environmentally acceptable agricultural production and processing systems. The goals are to provide safe, nutritious, desirable food and fiber products and processes for consumers as well as to assure that the businesses which comprise Mississippi's agricultural industry have the information required to remain competitive in a global marketplace.

MSU-ES receives a Smith-Lever formula allocation of \$6,879,251 or 16.1% of its total allocated budget. MAFES receives a Hatch formula allocation (including multistate research funds) of \$4.4M or 15.9% of its total allocated budget.

The plan includes individual program plans from 22 different programs. These 22 programs reflect the integration of the agricultural sector in Mississippi and provide needed programming for the youth, families, and communities of the state. The 22 programs include the following:

- 4-H/Youth Development
- Global Food Security and Hunger - Agronomic Crops
- Global Food Security and Hunger - Animal Science/Forages
- Global Food Security and Hunger - Aquaculture
- Global Food Security and Hunger - Poultry
- Global Food Security and Hunger - Risk/Farm Management
- Nutrient Management -- Water Quality
- Climate Change
- Sustainable Energy
- Integrated Pest Management
- Forestry
- Horticulture
- Wildlife and Fisheries
- Enterprise and Community Development

- Food Safety
- Human Nutrition
- Childhood Obesity
- Human Health
- Early Care and Education
- Family Life
- Family Resource Management
- Family Leadership Development

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

Year	Extension		Research	
	1862	1890	1862	1890
2012	210.0	0.0	53.0	0.0
2013	210.0	0.0	53.0	0.0
2014	210.0	0.0	53.0	0.0
2015	210.0	0.0	53.0	0.0
2016	210.0	0.0	53.0	0.0

II. Merit Review Process

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

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

2. Brief Explanation

Research projects utilize both an internal university panel and an expert peer review as part of the regional research networks. These reviews cover all aspects of research project proposals, including scientific merit, budgets, and suitability of the research mission for the unit, experiment station, and regional consortium.

Extension programs undergo an internal university panel review. This review takes into consideration the need for the program (including stakeholder input), the methods utilized, the audience identified, and the methods for outcome/impact evaluation.

The 5-Year Plan of Work combined plan is reviewed by a combined internal and external university and external non-university panel. Panels are set up as appropriate for specific program plans with a focus on a broader review of the need, resources allocated, and expected outcomes of the programs.

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?

Once the draft guidelines for AREERA were published in 1998, MSU initiated its new planning process. Each program plan in this Plan of Work reflects a group planning effort, including both research and extension where both are involved in the program.

To provide guidance for the program planning process, the planning groups not only used their professional expertise, but also had information at their disposal from the following sources:

- The stakeholder input process described in this document, including county and program advisory councils, state-level program advisory councils, research and extension center advisory meetings, key partners, and other sources;
- Outreach council meetings for research and extension;
- The county-level program delivery agreements developed by each local extension agent; and
- Professional peer review of the draft plans of work.

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

Through the stakeholder input process described elsewhere in this Plan of Work, needs of all clientele groups, including under-served and under-represented groups, were determined. (Most of the advisory groups mentioned in the stakeholder input process are required to be representative of all potential clientele.) MSU-ES also has specific procedures in place, such as "grassroots mailing lists," to reach all potential clientele, especially those in under-served and under-represented populations.

In addition to the stakeholder groups mentioned above, the outreach council has conducted a series of meetings around the state. These meetings were designed specifically to obtain input from under-served and under-represented populations.

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

Each planning group has developed one or more program plans using the logic model. In each program plan, expected outputs and outcome/impacts were developed. Most of the outcomes identified were intermediate- or long-term outcomes.

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

The creation of program planning groups has provided a mechanism for researchers and extension professionals to interact in the planning and implementation process. A required part of the joint plan of work is the sharing of information between the two "camps." The result has been the creation of numerous joint programs and enhanced interaction in all programming areas. Below are three examples of these joint efforts.

Mississippi River Post-Flood Taskforce

There is a need to investigate very-late planting of crops due to unforeseen natural disasters, such as the Mississippi River Flood of 2011. MSU research and extension professionals organized and established a taskforce specifically to deal with issues stemming from very-late planting of crops. Through this taskforce, there is an organized medium in which to discuss issues and projects, produce new knowledge concerning very-late planting and disseminate that knowledge to flood-prone regions of Mississippi and surrounding

regions.

Mississippi Broadband Education Program

Through a grant with the Governor's office, MSU Extension Service has initialized regional broadband coordinators throughout the state. These coordinators will establish regional advisory boards, consisting of research and extension faculty, as well as Internet Service Providers, local K-12 and community college teachers, residents and other stakeholders. The purpose of the advisory boards is to identify issues related to obtaining, adopting and using broadband services to improve the quality of life in their communities. By researching the external factors that influence broadband adoption and using the extension coordinators on the ground in the communities, the project intends to influence positive effects in Mississippi communities.

IV. Stakeholder Input

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

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

Brief explanation.

Efforts to determine economic, social, and environmental issues begin with County Extension Advisory Councils. Further needs assessment is carried out through Research and Extension Center Advisory Councils, and through formal and informal interaction with other stakeholders. Issues identified include concerns to be addressed with Extension and/or research programs.

County Extension Advisory Councils

As a formal process, key clientele meet under the leadership of county Extension professionals to review results of programs and identify key issues to be addressed in the county or area. Input comes from three different groups: the Overall Extension Advisory Council, Program Advisory Councils, and other stakeholders.

Overall Extension Advisory Councils

MSU-ES has an Overall Extension Advisory Council in each county. These advisory councils meet a minimum of two times per year to discuss programming efforts, evaluate programs, legitimize program efforts, assess needs for future programming, and identify human and financial resources needed for county programming. This group includes leaders who provide input from business, social, and economic entities as well as those who represent the needs of underserved and underrepresented clientele.

Program Advisory Councils

Program and/or commodity advisory groups in each county act as subcommittees of the overall advisory council, including people who represent the interests of agriculture, family & consumer sciences, 4-H youth, and community/rural development issues. These groups meet at least two times per year to identify specific areas of program needs, delivery and evaluation.

Other Stakeholders

MSU-ES county agents are also required to obtain information regarding clientele needs from people outside the advisory councils. They must give special attention to key community leaders and representatives of underserved populations, making sure all groups who are possible beneficiaries of MSU-ES programming efforts are included. These groups meet several times during the year to offer input and react to Extension's efforts to address key issues in the community.

Research and Extension Center Advisory Councils

MSU has four area Research and Extension Centers (Delta, Northeast, Central, and Coastal) jointly administered by MSU-ES and MAFES. These centers each have an overall advisory council where stakeholders lead discussions about programming and research efforts and assess needs at a yearly meeting. Subgroups of the advisory councils may meet several times during the year to discuss specific needs in research and extension programming.

Key Partners

MSU-ES and MAFES meet with key partners throughout the year to discuss efforts and results, coordinate activities, and set priorities. These key partners include such organizations as the Mississippi Farm Bureau, Natural Resources Conservation Service, Delta Council, Rural Development Offices, Mississippi Forestry Commission, Mississippi Department of Wildlife, Fisheries, and Parks, Mississippi Department of Agriculture and Commerce, and numerous state and regional commodity groups.

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 Advisory Committees
- Open Listening Sessions
- Needs Assessments

Brief explanation.

The collection of input from stakeholders is an ongoing process with both MSU-ES and MAFES. This was described in the previous section. Advisory committees are required to be reflective of the population of potential clientele. Listening sessions are sometimes held for the general public; others are specifically designed to reach under-served populations.

Specific needs assessments are conducted when warranted, such as the development of a new program or when an issue emerges. These needs assessments may include focus groups, written surveys, or face-to-face interviews with selected clientele.

As an example, the problem with glyphosate-resistant species in Mississippi had been an emerging issue for several years, but has become a leading concern in the last year. By including a vast amount of input from growers, dealers, extension personnel, industry associates and research faculty, we have been able to educate those involved in the proper management of these species and offer tools for delaying the onset of resistance.

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

Brief explanation.

Meetings with traditional stakeholder groups, the general public, and specifically with non-traditional groups are an on-going part of the needs assessment process conducted by MSU-ES and MAFES. These are described in page 1 of this section. As an example, in response to rising obesity rates in the Mississippi Delta, Extension faculty organized community forums in four Delta counties. Grassroot information was solicited from the general public, healthcare workers, teachers and others. MSU-ES then organized community action groups to help tackle one priority issue. One community decided one issue regarding obesity was that there was no local place that was safe to walk; they petitioned city government to open an abandoned high school gym.

Surveys with traditional stakeholder groups and non-traditional groups and individuals are conducted as needed as well. In addition, the use of social media is being used to solicit information from stakeholder groups. For example, the Mississippi Crop Situation Blog is generating nearly 10,000 contacts per month; many stakeholders take the opportunity to leave valuable input/comments. Surveys about county youth needs were also conducted by 4-H professionals in some counties.

3. A statement of how the input will be considered

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

Brief explanation.

Stakeholder input influences most aspects of this Plan of Work. Issues are identified through the needs assessment process discussed earlier. The issues help extension agents and specialists determine their plans of action, including redirecting programs to meet clientele needs. Administration must provide the resources to accomplish these changes, including setting new priorities or revising existing priorities, and hiring appropriate staff members as required to address the priorities.

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	4-H Youth Development
2	Global Food Security and Hunger - Agronomic Crops
3	Global Food Security and Hunger - Animal Science/Forages
4	Global Food Security and Hunger - Aquaculture
5	Global Food Security and Hunger - Poultry
6	Global Food Security and Hunger - Risk/Farm Management
7	Nutrient Management/Water Quality
8	Climate Change
9	Sustainable Energy
10	Integrated Pest Management
11	Forestry
12	Horticulture
13	Wildlife and Fisheries
14	Enterprise and Community Development
15	Food Safety
16	Human Nutrition
17	Childhood Obesity
18	Human Health
19	Early Care and Education
20	Family Life
21	Family Resource Management
22	Family Leadership Development

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

4-H Youth Development

2. Brief summary about Planned Program

This program contains all efforts regarding youth development by Extension, including military, volunteer development, and youth at risk.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		0%	
	Total	100%		0%	

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

1. Situation and priorities

Parents want their children to grow into healthy, productive, successful adults. The mission of 4-H, the non-formal youth education program of the Mississippi State University Extension Service, is to help parents achieve that goal.

4-H helps youth acquire knowledge that can enable them to develop such life skills as: communication, decision-making, leadership, interpersonal relations, and community awareness. For a list of examples, see the Search Institute (<http://www.search-institute.org/assets/forty.html>) or Iowa State University (<http://www.extension.iastate.edu/4H/lifeskills/homepage.html>).

4-H also helps youth form attitudes that will enable them to become self-directing, productive, and contributing members of society. The 4-H mission is accomplished through the involvement of parents, volunteer leaders, Extension agents, and other adults who organize and conduct educational experiences in community, school, and family settings. 4-H learning experiences are designed to help youth work with others in real-life situations. These experiences encourage family interactions by promoting individual growth in knowledge, skills, and attitudes.

Mississippi is ranked 50th by the National Kids Count analysis of the status of children. More than 31 percent of Mississippi children live in poverty and more than 39 percent live in families where no parent has full-time, year round employment. 42 percent of the children are living in single-parent households. Twelve percent of Mississippi teens are not attending school nor working while the school dropout rate is ten percent. 35 out of 82 counties have populations of more than 20 percent living below the poverty level. Poverty multiplies risk factors. Mississippi youth are at risk for school failure, abuse,

neglect, crime and violence. These youth are also at long-term risk of not becoming dependable family members, workers and involved citizens. Mississippi youth need knowledge skills and behavior to lead fulfilling lives and to become engaged throughout Mississippi communities.

Currently Mississippi has 4,828 active-duty National Guard and Reserve Units called to active duty in Mississippi. There are five military bases (Columbus AFB, Keesler AFB, naval Air Station Meridian, Naval Air Station Pascagoula, Naval Construction Battalion Center Gulfport) in our state. These full time soldiers and their families are dealing with multiple deployment and reunion issues for which the Extension Youth Development program can provide assistance.

Volunteers are vital to the Mississippi State University Extension Service 4-H Youth Development Program. Currently, there are over 6,100 adult volunteers and 98 youth are serving as volunteers in Mississippi 4-H. There is a need to provide Extension Agents with the skills that they need to become effective managers of volunteers. There is a need to equip 4-H volunteers with the skills that they need to become successful as 4-H club managers. There also is a need to provide learn-by-doing opportunity for youth to develop as leaders in their clubs and serve in county, district, and state leadership roles in Mississippi 4-H.

2. Scope of the Program

- Multistate Extension

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

1. Assumptions made for the Program

There is a strong commitment to youth development in the state and a dedicated volunteer core. Additionally, 4-H will continue to have strong funding support at the local and state level.

2. Ultimate goal(s) of this Program

Development of life skills in youth.

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
2012	62.5	0.0	0.0	0.0
2013	62.5	0.0	0.0	0.0
2014	62.5	0.0	0.0	0.0
2015	62.5	0.0	0.0	0.0
2016	62.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Activities

- Recruit Youth and Volunteers
- Provide Volunteer Leader Training for Youth Leaders and Adult Volunteers
- Provide Training on organization and maintenance of community clubs
- Provide recognition events for youth to exhibit project skills, including the following:
 - 4-H Club Congress
 - District Achievement Days
 - County, State, & Regional Fairs
 - Livestock and Horse Shows
- To Provide training to Extension personnel on experiential education through subject-matter

work:

- Chartering all 4-H Clubs and groups
- Four Essential Elements
- Legal Use of the Name and Emblem
- Diversity Training
- Financial Management

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 • Workshop • Group Discussion • One-on-One Intervention • Demonstrations 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • TV Media Programs • Web sites other than eXtension

3. Description of targeted audience

All Mississippians between the ages of 6 and 18.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of youth enrolled in 4-H Clubs.
 - Number of clubs operating on military bases.
 - Number of youth-at-risk who join 4-H clubs.
 - Number of volunteers attending local and/or district training.
 - Number of volunteers attending state volunteer leaders conference.
 - Number of volunteers attending the regional 4-H volunteer leaders forum.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Adult and youth volunteers increasing their knowledge and skills in being effective volunteer leaders.
2	Volunteers participating in training conferences incorporate their skills gained from training to work with 4-H clubs.
3	Volunteer-managed 4-H clubs are sustained at the local level.
4	Number of youth who improve life skills.
5	Number of youth who increase knowledge of subject-matter areas.
6	Number of 4-H projects completed.
7	Youth increase their involvement in leadership events and activities at the district, state, and national levels.

Outcome # 1

1. Outcome Target

Adult and youth volunteers increasing their knowledge and skills in being effective volunteer leaders.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:300 2013:300 2014:300 2015:300 2016:300

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Volunteers participating in training conferences incorporate their skills gained from training to work with 4-H clubs.

2. Outcome Type : Change in Action Outcome Measure

2012:200 2013:200 2014:200 2015:200 2016:200

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Volunteer-managed 4-H clubs are sustained at the local level.

2. Outcome Type : Change in Condition Outcome Measure

2012:200 2013:200 2014:200 2015:200 2016:200

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Number of youth who improve life skills.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:14500 2013:14500 2014:14500 2015:14500 2016:14500

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Number of youth who increase knowledge of subject-matter areas.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:14500 2013:14500 2014:14500 2015:14500 2016:14500

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 6

1. Outcome Target

Number of 4-H projects completed.

2. Outcome Type : Change in Action Outcome Measure

2012:8000 2013:8000 2014:8000 2015:8000 2016:8000

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 7

1. Outcome Target

Youth increase their involvement in leadership events and activities at the district, state, and national levels.

2. Outcome Type : Change in Action Outcome Measure

2012:4000 2013:4000 2014:4000 2015:4000 2016:4000

3. Associated Knowledge Area(s)

- 806 - Youth Development

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes

- Populations changes (immigration, new cultural groupings, etc.)

Description

While natural disasters are always a possibility, the primary external factors would be appropriations changes and population changes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluations will be conducted at both the state and local levels. Most local evaluations will include either after-only, retrospective, or case study methodology. Comparative studies and some retrospective studies will be conducted at the state level.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Global Food Security and Hunger - Agronomic Crops

2. Brief summary about Planned Program

This program includes research and extension efforts related to the 3.7 million acres of row-crops produced in Mississippi each year. Primary crops grown include cotton, soybeans, corn, rice, wheat, grain sorghum, and peanuts.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%		5%	
111	Conservation and Efficient Use of Water	15%		5%	
132	Weather and Climate	5%		0%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		10%	
202	Plant Genetic Resources	5%		2%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%		10%	
204	Plant Product Quality and Utility (Preharvest)	0%		10%	
205	Plant Management Systems	30%		25%	
206	Basic Plant Biology	0%		5%	
211	Insects, Mites, and Other Arthropods Affecting Plants	10%		5%	
212	Pathogens and Nematodes Affecting Plants	5%		15%	
213	Weeds Affecting Plants	10%		5%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%		3%	
	Total	100%		100%	

V(C). Planned Program (Situation and Scope)**1. Situation and priorities**

Agronomic crops comprise a substantial portion of Mississippi's number one industry, agriculture. Mississippi farmers normally grow a compliment of several crops, including soybeans, corn, cotton, rice, wheat, grain sorghum and peanuts. These crops are grown on approximately 3.7 million acres and their produce is estimated at over \$2.2 billion annually. The economic impact of crops to Mississippi's economy accounts for several times the actual commodity values, when considering the inputs utilized to grow, harvest, store, transport, process, market and utilize them. Crop production supports numerous agricultural industries, including seed, fertilizer, chemical, equipment, storage, processing, transportation, fuel, and consulting. Soybeans are currently the leading crop, planted on 2.0 million acres and produce a raw value of about \$850 million. Mississippi growers produce about \$550 million of corn on 750,000 acres, \$363 million of cotton on 420,000 acres, \$226 million of rice on 250,000 acres, \$116 million of hay on 700,000 acres, \$75 million of sweet potatoes on 21,000 acres, \$23 million of wheat on 125,000 acres, \$12 million of peanuts on and \$3 million on grain sorghum on 12,000 acres.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

University Experiment Station and Extension Service programs conduct open, unbiased, scientific research and provide expertise to our clientele. Information on any subject is readily available in the business world today. However, most of the information available from industry is directed towards those entities making a profit. Thus, this information is naturally going to be biased in their favor. Thus, this information has limited value to the public. The Extension Service can provide unbiased information by assimilating sound scientific research conducted at the University which is based upon sound science, methodology and is subject to peer-review. Thus, universities provide timely, uniquely impartial data and ideas from which clientele can use to make sound decisions to improve their profitability and reduce risk.

2. Ultimate goal(s) of this Program

Increase or improve production stability, minimize input expenses, and enhance environmental stewardship. These goals will improve profitability and sustainability for agronomic crop 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
2012	18.0	0.0	18.0	0.0
2013	18.0	0.0	18.0	0.0
2014	18.0	0.0	18.0	0.0
2015	18.0	0.0	18.0	0.0
2016	18.0	0.0	18.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Short courses, Workshops or Training Seminars
- Field Consultations
- Demonstration and Verification Programs
- Newsletters and Publications
- Web-based information and E-mail
- Distance Learning Programs
- Field Manuals or Guides
- Farm Management Software/Components
- Direct Technical Assistance/Recommendations/Interpretation/Analysis

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 ● Workshop ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

- Crop producers
- Non-traditional crop producers (wildlife food plots, tourist farms, etc....)
- Agricultural consultants
- Agricultural retail suppliers and dealers
- Agricultural businesses and financial institutions
- Agricultural industry representatives and research and development personnel
- Agricultural applicators
- Extension Service personnel
- Research faculty and personnel

V(G). Planned Program (Outputs)

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- Number of contacts
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 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending seminars, workshops, short courses, and demonstrations.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Documentation and effect of producers adopting recommended practices, technologies, strategies, or systems.
2	Documentation of growers increasing production levels.
3	Documentation of producers minimizing inputs/expenses associated with crop production.
4	Documentation of efforts and activities which have improved environmental stewardship.

Outcome # 1

1. Outcome Target

Documentation and effect of producers adopting recommended practices, technologies, strategies, or systems.

2. Outcome Type : Change in Action Outcome Measure

2012:5000 2013:5000 2014:5000 2015:5000 2016:5000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 132 - Weather and Climate
- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Documentation of growers increasing production levels.

2. Outcome Type : Change in Condition Outcome Measure

2012:4000 2013:4000 2014:4000 2015:4000 2016:4000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 202 - Plant Genetic Resources
- 205 - Plant Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Documentation of producers minimizing inputs/expenses associated with crop production.

2. Outcome Type : Change in Condition Outcome Measure

2012:4000 2013:4000 2014:4000 2015:4000 2016:4000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 202 - Plant Genetic Resources
- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Documentation of efforts and activities which have improved environmental stewardship.

2. Outcome Type : Change in Condition Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships

- 111 - Conservation and Efficient Use of Water
- 132 - Weather and Climate
- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

As the agronomic crops program is tied directly to agricultural production, weather extremes is the most likely external factor to affect outcomes. The next most likely factors to affect outcomes are government regulations, especially environmental regulations, and public policy changes, primarily government set-asides and production programs.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected producers. The time series analysis will include production data for selected row-crops in Mississippi.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Global Food Security and Hunger - Animal Science/Forages

2. Brief summary about Planned Program

This program addresses research and extension programming designed to enhance the animal production process, with a focus on helping beef, dairy, equine, and swine producers and industry personnel.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	0%		5%	
301	Reproductive Performance of Animals	10%		15%	
302	Nutrient Utilization in Animals	10%		10%	
303	Genetic Improvement of Animals	10%		5%	
304	Animal Genome	5%		20%	
305	Animal Physiological Processes	5%		10%	
306	Environmental Stress in Animals	5%		5%	
307	Animal Management Systems	15%		15%	
308	Improved Animal Products (Before Harvest)	5%		0%	
311	Animal Diseases	10%		5%	
312	External Parasites and Pests of Animals	5%		0%	
313	Internal Parasites in Animals	5%		0%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	5%		0%	
315	Animal Welfare/Well-Being and Protection	10%		0%	
502	New and Improved Food Products	0%		5%	
511	New and Improved Non-Food Products and Processes	0%		5%	
	Total	100%		100%	

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

1. Situation and priorities

There are 42,400 farms on approximately 11,150,000 acres in Mississippi. Over 20,000 of these farms are involved in livestock production. Livestock and forage are produced in all 82 Mississippi counties. The market value of livestock and hay production at the farm gate was approximately 456 million dollars in 2010.

Beef production is a significant component of Mississippi agriculture. The total value of production of cattle and calves in Mississippi approached \$145 million in 2009, ranking eighth among the state's agricultural commodities. Total cattle inventory in Mississippi on January 1, 2011 was 900,000 head including 495,000 head of beef cows and 71,000 head of beef cow replacements. Stocker cattle

production is also very prominent with 400,000 head of stocker cattle residing in the state annually. Beef cattle operations in Mississippi currently total approximately 18,500 operations.

Mississippi has a small, but active dairy industry. As of 2010, there were 130 licensed dairy farms scattered across the state, especially in southwest Mississippi. While the number of dairy farms is decreasing, which follows a national trend, the state is trying to capitalize on the abundant forages available in the state. In 2007, Mississippi's dairy industry generated an estimated \$277.6 million in economic revenue.

Mississippi's inventory of hogs and pigs was estimated at 385,000 head on December 1, 2010 reflecting a 5.48 percent increase over 2009. (MS Ag Statistics, 2010 State Agriculture Overview Report). The number kept for breeding is estimated at 38,000, which is an 11% increase over 2009. Pigs saved per litter in 2010, averaged 9.89 compared with 9.68 during 2009. (Quarterly Hogs and Pig Report, December 2010). There were 683 farms with an inventory of hogs in 2007 producing 1,294,545 pigs. Approximately, 96% of the total pig production is produced by 6.3% of the farms. The sale of hogs and pigs was valued at \$129.4 million (USDA Census of Agriculture, 2007 Census Publication). In 2009, MS sold 352,391 pigs with a gross market value of \$49.3 million however in 2010 total pigs marketed in MS declined to 101,562 pigs with a gross market value of 15.3 million due to out-shipments of pigs to be finished (National Pork Board Check-off Report).

The Mississippi horse industry plays a significant role in the state's economy and is a growing segment of Mississippi agriculture. The horse population in Mississippi has been recently estimated at 113,063 with an investment of \$877.45 million in horse inventory and operations. In 2006, Mississippi's horse industry contributed about \$1.02 billion to the state's economy and provided about 38,900 jobs. Mississippi has some of the best public equine facilities in the United States, which hosts horse shows and equine activities that bring many people from surrounding states to Mississippi every year.

There are approximately 2.1 million acres devoted to forage production in Mississippi. Hay is harvested on approximately 750,000 acres with an average yield of 2.9 tons per acre. The 2010 estimated value of hay production was \$124 million dollars. It is estimated that many of these acres of hay production do not receive adequate amounts of lime or fertilizer. Forage production could be increased without additional acreage by improving the management of the forage crops such as following soil test recommendations, renovating poor stands and incorporating improved forage crop varieties.

Animal Health is a concern of livestock producers. From a production standpoint, animal diseases decrease economic returns, create animal welfare challenges, and pose problems associated with carcass disposal. Health and parasite control programs can correct existing health problems and reduce potential for future difficulties. An appropriate herd health program that is effectively administered would have a positive economic impact on livestock production and marketing reputation in Mississippi. Other emerging issues involve food safety, animal identification, foreign animal diseases, and the limitation of antibiotic use in livestock production. Producers should be encouraged to participate in quality assurance programs that address the on-farm HACCP concept of food safety and drug use. Preventative disease management along with production technologies such as strict bio-security protocols can assist producers with animal health issues.

Mastitis Control -- Mastitis is a disease that exists in various degrees in every dairy herd in Mississippi. Mastitis influences the cow's ability to produce milk, and negatively influences the quality of milk. Effective mastitis control and management can increase milk production, lower production costs, and improve dairy farm profitability.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Livestock producers in general must be provided with economic incentives to change management or production practices. Producers have many demands on their time. Educational programs must be designed to interest the producers to participate and convince them the information delivered is sound and economically viable. The use of multi-media technology in delivering programs can be useful in attracting producer participation. The producer must depart from the program with a sense their participation was worthwhile.

2. Ultimate goal(s) of this Program

This program should result in increased production efficiency in animal operations, improved economic return for animal producers, and overall development, growth, and improvement of the livestock industries.

This program should result in animals and animal products from Mississippi farms being overall healthy--protected from harm and free of diseases, parasites, and toxins.

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
2012	14.0	0.0	5.0	0.0
2013	14.0	0.0	5.0	0.0
2014	14.0	0.0	5.0	0.0
2015	14.0	0.0	5.0	0.0
2016	14.0	0.0	5.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and Extension programs will be conducted in the following areas (and others as needed):

- MSUcares.com Livestock Web Site
- Beef Cattle Extension Publications
- Cattle Business in Mississippi magazine articles
- Mississippi Master Cattle Producer Program
- Beef Quality Assurance Program
- Beef Cattle Boot Camps

- Beef Cattle Workshops and Short Courses
- Heifer Development Program
- Farm-to-Feedlot Project
- Artificial Insemination School
- Beef Cattle Improvement Assn. sponsored sales
- Beef Cattle Improvement Assn. newsletter
- Feeder Calf Marketing
- Stocker Cattle Conference
- Enrollment on the Dairy Herd Improvement Assn.
- DHIA herd management screening
- Statewide Dairy Field Day
- Swine Producers Extension Program
- Swine Managers Training
- Environmental Continuing Education Classes
- Dietary analyses and consultation
- Pork Quality Assurance Program
- Swine Welfare and Assurance Program
- Forage Nutrient Analysis
- Grazing Schools
- Grazing Conference
- Cattle Transportation Stress Research
- Cattle Temperament Research
- Cattle Breeding and Genetics Research
- Cattle Disease Research
- Livestock Nutrition Research
- Livestock and Equine Reproduction Research
- End Product (Meats) Research
- Forage Production and Utilization Research

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 ● Workshop ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes beef, dairy, swine, equine, and forage producers (full- and part-time) and related industry personnel.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending seminars, workshops, short courses, and demonstrations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new technologies, strategies, or systems.
2	Number of producers optimizing production levels.
3	Number of producers optimizing production inputs/expenses.
4	Number of producers improving their environmental stewardship.
5	Number of producers adding value and capturing added value to products through marketing.
6	Number of producers improving overall herd health, animal welfare, and/or protection.

Outcome # 1

1. Outcome Target

Number of producers adopting new technologies, strategies, or systems.

2. Outcome Type : Change in Action Outcome Measure

2012:2500 2013:2500 2014:2500 2015:2500 2016:2500

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 303 - Genetic Improvement of Animals
- 304 - Animal Genome
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers optimizing production levels.

2. Outcome Type : Change in Condition Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

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

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of producers optimizing production inputs/expenses.

2. Outcome Type : Change in Condition Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

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
- 308 - Improved Animal Products (Before Harvest)

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Number of producers improving their environmental stewardship.

2. Outcome Type : Change in Condition Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:1000

3. Associated Knowledge Area(s)

- 302 - Nutrient Utilization in Animals
- 306 - Environmental Stress in Animals

- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 5

1. Outcome Target

Number of producers adding value and capturing added value to products through marketing.

2. Outcome Type : Change in Condition Outcome Measure

2012:500 2013:500 2014:500 2015:500 2016:500

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 6

1. Outcome Target

Number of producers improving overall herd health, animal welfare, and/or protection.

2. Outcome Type : Change in Action Outcome Measure

2012:750 2013:750 2014:750 2015:750 2016:750

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 303 - Genetic Improvement of Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Prices for beef, pork, dairy, and other animal products are somewhat dependent on the local, state, and national economies. Natural disasters can affect production, particularly drought. Government regulations, particularly environmental regulations, may affect producers' ability to make a profit on these enterprises.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected producers. The time series analysis will include production data for selected animal production metrics in Mississippi.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Global Food Security and Hunger - Aquaculture

2. Brief summary about Planned Program

This program focuses on aquaculture production in Mississippi, which primarily consists of commercial pond-raised catfish production, with some limited production of freshwater prawns and crayfish. Mississippi produces over one-half of the catfish produced in the U.S.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
302	Nutrient Utilization in Animals	15%		10%	
306	Environmental Stress in Animals	10%		0%	
307	Animal Management Systems	5%		35%	
308	Improved Animal Products (Before Harvest)	0%		5%	
311	Animal Diseases	25%		35%	
312	External Parasites and Pests of Animals	5%		0%	
313	Internal Parasites in Animals	0%		5%	
315	Animal Welfare/Well-Being and Protection	25%		5%	
402	Engineering Systems and Equipment	15%		5%	
	Total	100%		100%	

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

1. Situation and priorities

In 2010, just over 214 million kg of channel catfish were processed, representing over half the total United States aquaculture production. Catfish aquaculture has generally been a profitable and rapidly expanding industry in the southeastern United States. However, yield has not increased in recent years and profits have decreased. From the high in 2002, acres devoted to catfish production have declined by

50%. We will address these problems through a multidisciplinary, problem-solving approach focused on improving the efficiency of catfish production. The project will address production inefficiencies on two levels. Two objectives focus on improving traditional cultural practices. The other two objectives of this project address inefficiencies associated with traditional pond management technologies. The development of novel pond production methodologies will enhance overall production efficiency, reduce environmental impacts, and reduce water use.

Solutions to this problem are complex and multi-faceted, but improved production efficiency can decrease costs of production and thereby improve the potential for profitability. Some improvement in efficiency may be attained by improving management and culture techniques used in conventional earthen ponds. In particular, feeding efficiency is important because feeds represent about half the variable cost of catfish production. The other approach to restoring profitability is developing novel production technologies that are more cost-effective than traditional production practices. New technologies that can be applied to modify existing infrastructure and that can be adopted for a modest investment will be most helpful.

Since its inception more than 40 years ago, disease-related losses have represented a major impediment to economic viability. In the last decade losses from infectious and environmental diseases have escalated as culture practices have become more intensive and the incidence of recognized diseases has been amplified within relatively closed populations of cultured fish. There has also been an emergence of several previously unknown disease entities. It is estimated that disease-related mortalities account for approximately 45-50% of all losses incurred on farms and may account for as much as \$100 million annually in direct economic impact. Without substantial improvements in fish health management and production efficiency, the future of commercial catfish farming will remain in jeopardy.

All research conducted under this agreement will address practical, production-oriented problems facing the farm-raised catfish industry in the southeastern United States within the broad subject areas described above. Specifically, the work will focus on molecular disease diagnostics, elucidation of bacterial virulence factors, the relationship between management practices and disease, characterization of new and emerging diseases, and surveillance for diseases of undetermined etiology. The program will apply a multidisciplinary approach to addressing industry needs through basic and applied research, technology transfer through the Extension system, as well as provide a clinical diagnostic service and field investigation capability.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Spending on seafood by United States' consumers presently stands at over \$55 billion annually. Demand far exceeds domestic production, generating a \$7 billion dollar annual trade deficit and the third largest U.S. trade deficit after petroleum and automobiles. Increasing seafood production from wild fisheries to meet this demand and offset the deficit is not possible because most national and global wild-catch fisheries are fully exploited. The only way to close the enormous trade deficit in seafood and reduce America's dependence on foreign products is to dramatically increase domestic aquaculture production.

The channel catfish is the most important aquaculture species in the United States. In 2010, just over 214 million kg of channel catfish were processed, representing over half the total United States aquaculture production. Over 95% of channel catfish aquaculture occurs in four states (Mississippi,

Alabama, Arkansas, and Louisiana) located in the southeastern United States. Mississippi is by far the leading channel catfish producing state and accounts for over 70% of the total production.

From 1970 to 2000, improvements in production technology resulted in a consistent trend of increasing per-hectare yields of catfish. Major technological advances responsible for improved yields included formulation and refinement of high-performance diets and improved aeration technology. Although long-term demand for catfish is forecast to remain very strong, many catfish farms are not profitable at current price levels. The steady expansion of the catfish industry for the past 40 years may be threatened by this combination of low prices and competition from lower-priced imports.

Without substantial improvements in fish health management and production efficiency, the future of commercial catfish farming will remain in jeopardy.

2. Ultimate goal(s) of this Program

This program is focused on improving production efficiency which, if attained, will improve the profitability of channel catfish farming.

Establish new effective measures for the early detection, prevention, and treatment of disease and have producers implementing these measures.

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
2012	2.0	0.0	4.0	0.0
2013	2.0	0.0	4.0	0.0
2014	2.0	0.0	4.0	0.0
2015	2.0	0.0	4.0	0.0
2016	2.0	0.0	4.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

- Develop alternative feeds for optimal nutrition, increased production, and improved water quality of pond-raised catfish.
 - Increase the reliability, efficiency, and cost-effectiveness of catfish fry production through the use of new and improved technologies.
 - Increase reliability, efficiency, and cost-effectiveness of catfish production through the use of new and improved culture system technologies.
 - Researchers will develop referred journal articles and give scientific presentations at professional societies and at producer meetings.
 - Extension specialists will conduct workshops and seminar programs. Extension publications and

newsletters will aid in transferring new knowledge to producers. Farm visits will help producers adapt new procedures on farms.

- Develop diagnostic tools to detect and monitor diseases in commercially raised channel catfish and determine virulence factors associated with those diseases.
- Develop fish health management procedures to control economically important diseases of channel catfish.
- Determine factors associated with emerging diseases in pond-raised channel catfish.
- Researchers will develop referred journal articles and give scientific presentations at professional societies and at producer meetings.
- Extension specialists will conduct workshops and seminar programs. Extension publications and newsletters will aid in transferring new knowledge to producers. Farm visits will help producers adapt new procedures on farms.

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 • Workshop • One-on-One Intervention 	<ul style="list-style-type: none"> • Newsletters • Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes producers of catfish, crayfish, and freshwater prawns, and related industry personnel.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending seminars, workshops, short courses, and demonstrations.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new technologies, strategies, or systems.
2	Number of producers improving production efficiency.
3	Number of producers improving their environmental stewardship.

Outcome # 1

1. Outcome Target

Number of producers adopting new technologies, strategies, or systems.

2. Outcome Type : Change in Action Outcome Measure

2012:100 2013:100 2014:100 2015:100 2016:100

3. Associated Knowledge Area(s)

- 302 - Nutrient Utilization in Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers improving production efficiency.

2. Outcome Type : Change in Action Outcome Measure

2012:80 2013:80 2014:80 2015:80 2016:80

3. Associated Knowledge Area(s)

- 302 - Nutrient Utilization in Animals
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of producers improving their environmental stewardship.

2. Outcome Type : Change in Action Outcome Measure

2012:40 2013:40 2014:40 2015:40 2016:40

3. Associated Knowledge Area(s)

- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Public Policy changes

Description

The farmer's profit on the sale of catfish hopefully will increase in the future. However, national policy encourages foreign trade and imports. Consumers in the United States demand low-priced food. Producing aquaculture products more efficiently through improvements in existing culture techniques (feeding and fertilization practices) or adoption of novel culture methods will improve the ability of U.S. farmers to compete in the new global economy regardless of seafood prices. Government controls of inferior, imported fish products will be important.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected producers. The time series analysis will include production data for catfish production in Mississippi.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Global Food Security and Hunger - Poultry

2. Brief summary about Planned Program

This program describes university extension and research efforts to aid producers in increasing poultry production efficiency, health and quality of marketed products.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%		10%	
302	Nutrient Utilization in Animals	10%		50%	
303	Genetic Improvement of Animals	0%		5%	
305	Animal Physiological Processes	10%		10%	
306	Environmental Stress in Animals	10%		10%	
307	Animal Management Systems	10%		0%	
308	Improved Animal Products (Before Harvest)	10%		0%	
311	Animal Diseases	10%		15%	
312	External Parasites and Pests of Animals	10%		0%	
313	Internal Parasites in Animals	10%		0%	
315	Animal Welfare/Well-Being and Protection	10%		0%	
	Total	100%		100%	

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

1. Situation and priorities

The commercial poultry industry continues to expand as consumers increasingly demand high

quality, affordable poultry products. To meet this growing demand, poultry producers have historically relied heavily on university extension and research personnel to aid them in increasing poultry production efficiency, health and quality of marketed products. Increases in production have largely been attained by increasing the size of poultry operations to take advantage of economy of scale principles. As poultry operations become larger to increase efficiencies and remain economically viable, the potential for negative environmental impacts and unfavorable public perception is increased.

Air emissions (ammonia, dust, and odor) from poultry production facilities is currently and will continue to be an important issue for poultry producers. Economically feasible methods to reduce the generation of air contaminants and mitigate emissions need to be developed and implemented. Projects to improve the use trees and other plant barriers to mitigate environmental impact will be investigated. Other methods to improve the utilization of nutrients, such as composting, need to be expanded to preserve water quality in poultry production areas. Due to rising energy costs and concerns regarding global warming from increased use of fossil fuels, strategies to reduce energy consumption in poultry housing through improved design, operation and ventilation will be investigated. In addition, practices to improve drinking water quality and management to growing poultry need to be developed and emphasized. Poor water quality can contribute to excess moisture problems in poultry housing, leading to increased ammonia and odor generation. Measures to prevent disease, reduce animal stress and improve animal welfare are issues of continuing concern requiring constant improvement. To accomplish all of these goals, cooperation with personnel with additional expertise in engineering, chemistry, nutrition, and soil and water sciences will be needed.

Improvements in poultry housing operation and nutrient utilization and reduced environmental impact will help to assure the sustainability of commercial poultry operations in Mississippi. Poultry production is important to the economies of many rural areas of the state. In 2005, 763 million broilers were grown on approximately 2,000 farms in Mississippi, with a farm value in excess of \$2 billion. Broilers are slaughtered and further processed in 20 plants in Mississippi. In 2000, poultry firms operating in Mississippi directly employed almost 19,000 people.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

It is expected that adoption of new practices will be slow. As with any industry, the benefits and economic feasibility of new technologies must be proven before widespread adoption can occur.

2. Ultimate goal(s) of this Program

The goal of this program is to increase poultry production efficiency, health and quality of marketed products

V(E). Planned Program (Inputs)

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

Year	Extension		Research	
		1862	1890	1862

Year	Extension		Research	
	1862	1890	1862	1890
2012	1.0	0.0	2.0	0.0
2013	1.0	0.0	2.0	0.0
2014	1.0	0.0	2.0	0.0
2015	1.0	0.0	2.0	0.0
2016	1.0	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Extension personnel will communicate with poultry producers and the general public through seminars, workshops, and extension bulletins and newsletters distributed in paper copy and electronically via the internet. Field demonstrations may also be required to encourage acceptance of new practices and methodologies. Results of research projects may also be published in peer-reviewed scientific journals. Research disseminated to the stakeholders will consist of, but is not limited to, the following:

- Flock hatchability and fertility
- Male broiler breeder viability measurements
- Dietary and managerial regimes to decrease layer Mycoplasma infections
- Optimizing early chick performance through: broiler and breeder nutrition, embryo physiological assessment, incubation management, and physiological assessment
- Applied nutrition with feed additives and alternative feed ingredients
- Ammonia management in broiler houses: minimization of nitrogen input, ammonia chemical modification and capture, and ammonia impacts on bird performance
- Minimization of physiological stress in broilers and layers
- Understanding broiler intestinal microorganisms and their role in nutrient utilization and disease
- Identification of physiological responses associated with poultry welfare.

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• Group Discussion• One-on-One Intervention• Demonstrations | <ul style="list-style-type: none">• Public Service Announcement• Newsletters• Web sites other than eXtension |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|

3. Description of targeted audience

The target audience for this program consists of commercial poultry producers and related industry personnel.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending seminars, workshops, short courses, and demonstrations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new technologies, strategies, or systems.
2	Number of producers increasing production efficiency.
3	Number of producers reducing the environmental impact of production.

Outcome # 1

1. Outcome Target

Number of producers adopting new technologies, strategies, or systems.

2. Outcome Type : Change in Action Outcome Measure

2012:50 2013:50 2014:50 2015:50 2016:50

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in Animals
- 305 - Animal Physiological Processes
- 306 - Environmental Stress in Animals
- 307 - Animal Management Systems
- 308 - Improved Animal Products (Before Harvest)
- 311 - Animal Diseases
- 312 - External Parasites and Pests of Animals
- 313 - Internal Parasites in Animals
- 315 - Animal Welfare/Well-Being and Protection

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers increasing production efficiency.

2. Outcome Type : Change in Condition Outcome Measure

2012:40 2013:40 2014:40 2015:40 2016:40

3. Associated Knowledge Area(s)

- 301 - Reproductive Performance of Animals
- 302 - Nutrient Utilization in 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

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of producers reducing the environmental impact of production.

2. Outcome Type : Change in Condition Outcome Measure

2012:35	2013:35	2014:35	2015:35	2016:35
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3. Associated Knowledge Area(s)

- 302 - Nutrient Utilization in Animals
- 307 - Animal Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Government Regulations
- Competing Programmatic Challenges

Description

Many factors can influence the success and profitability of poultry producers. Inclement weather and storms, such as hurricanes, can have devastating effects on poultry facilities and production. Economic factors such as feed, energy, transportation and product market prices can determine if producers will be willing or able to invest in new systems and technologies. Market demand and prices can also be affected by consumer fears regarding safety of poultry products; for example,

fears about contamination with pathogenic bacteria or avian influenza. Recent publicity from animal welfare advocates have also swayed consumer concerns and demands regarding methods used to rear and process poultry

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will primarily use retrospective producer surveys and case studies of selected producers. The time series analysis will include production statistics for poultry production in Mississippi.

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Global Food Security and Hunger - Risk/Farm Management

2. Brief summary about Planned Program

This program helps agricultural producers improve the profitability of their enterprise through management, marketing, and influencing farm policy.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	30%		20%	
602	Business Management, Finance, and Taxation	10%		0%	
604	Marketing and Distribution Practices	40%		40%	
610	Domestic Policy Analysis	20%		40%	
	Total	100%		100%	

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

1. Situation and priorities

Mississippi's farmers and agribusiness professionals operate in a competitive and rapidly changing environment. To thrive in this environment, they need access to timely information, tools to effectively evaluate that information, and the skills to recognize the need for and implement changes in the management of their operations.

Mississippi's agricultural producers and agribusiness professionals need timely and accurate information on developments in markets for their commodities. In addition, they need a better understanding of the marketing tools and opportunities that are available to them.

Changes in agricultural policy related to commodity production and natural resource conservation have a tremendous impact on the economic well-being of Mississippi's agricultural producers, agribusinesses, and landowners. These stakeholders need access to the most current information and analysis related to proposed policy changes.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Producers that are proficient at production techniques are not necessarily proficient at the business aspects of farming. While production levels are important to farm viability, marketing, management, and knowledge of policy are also important components of successful enterprises.

2. Ultimate goal(s) of this Program

The program seeks to increase the profitability of farm enterprises so that operations are sustainable.

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
2012	3.0	0.0	2.0	0.0
2013	3.0	0.0	2.0	0.0
2014	3.0	0.0	2.0	0.0
2015	3.0	0.0	2.0	0.0
2016	3.0	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

This program includes three areas designed to assist farmers in making their enterprises more profitable:

The Farm Management Information and Training area provides farmers and agribusiness professionals with timely and relevant information on a variety of topics potentially impacting management decisions on their operations. It offers a number of practical decision aids along with training on the use of these aids as well as providing a resource for managers who need help with business planning.

The Extension Agricultural Marketing Information and Education area provides producers of major row crops, cattle, milk and dairy products, catfish, fruits and vegetables, and horticultural crops with regular, timely updates on conditions in these commodity markets. In addition, training will be made available on the use of commonly used marketing tools and strategies.

The Agricultural Policy Analysis and Education area provides producers, lenders and other input providers, and rural community leaders with timely and relevant information on existing farm, conservation, and international trade programs as well as analysis of the potential impact of proposed policy changes.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program consists primarily of agricultural producers and related agribusiness personnel.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending workshops, seminars, and short courses.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting recommended strategies in management, marketing, and government program use.
2	Number of producers indicating increased profitability due to implementation of recommended strategies.

Outcome # 1

1. Outcome Target

Number of producers adopting recommended strategies in management, marketing, and government program use.

2. Outcome Type : Change in Action Outcome Measure

2012:250 2013:250 2014:250 2015:250 2016:250

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 604 - Marketing and Distribution Practices
- 610 - Domestic Policy Analysis

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers indicating increased profitability due to implementation of recommended strategies.

2. Outcome Type : Change in Condition Outcome Measure

2012:200 2013:200 2014:200 2015:200 2016:200

3. Associated Knowledge Area(s)

- 601 - Economics of Agricultural Production and Farm Management
- 604 - Marketing and Distribution Practices

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

As with most production-related programs, the success of this program can be influenced by many factors. The program is designed to help producers maintain their viability in spite of external factors, however.

Retirements and resignations have left this program shorthanded. New hires for the program are not imminent.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Retrospective studies will be used to determine adoption strategies and related impacts. Time series and case study analyses will be used to determine trends in marketing effectiveness.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Nutrient Management/Water Quality

2. Brief summary about Planned Program

This program focuses on water (quality, use, and conservation) as it relates to production agriculture, with an emphasis on proper disposal of agricultural wastes, including pesticides, solid animal wastes, and other waste 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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	20%		2%	
111	Conservation and Efficient Use of Water	5%		10%	
112	Watershed Protection and Management	15%		62%	
133	Pollution Prevention and Mitigation	15%		15%	
401	Structures, Facilities, and General Purpose Farm Supplies	10%		0%	
402	Engineering Systems and Equipment	5%		1%	
403	Waste Disposal, Recycling, and Reuse	5%		0%	
404	Instrumentation and Control Systems	5%		0%	
405	Drainage and Irrigation Systems and Facilities	20%		0%	
903	Communication, Education, and Information Delivery	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

Agriculture is one of Mississippi's most important industries. Mississippi is among the nation's

leaders in broiler production, and other animal agriculture enterprises such as swine, beef and dairy cattle, constitute an important segment of the state's agricultural production. Row crop agriculture, including predominantly cotton, soybeans and corn, and other crops such as rice and wheat are other major crops produced in the state.

Issues associated with nutrient management and water - including water quality, water use and water conservation--continue to be important focus areas of research and Extension education programs. Water conservation practices for agricultural crop production systems and the general public are needed to promote conservation of water resources in Mississippi. Proper disposal of agricultural wastes such as waste pesticides, solid wastes and other waste products are other important issues among agricultural producers. Research and education programs are targeted toward agricultural producers to address potential water quality and environmental impacts associated with nutrient management, animal and row crop production, as well as reach other rural audiences potentially impacted by agricultural production. Furthermore, disposal of household chemicals, pharmaceuticals and personal care products has historically been conducted in ways that can impair surface and ground water quality.

Both internal and external linkages are employed to reach research and education program objectives. Internal linkages include integrated, multi-disciplinary approaches through multi-departmental efforts. Externally, multi-institutional and multistate linkages are maintained with agricultural support groups and agencies, 1890 institutions, state environmental and water quality agencies, multi-state water quality agencies, and other linkages in Mississippi, the region and nationally.

Stakeholders and customers of research and Extension programs represent a broad section of audiences, including agricultural producers and other rural audiences, agricultural support groups, environmental and water quality agencies, consumers, and traditionally under-served groups. These stakeholders are accessed through direct linkages, mass media, special influence groups and other methods.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Two primary assumptions are integral to this plan: (1) the participating entities (Extension and research) are equipped to conduct the research pertinent to the plan and effectively deliver its components to the targeted audiences; and (2) the targeted audiences are in a position to and are willing to implement the particular components of the plan.

2. Ultimate goal(s) of this Program

To change the practices of the general public and agricultural production practices to reduce the potential impact of these entities on water quality, water quantity and the environment.

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
2012	2.0	0.0	0.2	0.0
2013	2.0	0.0	0.2	0.0
2014	2.0	0.0	0.2	0.0
2015	2.0	0.0	0.2	0.0
2016	2.0	0.0	0.2	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Varied activities, services and products are anticipated as a result of this plan. These include formation of state and regional advisory groups, assignment of work groups to address specific issues and tasks associated with nutrient management and water quality, participation of targeted audiences such as agricultural producers in environmental education programs, development of publications, fact sheets, web pages and other educational materials as program support, and reporting documents. Specific programs targeted toward agricultural producers in this plan include environmental stewardship programs, waste pesticide collection and disposal programs, recycling and solid waste management programs, development of agricultural water conservation practices to protect and maintain water resources, pharmaceutical and household chemical management and disposal programs and other initiatives related to water quality and nutrient management.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

Stakeholders and customers of research and Extension programs represent a broad section of audiences, including agricultural producers and other rural audiences, agricultural support groups, environmental and water quality agencies, consumers, and traditionally under-served groups.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers attending seminars, workshops, short courses, and demonstrations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new technologies, strategies, or systems.
2	Number of producers improving their environmental stewardship.
3	Number of pounds of waste pesticides, pharmaceuticals and personal care products collected or disposed of properly.

Outcome # 1

1. Outcome Target

Number of producers adopting new technologies, strategies, or systems.

2. Outcome Type : Change in Action Outcome Measure

2012:125 2013:125 2014:125 2015:125 2016:125

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 403 - Waste Disposal, Recycling, and Reuse
- 404 - Instrumentation and Control Systems
- 405 - Drainage and Irrigation Systems and Facilities

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers improving their environmental stewardship.

2. Outcome Type : Change in Condition Outcome Measure

2012:50 2013:50 2014:50 2015:50 2016:50

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 111 - Conservation and Efficient Use of Water
- 401 - Structures, Facilities, and General Purpose Farm Supplies
- 402 - Engineering Systems and Equipment
- 403 - Waste Disposal, Recycling, and Reuse
- 404 - Instrumentation and Control Systems
- 405 - Drainage and Irrigation Systems and Facilities

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of pounds of waste pesticides, pharmaceuticals and personal care products collected or disposed of properly.

2. Outcome Type : Change in Action Outcome Measure

2012:0	2013:0	2014:0	2015:0	2016:0
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3. Associated Knowledge Area(s)

- 403 - Waste Disposal, Recycling, and Reuse

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Many potential factors may affect the implementation and success of this plan. Among these are changing political climates and priorities, changing internal policies and priorities, potentially conflicting interests of stakeholders and customers, the impact of natural disasters such as hurricanes, floods and tornadoes and the resulting changes in priorities, and funding limitations.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected producers. The time series analysis will include water quality statistics.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Climate Change

2. Brief summary about Planned Program

Changes in climate, including global warming, have led to a need to develop an agriculture system that maintains high productivity in the face of climate changes and reduce greenhouse gas emissions.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	0%		40%	
111	Conservation and Efficient Use of Water	15%		0%	
112	Watershed Protection and Management	0%		5%	
132	Weather and Climate	85%		0%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		25%	
205	Plant Management Systems	0%		20%	
206	Basic Plant Biology	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

Recent climate data indicate that higher variability and greater incidence of catastrophic weather must be seen as part of the situation.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

This program will assume that research must recognize that while plants and animals can be more closely adapted to a changing climate, most production systems must be changed in parallel to recognize both climate change and organism change.

2. Ultimate goal(s) of this Program

To develop an agricultural production system that is able to adapt to changing environments, sustain economic vitality, and take advantage of opportunities offered by climate change mitigation technologies.

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
2012	0.2	0.0	0.5	0.0
2013	0.2	0.0	0.5	0.0
2014	0.2	0.0	0.5	0.0
2015	0.2	0.0	0.5	0.0
2016	0.2	0.0	0.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and outreach must not only adapt to a changing climate, but must improve efficiency under these new conditions. They must anticipate more limited access to both energy and water.

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 ● Workshop ● Demonstrations 	<ul style="list-style-type: none"> ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

Rural Communities, small towns that are seeing new challenges for handling stormwater due to higher rainfall intensities.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of people attending workshops, short courses, etc.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new practices based on research/extension recommendations.
2	Number of producers reporting increased income/decreased expenses based on practice changes.

Outcome # 1

1. Outcome Target

Number of producers adopting new practices based on research/extension recommendations.

2. Outcome Type : Change in Action Outcome Measure

2012:25	2013:25	2014:25	2015:25	2016:25
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3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers reporting increased income/decreased expenses based on practice changes.

2. Outcome Type : Change in Condition Outcome Measure

2012:25	2013:25	2014:25	2015:25	2016:25
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3. Associated Knowledge Area(s)

- 111 - Conservation and Efficient Use of Water
- 132 - Weather and Climate

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes

- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Description

{NO DATA ENTERED}

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

{NO DATA ENTERED}

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Sustainable Energy

2. Brief summary about Planned Program

This program is a combination of parts and/or whole of several currently existing programs. Research and extension personnel are currently working together to determine exactly how this program will be organized and fit in with other programs. It is expected that work will be conducted in this program as the details of the research/extension integration are being developed.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	20%		0%	
112	Watershed Protection and Management	0%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	10%		0%	
204	Plant Product Quality and Utility (Preharvest)	0%		15%	
401	Structures, Facilities, and General Purpose Farm Supplies	0%		10%	
402	Engineering Systems and Equipment	60%		8%	
403	Waste Disposal, Recycling, and Reuse	10%		2%	
511	New and Improved Non-Food Products and Processes	0%		50%	
601	Economics of Agricultural Production and Farm Management	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

Rising energy costs and increasing demand have shown a need to develop sustainable energy

systems. Biofuels from crops and forest products in addition to solar, wind and other systems will help meet the increase in demand and help stabilize costs.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

It is assumed that energy demand will continue to increase and that price will continue to fluctuate and rise.

2. Ultimate goal(s) of this Program

To decrease the dependency on petroleum based fuel, and provide reliable energy supplies.

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
2012	0.3	0.0	1.0	0.0
2013	0.3	0.0	1.0	0.0
2014	0.3	0.0	1.0	0.0
2015	0.3	0.0	1.0	0.0
2016	0.3	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and extension activities will be carried out with the goal of developing biomass used for biofuels, design optimum technologies for processing forest products and crops for bioenergy production, and production of alternative energy.

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● Workshop● Demonstrations	<ul style="list-style-type: none">● Newsletters● Web sites other than eXtension
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3. Description of targeted audience

Target audience will be agricultural producers, home owners and energy developers.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of people attending workshops, short courses, etc.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting new practices due to research/extension recommendations.

Outcome # 1

1. Outcome Target

Number of producers adopting new practices due to research/extension recommendations.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:25 2013:25 2014:25 2015:25 2016:25

3. Associated Knowledge Area(s)

- 203 - Plant Biological Efficiency and Abiotic Stresses Affecting Plants
- 402 - Engineering Systems and Equipment
- 403 - Waste Disposal, Recycling, and Reuse

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

{NO DATA ENTERED}

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

{NO DATA ENTERED}

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Integrated Pest Management

2. Brief summary about Planned Program

This program focuses on the control and prevention of pests, including such concepts as pest identification, pest biology, inspection and monitoring, pest thresholds, habitats and habitat management as it relates to pest control, exclusion, and pesticide chemistry and formulations.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
133	Pollution Prevention and Mitigation	0%		5%	
205	Plant Management Systems	10%		0%	
206	Basic Plant Biology	5%		0%	
211	Insects, Mites, and Other Arthropods Affecting Plants	10%		65%	
212	Pathogens and Nematodes Affecting Plants	5%		0%	
213	Weeds Affecting Plants	5%		0%	
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%		0%	
215	Biological Control of Pests Affecting Plants	5%		0%	
216	Integrated Pest Management Systems	50%		5%	
311	Animal Diseases	0%		10%	
402	Engineering Systems and Equipment	0%		5%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	0%		10%	
721	Insects and Other Pests Affecting Humans	5%		0%	
	Total	100%		100%	

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

1. Situation and priorities

As cotton acres have decreased over the last several years, Mississippi has seen soybean and corn acres reach record highs. In 2009, Mississippi planted 2,200,000 acres of soybeans and 730,000 acres of corn. Traditionally, cotton was the only crop scouted by professional consultants. As cotton acres reach all time lows, the agricultural consultant base has diversified into soybeans and corn to make up for lost revenue in cotton. Five years ago it is estimated that less than 5% of soybean and corn acres were scouted by consultants. Today it is estimated that greater than 80% of the all soybean and corn acres are scouted by professional consultants. With the "new" high management soybean and corn plantings, producers have adopted some of the high spray practices from cotton. There are numerous producers that will make "convenience" sprays with insecticides if they are going across the field with an herbicide or fungicide to save on application cost. These convenience sprays are often not justified. Extension entomologists and research scientists have begun an increased effort to provide reliable and sustainable information to producers and consultants on scouting techniques, thresholds, identification, and pest biology.

Mississippi consistently ranks in the top 5 states of WNV cases per 100,000 population (Lindsey et al. 2008, Vector-borne and Zoonotic Diseases 8: 35-39), and there were 51 human cases in 2009 with 4 deaths, so effective (even chemical-based) mosquito control is definitely needed. Unfortunately, no public health IPM efforts have been promoted in Mississippi and only rarely have such practices ever been conducted. Municipal mosquito control in Mississippi is mostly conducted by personnel in town/city public works departments rather than relegated to contract personnel. At least half of the programs are in towns with fewer than 3,000 people, meaning they have limited financial resources for control efforts. Many of the mosquito control personnel are untrained and even uncertified. Therefore, mosquito control often only consists of routine spraying with a truck-mounted ULV machine. Rocky Mountain spotted fever and other tick-borne diseases are present in Mississippi and tick control efforts are sometimes implemented at city and state parks. Education on prevention and control of tick-borne diseases is also needed in this state. This aspect of the IPM plan of work will help ensure safe and effective public health pest control in towns and cities throughout Mississippi and will promote adoption of IPM principles such as education, source reduction, and least use of the least toxic products.

Mississippi has over 2.9 million citizens, representing just over a million individual households. Approximately 72% of these households live in owner-occupied housing and approximately 13% live in multi-family housing units (U.S. Census Bureau, 2008). Each of these households is faced with insect pest problems that can adversely affect the health, economy, and quality of life of the inhabitants. Each of these households is in need of information and education on how to best avoid, manage, and/or control insect pests and plant diseases that adversely affect household members and their property. This includes insect and disease pests of turf and ornamental plants, insect pests of home vegetable gardens, and structural and household insect pests. This aspect of the IPM plan of work is to provide training and assistance to clients that will help them to prevent or solve insect pest and plant disease problems they encounter in their home, garden or landscape.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

IPM principles can be applied in a number of settings and offer producers a viable option for lowering expenses and maintaining effective control of pests.

2. Ultimate goal(s) of this Program

The ultimate goal of IPM is to increase profits and reduce harmful environmental impacts by decreasing the use of pesticides in agricultural and horticultural 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
2012	3.5	0.0	3.0	0.0
2013	3.5	0.0	3.0	0.0
2014	3.5	0.0	3.0	0.0
2015	3.5	0.0	3.0	0.0
2016	3.5	0.0	3.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and extension programming will be conducted many IPM areas, including the following:

1. urban entomology and plant pathology
2. plant disease and nematode diagnostics
3. cotton and corn pest management
4. greenhouse tomato pest management
5. soybean management by application of research and technology
6. public health issues related to vector control

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 ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes home pest control providers, homeowners, cotton producers, corn producers, soybean producers, greenhouse tomato producers, and public health officials.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, short courses, and demonstrations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of producers adopting IPM production practices.
2	Number of producers increasing profits.
3	Number of producers reducing environmental impacts of pesticide use.

Outcome # 1

1. Outcome Target

Number of producers adopting IPM production practices.

2. Outcome Type : Change in Action Outcome Measure

2012:800 2013:800 2014:800 2015:800 2016:800

3. Associated Knowledge Area(s)

- 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
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers increasing profits.

2. Outcome Type : Change in Condition Outcome Measure

2012:640 2013:640 2014:640 2015:640 2016:640

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of producers reducing environmental impacts of pesticide use.

2. Outcome Type : Change in Condition Outcome Measure

2012:640 2013:640 2014:640 2015:640 2016:640

3. Associated Knowledge Area(s)

- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants
- 212 - Pathogens and Nematodes Affecting Plants
- 213 - Weeds Affecting Plants
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants
- 215 - Biological Control of Pests Affecting Plants
- 216 - Integrated Pest Management Systems

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

The IPM program's success is influenced by many factors. Like most programs based on production agriculture, natural disasters and government regulations have the largest potential impact.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Retrospective studies will be utilized to measure implementation and impacts of IPM. Case study methods will be used to verify implementation.

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Forestry

2. Brief summary about Planned Program

This program includes research and extension efforts in forestry, including forest production and management, forest recovery, timber harvesting, and environmental stewardship.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
122	Management and Control of Forest and Range Fires	20%		0%	
123	Management and Sustainability of Forest Resources	45%		10%	
124	Urban Forestry	10%		10%	
125	Agroforestry	15%		15%	
133	Pollution Prevention and Mitigation	10%		10%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		35%	
211	Insects, Mites, and Other Arthropods Affecting Plants	0%		10%	
511	New and Improved Non-Food Products and Processes	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

Mississippi's forest industry (including private landowners, independent harvesters and forest industry) harvests and delivers over \$2 billion worth of forest products to mills and other processors each year. Timber generally ranks as the first or second most valuable agricultural commodity in the state, usually second behind only poultry and eggs production. About 67 percent of Mississippi's land is in forest production. This is nearly 20 million acres according to the Mississippi Institute for Forest Inventory. The

total industry output of Mississippi's forest products industry was \$19.2 billion based on 2006 data but expressed in 2010 dollars..

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Changes in markets and the overall economy have prices fall for pine saw timber and chip-n-saw material. In addition, various mill closings around Mississippi have reduced the demand for pulpwood and timber markets. The return of past markets, as well as the development of new processes and materials will play a large significant role in the long term health of forestry and the forest products industry in Mississippi.

2. Ultimate goal(s) of this Program

To increase the profitability of forest production and improve the environmental stewardship of forest landowners.

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
2012	13.0	0.0	0.5	0.0
2013	13.0	0.0	0.5	0.0
2014	13.0	0.0	0.5	0.0
2015	11.0	0.0	0.5	0.0
2016	11.0	0.0	0.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research will be conducted in forest production and management, timber harvesting, forest recovery, and environmental impacts of forest practices. Extension programming will be conducted to share this information with forest landowners and industry personnel.

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● Workshop● One-on-One Intervention● Demonstrations● Other 1 (Interactive Video)	<ul style="list-style-type: none">● Newsletters● Web sites other than eXtension
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3. Description of targeted audience

The audience for these programs includes forest landowners, loggers, professional foresters, industry personnel, and the general public.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of producers and industry attending seminars, workshops, short courses, and demonstrations.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of timber producers adopting new technologies and practices.
2	Number of forest producers increasing profitability of their forest operations.
3	Number of producers improving their environmental stewardship.

Outcome # 1

1. Outcome Target

Number of timber producers adopting new technologies and practices.

2. Outcome Type : Change in Action Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

3. Associated Knowledge Area(s)

- 122 - Management and Control of Forest and Range Fires
- 123 - Management and Sustainability of Forest Resources
- 124 - Urban Forestry
- 125 - Agroforestry
- 133 - Pollution Prevention and Mitigation

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of forest producers increasing profitability of their forest operations.

2. Outcome Type : Change in Condition Outcome Measure

2012:1600 2013:1600 2014:1600 2015:1600 2016:1600

3. Associated Knowledge Area(s)

- 123 - Management and Sustainability of Forest Resources
- 125 - Agroforestry

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of producers improving their environmental stewardship.

2. Outcome Type : Change in Condition Outcome Measure

2012:800 2013:800 2014:800 2015:800 2016:800

3. Associated Knowledge Area(s)

- 122 - Management and Control of Forest and Range Fires
- 133 - Pollution Prevention and Mitigation

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes
- Government Regulations
- Competing Programmatic Challenges

Description

Natural disasters, particularly hurricanes and tornadoes, are particularly harsh on forest holdings. The effects of Hurricane Katrina have had, and will continue to have a significant impact on outreach efforts and directions for years to come. Policy changes, especially regarding importing of cheap timber from other countries, can have a big impact on the industry. Government regulations, especially regarding environmental issues, can increase production and harvesting costs.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected producers. The time series analysis will include production data for forest crops in Mississippi.

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Horticulture

2. Brief summary about Planned Program

This program includes research and extension efforts focused on helping producers, manufacturers, suppliers, managers, and consumers involved in the \$2.3 billion horticulture industry in Mississippi, including vegetable and fruit production, turf, floriculture, and the ornamental nursery industries.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%		15%	
204	Plant Product Quality and Utility (Preharvest)	15%		15%	
205	Plant Management Systems	50%		50%	
216	Integrated Pest Management Systems	10%		10%	
601	Economics of Agricultural Production and Farm Management	10%		10%	
	Total	100%		100%	

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

1. Situation and priorities

The horticulture industry in Mississippi, composed of producers, manufacturers, suppliers, managers, and consumers, encompasses vegetable and fruit production, turf, floriculture, and the ornamental nursery industries. Recent estimates for commercial horticulture direct value exceed \$200 million and include: vegetables (\$67 million (MSU Ag Econ., 2005)), sweet potatoes (\$75 million (Arancibia, personal communication)) nursery and turf (\$31.9 million (MSU Ag Econ., 2005)), floriculture and ornamentals (\$13 million (MSU Ag Econ., 2005)), and fruits and nuts (\$19.6 million (MSU Ag Econ., 2005)). The total direct and indirect economic impact of the nursery and floriculture industries alone equaled to \$81 million in 2007 (Posadas, 2010). Mississippi spends over \$2.2 billion annually on installation and management of turf, as well (W. Wells).

The majority of these firms (2,000+) are small family farms or family owned businesses, employing a

total of over 25,000 people. Allied industries such as retail garden centers, landscape contracting, roadside and direct marketing, and consumer purchasing are not reflected in these figures. Homeowner education is a major component of Mississippi State University Extension Service's horticulture efforts. Inconsistent production, due to weather or poor production practices, prevents consistent marketing. In order to obtain a consistent supply of quality product growers need to be informed about research-based, successful production and marketing practices.

All areas of horticulture share similar research needs. Site selection, cultivar evaluations, and marketing strategies are common research areas. Mississippi has three distinct climatic zones that preclude single site evaluations of production practices. Several factors must be employed in research and extension. These include the development of applicable and environmentally sound production and maintenance practices; selection and development of cultivars suitable under Mississippi's environmental conditions; research, development, and distribution of cultural recommendations; and, at the state level, the encouragement of economic development in this area.

Producers, manufacturers, suppliers, and managers of horticultural products require a comprehensive research program involving all aspects of production practices with emphasis on Mississippi's environment. These include: reducing pesticide use via integrated pest management, nutrient management, cold hardiness, heat stress management, plant evaluations, plant growth regulation, propagation, water/irrigation management, and marketing. Cost and production analysis of the state's industry to determine the scope and impact on the state's economy is being done, but more is needed. Information on cost analysis and financial management are critical to management decisions.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Growth in farmers' markets and opportunities for local and regional sales of horticultural specialty crops will continue to increase for Mississippi. The decentralization of fresh product purchases by large retailers offers opportunities for new and existing horticultural enterprises in the state. Traditional production systems will remain the center of most production while non-traditional crops and production systems continue to serve niches and provide valuable opportunities for some enterprises. Home horticulture and recreational activities will continue to be an important part of horticulture in the state.

Markets and information needs for turf and landscape horticulture are steady or growing, with continued population and income growth, especially in the north and coastal areas of the state, driving much of this.

Producers will continue working smarter to increase profitability. Increased interest in marketing will continue to build a more market wise industry. Energy and labor efficiency will continue to be pressing issues. Changes in availability and labeling, along with continued interest in what is new, will lead to continued increases in the use of proprietary cultivars, crop production products, and equipment.

2. Ultimate goal(s) of this Program

Increasing the profitability, efficiency, and sustainability of horticultural activities, while strengthening horticulture's contributions and ties to our communities and our state.

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
2012	20.0	0.0	3.5	0.0
2013	20.0	0.0	3.5	0.0
2014	20.0	0.0	3.5	0.0
2015	20.0	0.0	3.5	0.0
2016	20.0	0.0	3.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and extension activities designed to

1. Increase commercial producer profitability by promoting cultural practices that are research based;
 2. Improve marketing of horticultural crops;
 3. Determine commercial producer and support industry needs via interaction with commodity groups, grower meetings, advisory councils, etc.;
 4. Reduce economic and environmental impact of commercial production by facilitating implementation of integrated pest management techniques in commercial production;
 5. Increase commercial production efficiency by decreasing labor requirements, i.e. mechanization, automation, etc.
 6. Continue selection of appropriate varieties for local environments in Mississippi;
 7. Increase the sustainability, efficiency, and enjoyment of home and non-commercial horticulture;
- and
8. Contribute to the overall art and science of horticulture.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience includes commercial producers, manufacturers, suppliers, managers, and consumers, within the vegetable and fruit production, sweetpotato, turf, floriculture, and ornamental nursery industries. It also includes gardeners, landscapers, turf owners/managers, retailers and

wholesalers in commercial and/or non-commercial horticulture.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending seminars, workshops, short courses, and demonstrations.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele adopting recommended practices, new technologies, strategies, systems, or cultivars.
2	Number of producers reporting increasing profitability levels.
3	Number of Master Gardeners completing training.
4	Number of attendees at field days and events reporting knowledge gains in post event surveys.

Outcome # 1

1. Outcome Target

Number of clientele adopting recommended practices, new technologies, strategies, systems, or cultivars.

2. Outcome Type : Change in Action Outcome Measure

2012:5000 2013:5000 2014:5000 2015:5000 2016:5000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of producers reporting increasing profitability levels.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:4000 2013:4000 2014:4000 2015:4000 2016:4000

3. Associated Knowledge Area(s)

- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of Master Gardeners completing training.

2. Outcome Type : Change in Condition Outcome Measure

2012:150 2013:150 2014:150 2015:150 2016:150

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Number of attendees at field days and events reporting knowledge gains in post event surveys.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

3. Associated Knowledge Area(s)

- 102 - Soil, Plant, Water, Nutrient Relationships
- 204 - Plant Product Quality and Utility (Preharvest)
- 205 - Plant Management Systems
- 601 - Economics of Agricultural Production and Farm Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Total staffing and fiscal support for horticulture has declined over the past five years. Budget restraints have altered the delivery methods for extension dissemination of information. Increased use of Internet, email, distance education, and other technologies has broadened communication avenues at the cost of interpersonal relationships between clientele and extension personnel. Demographic shifts and population growth, hurricane damage, and increased disposable income have increased the demand for consumer information.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of the program will include retrospective producer/clientele surveys and case studies of selected producers. The time series analysis will include production data for selected horticulture crops in Mississippi.

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Wildlife and Fisheries

2. Brief summary about Planned Program

This program focuses on wildlife habitat management, wildlife enterprise development, and management of human-wildlife conflicts.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	10%		10%	
135	Aquatic and Terrestrial Wildlife	20%		20%	
136	Conservation of Biological Diversity	5%		5%	
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	15%		10%	
312	External Parasites and Pests of Animals	0%		15%	
314	Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals	5%		0%	
604	Marketing and Distribution Practices	10%		10%	
605	Natural Resource and Environmental Economics	20%		20%	
722	Zoonotic Diseases and Parasites Affecting Humans	5%		5%	
903	Communication, Education, and Information Delivery	10%		5%	
	Total	100%		100%	

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

1. Situation and priorities

Mississippi is rich in wildlife and fisheries resources that are important to its heritage, culture and

economic well-being. State residents and non-residents aged 16 years and older spend approximately \$2 billion in consumptive and non-consumptive wildlife-related recreation. Over 600,000 Mississippians (16 years or older) fish, hunt or watch wildlife. Most of Mississippi is either privately owned or industrial forest or agricultural land with a high potential for fish and wildlife production and management. Many landowners do not know how to manage their land properly for different species of these resources, and need current research-based information. Much of the state's 18.2 million acres of commercial and private forestland, 225,000 acres of small impoundments, 14,205 miles of streams and rivers, and 13 million acres of agricultural open lands is not managed for wildlife/fisheries. Additionally, opportunities for quality recreational experiences and/or additional revenue generation through development of wildlife/fisheries related enterprises exist on Mississippi land bases for property owners and resource stakeholders.

Sociological and demographic changes associated with increased urbanization and changing lifestyles, coupled with greater public demand for enjoyment of wildlife and fisheries resources, have led to new dilemmas in conservation issues, as well as user conflicts. These dilemmas are frequently compounded by increased public awareness and involvement in issues such as endangered/threatened species conservation, traditional hunting/fishing activities, environmental stewardship and quality of life, wildlife/fisheries population management, ecosystem restoration and habitat management, and agricultural and agroforestry intensification.

To address current and future challenges in wildlife and fisheries management, Mississippians need accurate and reliable information. This need can be met through well-designed and executed research, combined with pro-active, client-driven extension programming.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

- To ensure a sound conservation ethic among the citizenry regarding our natural resources, training of our youth at the critical ages (8-12) is essential.
- It is important to ensure that educators of children in grades K-12 understand and respect fundamental principles of natural resources conservation which aids in compliance of environmental education standards by the National Council for the Accrediting of Teacher Education.

2. Ultimate goal(s) of this Program

The ultimate goal for this program is to increase respect for and enjoyment and profitability of human and wildlife/fisheries interactions in Mississippi.

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

Year	Extension		Research	
	1862	1890	1862	1890
2012	7.0	0.0	0.5	0.0
2013	7.0	0.0	0.5	0.0
2014	7.0	0.0	0.5	0.0
2015	7.0	0.0	0.5	0.0
2016	7.0	0.0	0.5	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

In-state and multistate research and extension activities will be conducted related to wildlife and fisheries habitat management, wildlife enterprise development, human-wildlife conflicts, and youth (K-12) education.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this project consists of most Mississippians, including those who hunt, fish, and watch wildlife, those who interact with wildlife at work and home, those who work in related industries and professions, and those who educate our youth (K-12).

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending seminars, workshops, short courses, and demonstrations.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele adopting recommended wildlife habitat improvement practices.
2	Number of wildlife professionals improving their skills in handling wildlife damage issues.
3	Number of non-industrialized, private landowners initiating wildlife-related enterprises.
4	Number of landowners reporting improved wildlife conservation due to management practices.
5	Number of clientele reporting increased income levels due to wildlife enterprises.
6	Number of youth trained in summer camps and workshops on natural resources management.
7	Number of K-12 educators trained in workshops on fundamentals of natural resources management in accordance with the National Council for the Accrediting of Teacher Education.

Outcome # 1

1. Outcome Target

Number of clientele adopting recommended wildlife habitat improvement practices.

2. Outcome Type : Change in Action Outcome Measure

2012:800 2013:800 2014:800 2015:800 2016:800

3. Associated Knowledge Area(s)

- 135 - Aquatic and Terrestrial Wildlife
- 136 - Conservation of Biological Diversity
- 214 - Vertebrates, Mollusks, and Other Pests Affecting Plants
- 314 - Toxic Chemicals, Poisonous Plants, Naturally Occurring Toxins, and Other Hazards Affecting Animals
- 605 - Natural Resource and Environmental Economics
- 722 - Zoonotic Diseases and Parasites Affecting Humans
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of wildlife professionals improving their skills in handling wildlife damage issues.

2. Outcome Type : Change in Action Outcome Measure

2012:100 2013:100 2014:100 2015:100 2016:100

3. Associated Knowledge Area(s)

- 135 - Aquatic and Terrestrial Wildlife
- 605 - Natural Resource and Environmental Economics
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of non-industrialized, private landowners initiating wildlife-related enterprises.

2. Outcome Type : Change in Action Outcome Measure

2012:320 2013:320 2014:320 2015:320 2016:320

3. Associated Knowledge Area(s)

- 136 - Conservation of Biological Diversity
- 605 - Natural Resource and Environmental Economics
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 4

1. Outcome Target

Number of landowners reporting improved wildlife conservation due to management practices.

2. Outcome Type : Change in Condition Outcome Measure

2012:200 2013:200 2014:200 2015:200 2016:200

3. Associated Knowledge Area(s)

- 135 - Aquatic and Terrestrial Wildlife
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 5

1. Outcome Target

Number of clientele reporting increased income levels due to wildlife enterprises.

2. Outcome Type : Change in Condition Outcome Measure

2012:50 2013:50 2014:50 2015:50 2016:50

3. Associated Knowledge Area(s)

- 135 - Aquatic and Terrestrial Wildlife
- 605 - Natural Resource and Environmental Economics

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 6

1. Outcome Target

Number of youth trained in summer camps and workshops on natural resources management.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:500 2013:500 2014:500 2015:500 2016:500

3. Associated Knowledge Area(s)

- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 7

1. Outcome Target

Number of K-12 educators trained in workshops on fundamentals of natural resources management in accordance with the National Council for the Accrediting of Teacher Education.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:100 2013:100 2014:100 2015:100 2016:100

3. Associated Knowledge Area(s)

- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Government Regulations
- Competing Programmatic Challenges

Description

The most likely limiting factor for the program is competing programmatic challenges that might impact funding for wildlife research and extension programming. The economy, natural disasters, and government regulations might influence clientele interest in the program by replacing wildlife conservation with other concerns, especially short-term.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Evaluation of this program will include retrospective producer surveys and case studies of selected clientele. The time series analysis will consist of wildlife population and harvest statistics for Mississippi.

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Enterprise and Community Development

2. Brief summary about Planned Program

This program focuses on:

- Helping local communities evaluate their local economy and make decisions about alternatives for improving their economy
- Helping local communities improve their local health care services
- Developing local community leadership that creates a diverse environment and promotes a shared vision among residents.
 - Assessing tourism potential and developing models and strategies to turn that potential into increased tourism and economic development, and
 - Assisting local government officials, local units of government, and associations of local government officials in their efforts to improve governance at the grassroots and delivery of services to the citizens of Mississippi.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	25%		10%	
609	Economic Theory and Methods	25%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	25%		35%	
805	Community Institutions, Health, and Social Services	25%		30%	
903	Communication, Education, and Information Delivery	0%		25%	
	Total	100%		100%	

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

1. Situation and priorities

Local economies include businesses, governments, and consumers who conduct thousands of interrelated transactions every day. The current economic climate is volatile, and concerns local and state policy makers. An understanding of the local economy improves the quality of decision-making. As community leaders evaluate their local economy and learn which specific sectors are competitive in their unique locality, they can make decisions concerning alternative strategies for diversifying their local economy.

The Mississippi population is greatly underserved by physicians. In 2003, there were 183 physicians per 100,000 people compared to the national average of 281. Health care can be an economic engine. The health services sector makes up a substantial part of many rural economies, and is often the largest single employer in many communities.

For communities to be successful, they must support and nurture a leadership philosophy that welcomes widespread citizen involvement. The best leadership is shared and recognized as a process by which people are empowered to make their own decisions through collaborative efforts with diverse sectors of any given community. Traditional leadership ideas were based on competitive styles that were exclusive of the many voices within a community.

According to a report by the Southern Rural Development Center, building civically minded citizens within rural community requires that (1) all segments of the community be involved in guiding the future of the community, (2) new and expanded leadership development opportunities be provided, (3) leadership responsibilities should be shared in order to build trust, and (4) support of the establishment of local-oriented small and entrepreneurial businesses must be evident.

Launching a tourism initiative is one way to diversify and improve the economic vitality of a given community. Rural communities are searching for methods like tourism development to strengthen their traditionally agricultural-based economies. A prepared community is the foundation of a successful tourism initiative. As a community or region takes inventory of existing or potential attractions, such as festivals and events, natural resources, historical attractions, and recreation opportunities, local leaders should be mindful that tourism is a highly competitive business. Successful local tourism efforts build on existing strengths.

Within their respective election cycles, some 3,000 local elected officials are given responsibility by the electorate for the formulation, adoption, and implementation of public policy in Mississippi's 82 counties and 297 municipalities. Typically, from one-third to one-half of these officials will be newly-elected, having never held public office. In addition, some 2,000 major appointed county and municipal officials assist these elected officials in governing and providing services.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Most communities lack the resources to appropriately examine the consequences of events that can affect the economy. Communities that focus efforts on developing health care services will improve the health and livability of their communities. Talents and skills of local residents can be used to evoke positive community change; therefore, a leadership approach that targets people with diverse ethnic, social, and economic backgrounds is extremely important to the vitality of a given community. Not only should current, traditional leaders participate in leadership training, but also potential leaders with nontraditional leadership

roles should be actively involved as well. Thus, an ongoing network of community leaders is formed to help shape the future direction of their respective communities. Through an asset-based community development approach, rural communities challenged with struggling economies are model communities where tourism initiatives could be successful. By inventorying, improving, and marketing existing resources and tapping into potential resources, communities that follow the tourism model for proper development learn how to revitalize their local economies and enjoy an improved quality of life for their residents. The better educated a local official, the better job he or she will do in meeting the needs of the citizens. The Mississippi legislature will continue to recognize the importance of training of public officials and will mandate this responsibility to the extension service.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to develop local communities through expanding the diversity of local economies, improving access to quality health care services for local citizens, with viable local health care organizations providing that care, developing leadership abilities in local communities, increasing tourism in local communities, thereby increasing the viability of local economies, and equipping local government officials with the skills and knowledge they need to be effective in their jobs and provide better local government to the citizens of Mississippi.

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
2012	8.0	0.0	0.3	0.0
2013	8.0	0.0	0.3	0.0
2014	8.0	0.0	0.3	0.0
2015	8.0	0.0	0.3	0.0
2016	8.0	0.0	0.3	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Extension will assist local communities in conducting the following activities:

- Development of demographic, economic, and fiscal profiles
- Development of economic analyses (eg., feasibility, impact, export-base, business plans, commuting, trade, shift share, location quotients).
- Providing technical assistance and holding community forums
- Taking strategic planning surveys (eg., market assessment, customer satisfaction, hospitality, health).
- Developing market strategies
- Conducting strategic planning workshops
- Publishing a directory of local services
- Developing quantitative profiles of health organizations
- Conducting feasibility studies
- Producing gap analyses
- Promoting coalition building trainings
- Conducting tourism development workshops

- Providing customer service/hospitality trainings
- Conducting leadership development workshops
- Providing technical assistance to counties and municipalities in such areas as general management, financial administration, personnel administration, leadership development, economic development, community facilities and services, and solid waste management.

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 • Workshop • One-on-One Intervention • Demonstrations 	<ul style="list-style-type: none"> • Public Service Announcement • Newsletters • Web sites other than eXtension

3. Description of targeted audience

The target audience for this program consists of local communities and their leaders.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, and short courses.
- Number of communities requesting economic analyses.
- Number of communities participating in community health improvement activities.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of community leaders improving knowledge and skills.
2	Number of participants implementing strategies to improve public decision-making and/or increase civic engagement.
3	Number of local government officials obtaining required certifications.
4	Number of local communities adopting recommended strategies to improve their local economy.
5	Number of local communities adopting recommended strategies to improve health services.
6	Number of communities implementing strategies for improvement, development, and/or marketing of tourist attractions.
7	Number of local communities improving their health services.
8	Number of communities reporting increased levels of tourist activity.
9	Number of communities reporting an increase in local broadband adoption and use.

Outcome # 1

1. Outcome Target

Number of community leaders improving knowledge and skills.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:5000 2013:5000 2014:5000 2015:5000 2016:5000

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 609 - Economic Theory and Methods
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of participants implementing strategies to improve public decision-making and/or increase civic engagement.

2. Outcome Type : Change in Action Outcome Measure

2012:3550 2013:3550 2014:3550 2015:3550 2016:3550

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 609 - Economic Theory and Methods
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 805 - Community Institutions, Health, and Social Services
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of local government officials obtaining required certifications.

2. Outcome Type : Change in Action Outcome Measure

2012:4800 2013:4800 2014:4800 2015:4800 2016:4800

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Number of local communities adopting recommended strategies to improve their local economy.

2. Outcome Type : Change in Action Outcome Measure

2012:20 2013:20 2014:20 2015:20 2016:20

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 609 - Economic Theory and Methods

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 5

1. Outcome Target

Number of local communities adopting recommended strategies to improve health services.

2. Outcome Type : Change in Action Outcome Measure

2012:15 2013:15 2014:15 2015:15 2016:15

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 6

1. Outcome Target

Number of communities implementing strategies for improvement, development, and/or marketing of tourist attractions.

2. Outcome Type : Change in Action Outcome Measure

2012:20 2013:20 2014:20 2015:20 2016:20

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 7

1. Outcome Target

Number of local communities improving their health services.

2. Outcome Type : Change in Condition Outcome Measure

2012:10 2013:10 2014:10 2015:10 2016:10

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 8

1. Outcome Target

Number of communities reporting increased levels of tourist activity.

2. Outcome Type : Change in Condition Outcome Measure

2012:10 2013:10 2014:10 2015:10 2016:10

3. Associated Knowledge Area(s)

- 608 - Community Resource Planning and Development
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 9

1. Outcome Target

Number of communities reporting an increase in local broadband adoption and use.

2. Outcome Type : Change in Condition Outcome Measure

2012:50 2013:50 2014:50 2015:50 2016:50

3. Associated Knowledge Area(s)

- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities
- 903 - Communication, Education, and Information Delivery

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Government Regulations

Description

The most important factor influencing this program is the local economy and its ability to sustain and improve local communities.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Retrospective studies will be used to measure knowledge gained by local community leaders. Case study analyses will be used to determine economic changes in local communities.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Food Safety

2. Brief summary about Planned Program

This program is concerned with ensuring a safe food supply for Mississippians.

3. Program existence : Intermediate (One to 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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
503	Quality Maintenance in Storing and Marketing Food Products	0%		10%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	10%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	90%		90%	
	Total	100%		100%	

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

1. Situation and priorities

Under the Mississippi Food Code, anyone serving food for pay is required to have a permit to operate their facility. As part of the permit, facilities are required to show documentation of food safety knowledge. This requirement applies to commercial, institutional, catering and other foodservice establishments in Mississippi. The required training leads to cleaner and safer facilities and employees who have an increased knowledge of how food becomes unsafe and what groups are at an increased risk for foodborne illnesses. Cleaner and safer facilities, combined with routine inspection by the Mississippi Department of Health reduce the risk of contamination by food to the Mississippi population.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

The primary educational programming is intended for foodservice managers. The managers are expected to provide instruction to other employees at their respective foodservice establishments. It is assumed that they do so.

It is also assumed that if the foodservice establishments implement the handling techniques stressed through the course, food safety will be improved.

2. Ultimate goal(s) of this Program

To reduce the incidence of food-borne illness.

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
2012	3.0	0.0	2.0	0.0
2013	3.0	0.0	2.0	0.0
2014	3.0	0.0	2.0	0.0
2015	3.0	0.0	2.0	0.0
2016	3.0	0.0	2.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Mississippi State University Extension Service(MSU-ES), in partnership with the Mississippi Restaurant and Hospitality Association, the National Restaurant Association, and the Mississippi State Department of Health, provides the primary food safety management certification course used in Mississippi. The ServSafe program is an 8 to 16 hour face-to-face training with a national certification offered by the National Restaurant Association Educational Foundation. Certification lasts for a five-year period. MSU-ES offers both an 8-hour training module, for those individuals who are recertifying or have a background in food safety, and a 16-hour training module for those who are new to food safety management or need additional time for training and instruction. It is the 16-hour training that is unique to MSU-ES and this extended training format continues to benefit many individuals who request a more in-depth training.

Key Training Areas Include:

The Food Safety Challenge

- Providing Safe Food
- The Microworld
- Contamination and Food Allergies

The Safe Food Handler

The Flow of Food Through the Operation

Purchasing, Receiving, and Storage
Preparation
Service

Food Safety Management Systems, Facilities, and Pest Management

Food Safety Management Systems
Sanitary Facilities and Equipment
Cleaning and Sanitizing
Integrated Pest Management

Food Safety Regulations and Employee Training

Food Safety Regulations and Standards
Employee Food Safety Training

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• Workshop• Demonstrations	<ul style="list-style-type: none">• Newsletters• Web sites other than eXtension

3. Description of targeted audience

MSU-ES employees provide the course to managers, owners, and foodservice employees from a variety of foodservice settings, including commercial restaurants, hospitals, school foodservice, childcare centers, and other locations where food safety policies and procedures are required and necessary to protect public health.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of people attending certification courses.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of foodservice professionals achieving required certification in food handling techniques.

Outcome # 1

1. Outcome Target

Number of foodservice professionals achieving required certification in food handling techniques.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:450 2013:450 2014:450 2015:450 2016:450

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 Occurring Toxins

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Public Policy changes
- Competing Programmatic Challenges

Description

{NO DATA ENTERED}

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Food safety certification test.

V(A). Planned Program (Summary)

Program # 16

1. Name of the Planned Program

Human Nutrition

2. Brief summary about Planned Program

This program includes extension and research efforts related to providing safe, nutritious food to Mississippians.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	0%		5%	
303	Genetic Improvement of Animals	0%		5%	
502	New and Improved Food Products	0%		5%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		5%	
703	Nutrition Education and Behavior	100%		20%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	0%		50%	
801	Individual and Family Resource Management	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

Many consumers:

- have trouble identifying foods that are good sources of key nutrients;
- do not understand the link between food and health;
- are not familiar with proper food handling techniques necessary to prevent food-borne illness;

- are not familiar with appropriate food choices for individuals across the life cycle;
- do not follow the principles of the Dietary Guidelines;
- do not understand and use the Nutrition Facts panel;
- have trouble identifying foods that are good sources of key nutrients;
- do not understand the link between food and health; and
- need instruction in saving money in food shopping

This program previously contained Food Safety, which is now a separate program on its own.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

People will make better food choices if they know the facts about nutrition and its relation to health. They will observe safe food handling practices if they understand the dangers of not doing so.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is that Mississippians will enjoy safe, nutritious food as part of a healthy diet.

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
2012	14.0	0.0	0.0	0.0
2013	14.0	0.0	0.0	0.0
2014	14.0	0.0	0.0	0.0
2015	14.0	0.0	0.0	0.0
2016	14.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and extension activities will be carried out, including Partner with community groups and organizations to set up educational opportunities. Train/Update professional and paraprofessionals on new USDA Food Pyramid and other related materials
 Conduct educational programs as needed

Partner with local school systems to conduct nutrition-based research and provided nutrition education.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension

3. Description of targeted audience

The audience for this program consists of all Mississippians. Special emphasis is placed on those who historically have demonstrated poor nutrition behaviors, which includes low-income populations--both parents and children in these families are targeted.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, and short courses.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele who learn how to use the food pyramid and nutritional guidelines to make food decisions.
2	Number of clientele who adopt practices to fit their diets within the dietary guidelines.
3	Number of clientele reporting improved health and/or well-being due to changes in diet.

Outcome # 1

1. Outcome Target

Number of clientele who learn how to use the food pyramid and nutritional guidelines to make food decisions.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:18000 2013:18000 2014:18000 2015:18000 2016:18000

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of clientele who adopt practices to fit their diets within the dietary guidelines.

2. Outcome Type : Change in Action Outcome Measure

2012:15000 2013:15000 2014:15000 2015:15000 2016:15000

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of clientele reporting improved health and/or well-being due to changes in diet.

2. Outcome Type : Change in Condition Outcome Measure

2012:7200

2013:7200

2014:7200

2015:7200

2016:7200

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Competing Public priorities
- Competing Programmatic Challenges

Description

Funding is the primary factor affecting the ability of this program to achieve its goals. Another important factor is cultural habits that must be overcome to affect changes in lifestyle.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

This program will use both retrospective and before-after methods to measure changes in food buying, preparation, and consumption behaviors. Time series analysis will be used to monitor incidents of food-borne illness.

V(A). Planned Program (Summary)

Program # 17

1. Name of the Planned Program

Childhood Obesity

2. Brief summary about Planned Program

Mississippi has one of the highest rates of obesity in the nation, which holds true for childhood obesity as well.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	70%		0%	
724	Healthy Lifestyle	30%		0%	
	Total	100%		0%	

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

1. Situation and priorities

In 2009 Mississippi had the highest rates of childhood and adult obesity in the nation. This marks the fifth year in a row that Mississippian adults have topped this list, and the percentage of overweight children in Mississippi is a full 6.9 percent higher than second place, the largest margin between state rankings by far. Over 40% of Mississippi's children are obese.

Health issues linked to obesity are numerous and severe. Increased risk for heart disease, stroke, and type 2 diabetes (all major drivers to the nation's skyrocketing healthcare costs) are all directly associated with weight problems. Recent studies on overweight children have revealed correlations to depression, increased likeliness to miss school, and lowered academic performance in school.

2. Scope of the Program

- Multistate Extension

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

1. Assumptions made for the Program

Ameliorating childhood obesity requires a multifaceted approach including programming for both children, youth, and adults. (Children often cannot change their nutrition and dietary habits unless their adult caretakers also change.) The problem must be addressed in various media and methods, it must focus on both diet and exercise, and it must be comprehensive in nature.

2. Ultimate goal(s) of this Program

- To reduce the increasing rate of childhood obesity.
- To reduce the number of obese children in the state.

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
2012	3.0	0.0	0.0	0.0
2013	3.0	0.0	0.0	0.0
2014	3.0	0.0	0.0	0.0
2015	3.0	0.0	0.0	0.0
2016	3.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Activities will include almost all types of media and educational activities. Courses on nutrition labeling, preparing healthy meals by reducing fat and calories, exercise, and many other topics will be provided for adults. Classes and other activities both in and out of school on diet and exercise will be provided for children/youth. These programs will complement programs offered by schools and other organizations.

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 ● Workshop ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● TV Media Programs ● Web sites other than eXtension

3. Description of targeted audience

The primary audience for this program includes almost one million obese Mississippians.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of people attending workshops, short courses, etc.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of people reporting a positive change in at least one behavior related to obesity (increase level of regular exercise, decrease in caloric intake, increase in percentage of fruits and vegetables in diet).
2	Number of people reporting lowered body mass index.

Outcome # 1

1. Outcome Target

Number of people reporting a positive change in at least one behavior related to obesity (increase level of regular exercise, decrease in caloric intake, increase in percentage of fruits and vegetables in diet).

2. Outcome Type : Change in Knowledge Outcome Measure

2012:1800 2013:1800 2014:1800 2015:1800 2016:1800

3. Associated Knowledge Area(s)

- 703 - Nutrition Education and Behavior
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Number of people reporting lowered body mass index.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:1400 2013:1400 2014:1400 2015:1400 2016:1400

3. Associated Knowledge Area(s)

- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

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

Description

Obesity is very strongly linked with poverty and ethnicity. Cultural habits will have to be changed,

which can be a tedious process.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Some programming efforts have well-established evaluation criteria. These will be monitored and reported.

V(A). Planned Program (Summary)

Program # 18

1. Name of the Planned Program

Human Health

2. Brief summary about Planned Program

This program focuses on improving the health of Mississippians, with a special emphasis on adult health. (Childhood obesity was removed from this program and placed into a separate program.)

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
132	Weather and Climate	0%		10%	
610	Domestic Policy Analysis	0%		30%	
723	Hazards to Human Health and Safety	0%		10%	
724	Healthy Lifestyle	100%		0%	
802	Human Development and Family Well-Being	0%		50%	
	Total	100%		100%	

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

1. Situation and priorities

Individuals living in the Mississippi experience significantly higher rates of diabetes, hypertension, diabetes, and obesity, when compared to the overall general national population. Higher rates of preventable conditions and risk factors translate into a higher morbidity rate. An example of this includes the high stroke death rate for both blacks and whites for those living in Mississippi. This is particularly true for African American men, who are also at a greater risk of mortality from heart disease. Chronic conditions and illnesses reduce the quality of life for Mississippi residents, decrease the workforce productivity and cause health care costs to spiral. Because of low levels of education and the high unemployment rate, these factors contribute to a lack of insurance (Mississippi has an employment-based health insurance system) and these factors also may contribute to Mississippi's high premature death rate, as calculated through years of potential life lost, which is 2nd highest in the nation.

2. Scope of the Program

- Multistate Integrated Research and Extension

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

1. Assumptions made for the Program

Changes to healthier lifestyles will lead to decreases in the primary risk factors contributing to morbidity and mortality of Mississippians: blood cholesterol, body mass index, and hypertension.

2. Ultimate goal(s) of this Program

Increase the overall health of Mississippians, leading to reduced health care costs, reduced employee absenteeism, and overall improvement of mental and physical well-being.

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
2012	4.5	0.0	0.0	0.0
2013	4.5	0.0	0.0	0.0
2014	4.5	0.0	0.0	0.0
2015	4.5	0.0	0.0	0.0
2016	4.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research in healthy lifestyles education will be complemented by Extension programming, including the following methods:

- Training programs
- Video conferences
- Health fairs
- Workshops
- Partnership development
- Needs assessment
- Leadership training
- Strategic planning

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• Demonstrations | <ul style="list-style-type: none">• Public Service Announcement• Newsletters• TV Media Programs• Web sites other than eXtension |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

3. Description of targeted audience

The audience for this program includes all Mississippians, with a specific focus on those who are overweight and/or have hypertension, and high blood cholesterol.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, and short courses.

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele reporting changes in lifestyle to improve health.
2	Number of clientele reporting decreases in at least one indicator (blood pressure, blood cholesterol, body mass index).

Outcome # 1

1. Outcome Target

Number of clientele reporting changes in lifestyle to improve health.

2. Outcome Type : Change in Action Outcome Measure

2012:2250 2013:2250 2014:2250 2015:2250 2016:2250

3. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of clientele reporting decreases in at least one indicator (blood pressure, blood cholesterol, body mass index).

2. Outcome Type : Change in Condition Outcome Measure

2012:1800 2013:1800 2014:1800 2015:1800 2016:1800

3. Associated Knowledge Area(s)

- 723 - Hazards to Human Health and Safety
- 724 - Healthy Lifestyle

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Other (Cultural traditions)

Description

Economic factors may influence the ability to change lifestyle habits. The most important factor, however, is overcoming cultural traditions related to health.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Before-after studies will be used to measure health indicators. During program studies will be used to measure changes in knowledge and skill related to health.

V(A). Planned Program (Summary)

Program # 19

1. Name of the Planned Program

Early Care and Education

2. Brief summary about Planned Program

This program focuses on Extension efforts to improve the quality of child care in Mississippi.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	80%		80%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	20%		20%	
	Total	100%		100%	

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

1. Situation and priorities

The Quality Rating and Improvement System established in Mississippi has a mandatory requirement for professional development hours that are above state licensing requirements. Providers are still mandated to obtain a minimum of 15 training hours in order to meet state licensing requirements.

The Mississippi Child Care Resource and Referral network is housed under MSU-ES and has been given state funding and the responsibility to provide majority of professional development for the early care and education community.

Early care and education providers and families continue to need quality programming to support their needs. The quality of care in Mississippi is adversely affected by employment of untrained providers.

There are over 54% of children under the age of five that are in some type of informal care. Quality childcare is not available in many communities. The MSCCR&R is implementing a voluntary registry system for informal care providers at the request of the State Early Care and Education Council.

The situation of families and children living in poverty continues to impact the state. One out of

four children are living in poverty. MS has the highest infant mortality rate, high child abuse rates, and high unemployment rates. Parenting education and foster parent education is still a priority need.

2. Scope of the Program

- Multistate Extension

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

1. Assumptions made for the Program

Current financial hardships at all levels has resulted in layoffs, loss of income, and budget cuts that reduced or eliminated child care subsidy certificates impacts both families and child care providers.

Under a newly state funded professional development system, the MSCCR&R is providing educational programming for families and early care and education providers.

2. Ultimate goal(s) of this Program

This program seeks to increase the number of high-quality child care options for Mississippi families. This program seeks to increase nurturing parenting skills and thereby decrease child abuse and infant mortality rates.

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
2012	11.0	0.0	0.0	0.0
2013	11.0	0.0	0.0	0.0
2014	11.0	0.0	0.0	0.0
2015	11.0	0.0	0.0	0.0
2016	11.0	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

CFD Area Agents and project staff will provide additional parenting education programs to families and foster parents utilizing an evidenced based program.

CFD Area Agents and project staff will provide additional staff development training and technical assistance for the After School community.

MSCCR&R providing assistance with early care and education providers moving into the career ladder system and obtaining the Child Development Associate credential.

CFD Area Agents & project staff provides mandated staff development training to keep providers in good standing with legal requirements.

CFD Area Agents & project staff provide technical assistance to providers & businesses.

CFD Area Agents and project staff will receive/ maintain ECERS; ITERS; and FDCRS Certification.

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 ● Group Discussion ● One-on-One Intervention 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

In general, audience for this program is families and communities. Specifically, the following groups are target audiences:

Early Care & Education Providers, including Directors, Center-based professionals, Family Childcare providers, and School-age providers.

- Industry/Business owners
- Parents
- Grandparents
- Agencies
- Professional Organizations
- Elementary teachers
- Elected officials
- Community College and University students

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending seminars, workshops, and short courses.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of licensed centers entering the Quality Rating Improvement System and improving the quality of care as measured by the ERS and technical assistance.
2	Number of early care and education providers receiving their Child Development Associate credential will increase.
3	Number of informal child care providers increasing in receiving technical assistance and registering in the system.
4	Number of parents demonstrating nurturing parenting attitudes will increase as measured by a pre/post assessment tool.
5	Number of new parents receiving educational materials and information on age appropriate child outcomes measured by a pre/post survey will increase.
6	Number of clientele increasing knowledge in child care and development content areas as measured by pre/post assessments.

Outcome # 1

1. Outcome Target

Number of licensed centers entering the Quality Rating Improvement System and improving the quality of care as measured by the ERS and technical assistance.

2. Outcome Type : Change in Condition Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:1000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Number of early care and education providers receiving their Child Development Associate credential will increase.

2. Outcome Type : Change in Action Outcome Measure

2012:1000 2013:1000 2014:1000 2015:1000 2016:1000

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 3

1. Outcome Target

Number of informal child care providers increasing in receiving technical assistance and registering in the system.

2. Outcome Type : Change in Action Outcome Measure

2012:1250 2013:1250 2014:1250 2015:1250 2016:1250

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 4

1. Outcome Target

Number of parents demonstrating nurturing parenting attitudes will increase as measured by a pre/post assessment tool.

2. Outcome Type : Change in Condition Outcome Measure

2012:1500 2013:1500 2014:1500 2015:1500 2016:1500

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 5

1. Outcome Target

Number of new parents receiving educational materials and information on age appropriate child outcomes measured by a pre/post survey will increase.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2500 2013:2500 2014:2500 2015:2500 2016:2500

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 6

1. Outcome Target

Number of clientele increasing knowledge in child care and development content areas as measured by pre/post assessments.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2400 2013:2400 2014:2400 2015:2400 2016:2400

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being
- 803 - Sociological and Technological Change Affecting Individuals, Families, and Communities

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations

Description

Regulations regarding child care have made it increasingly difficult to operate care facilities at a profit or break-even level. These regulations, along with economic conditions, have the most potential impact on this program.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Quality of care provided will be measured using the appropriate day care rating scales (ECERS-R, ITERS-R, or FDCERS) using pre- and post-observations.

V(A). Planned Program (Summary)

Program # 20

1. Name of the Planned Program

Family Life

2. Brief summary about Planned Program

This program focuses on family issues and related policies.

3. Program existence : Intermediate (One to 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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	100%		0%	
	Total	100%		0%	

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

1. Situation and priorities

Social and population trends make it difficult for families to remain strong in the 21st century. According to the most recent (2009) data, Mississippi has the lowest marriage rate among all 50 states, and the divorce rate is 17% higher than the national average. Risky sexual behavior among youth is prevalent, with the state at or near the highest in the nation in categories such as likelihood of having had sexual intercourse, failure to use birth control, number of sexual partners, rates of sexually transmitted infections, and teen birth rates. More than half (54%) of Mississippi children live in low-income families, one-fourth of whom do not have an employed parent. Two-thirds of children in low-income families live with a single parent.

2. Scope of the Program

- Integrated Research and Extension

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

1. Assumptions made for the Program

Today's families need help developing skills in making healthy relationship decisions, parenting, and

locating resources available for help.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to develop strong families that make good decisions and build healthy relationships.

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
2012	4.5	0.0	0.0	0.0
2013	4.5	0.0	0.0	0.0
2014	4.5	0.0	0.0	0.0
2015	4.5	0.0	0.0	0.0
2016	4.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Research and extension programming will focus on family dynamics, parenting skills, human development, and aged care.

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 ● Group Discussion ● One-on-One Intervention 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes all Mississippi families.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, and short courses.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of families adopting recommended family strategies and behaviors.
2	Number of families reporting improved strengthened family life.

Outcome # 1

1. Outcome Target

Number of families adopting recommended family strategies and behaviors.

2. Outcome Type : Change in Action Outcome Measure

2012:1100 2013:1100 2014:1100 2015:1100 2016:1100

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Number of families reporting improved strengthened family life.

2. Outcome Type : Change in Condition Outcome Measure

2012:880 2013:880 2014:880 2015:880 2016:880

3. Associated Knowledge Area(s)

- 802 - Human Development and Family Well-Being

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Competing Programmatic Challenges

Description

Economic concerns are very disruptive to families. Funding for research and extension efforts could affect the ability of the program to meet its goals.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Retrospective studies will be conducted to measure reported behavior changes and outcomes.

V(A). Planned Program (Summary)

Program # 21

1. Name of the Planned Program

Family Resource Management

2. Brief summary about Planned Program

This project focuses on helping families improve their financial well-being through enhancement of personal financial choices: shopping, money management, credit use, fraud, and record-keeping, clothing and housing.

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation	0%		30%	
605	Natural Resource and Environmental Economics	0%		5%	
608	Community Resource Planning and Development	0%		5%	
610	Domestic Policy Analysis	0%		5%	
801	Individual and Family Resource Management	100%		0%	
802	Human Development and Family Well-Being	0%		15%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%		30%	
805	Community Institutions, Health, and Social Services	0%		10%	
	Total	100%		100%	

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

1. Situation and priorities

According to the U.S. Census Bureau, Mississippi ranks second among states for individuals living in poverty. Only Louisiana has more living below poverty level. Mississippi also ranks sixth among states for the percentage of the population that is unemployed. Economic challenges of Mississippi citizens have a great impact on educational programs planned to meet their needs.

The national rate of bankruptcies grew in the last quarter of 2005 when Americans were trying to file before the new bankruptcy legislation of 2005 went into effect on October 17 and Mississippi followed suit, however, the bankruptcy rate in Mississippi is expected to climb even more in next few years, as victims of Hurricane Katrina who lost jobs and property in 2005 run into more difficulty. Research has shown that bankruptcies continue to rise for at least 3 years after major disasters. Close proximity to gambling and lack of health insurance have been shown to increase bankruptcy filings. More than 18% of Mississippians are currently without health insurance. Additionally, loss of tourism dollars from the gulf oil spill will negatively impact the economy and family finances.

National trends affecting family resource management programming show that household debt is at a record high relative to disposable income. The personal savings rate has not just been low in the last few months, it has been negative (currently -.5) meaning that Americans are spending more than they earn and either using savings or borrowing to pay. It will be more important than ever to encourage clientele to save, reduce debt and to live within their means.

2. Scope of the Program

- Multistate Extension

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

1. Assumptions made for the Program

Peoples' choices and actions affect themselves, their families and their communities.
 Individuals and families have the capacity to learn and make changes to help themselves improve their lives.
 Providing objective, research-based information and instruction about sound resource management can motivate consumers to learn and adopt new practices.
 If citizens develop and practice sound resource management skills, then their financial well-being will improve.
 Resources managed by families include housing and clothing.

2. Ultimate goal(s) of this Program

This program will help Mississippi families improve their financial well-being.

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
2012	6.0	0.0	1.0	0.0
2013	6.0	0.0	1.0	0.0
2014	6.0	0.0	1.0	0.0
2015	6.0	0.0	1.0	0.0

Year	Extension		Research	
	1862	1890	1862	1890
2016	6.0	0.0	1.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Extension programming will be conducted using the following methods: Workshops, group training; Information fairs; One-on-one consultations; Media-news, radio, TV; Publications, printed and web-based information; and Newsletters, in-print and email.

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 ● Group Discussion ● One-on-One Intervention ● Demonstrations 	<ul style="list-style-type: none"> ● Public Service Announcement ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes almost all of the 2.8 million Mississippians.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
- Number of patents submitted
- Number of peer reviewed publications

Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending seminars, workshops, and short courses.

- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele adopting new practices related to financial management.
2	Number of clientele reducing debt.
3	Number of clientele increasing wealth.

Outcome # 1

1. Outcome Target

Number of clientele adopting new practices related to financial management.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:2000 2013:2000 2014:2000 2015:2000 2016:2000

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 2

1. Outcome Target

Number of clientele reducing debt.

2. Outcome Type : Change in Condition Outcome Measure

2012:1600 2013:1600 2014:1600 2015:1600 2016:1600

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

Outcome # 3

1. Outcome Target

Number of clientele increasing wealth.

2. Outcome Type : Change in Condition Outcome Measure

2012:800

2013:800

2014:800

2015:800

2016:800

3. Associated Knowledge Area(s)

- 801 - Individual and Family Resource Management

4. Associated Institute Type(s)

- 1862 Extension
- 1862 Research

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Competing Programmatic Challenges

Description

Economic conditions are the most important factor affecting the achievement of this program's outcomes.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

This program will utilize both immediate and follow-up comparisons of financial indicators.

V(A). Planned Program (Summary)

Program # 22

1. Name of the Planned Program

Family Leadership Development

2. Brief summary about Planned Program

The program addresses the development of volunteer leaders needed in various roles helping make communities better places to live.

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 : No

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	0%		50%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%		20%	
805	Community Institutions, Health, and Social Services	100%		30%	
	Total	100%		100%	

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

1. Situation and priorities

Throughout its history, Extension has partnered with citizens, local leaders, and local government officials to identify and acquire the knowledge and strategies needed to address public issues effectively. Through leadership and volunteer development programs, Extension has made and will continue to make major contributions toward the preparation of citizens and local government officials for strengthening organizations and communities. Leadership development builds the capacity to address issues faced by communities.

2. Scope of the Program

- In-State Extension

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

1. Assumptions made for the Program

If they participate in the leadership development programs, clientele will assume positions of leadership.

If clientele put into action their leadership styles and theory, the communities will improve dramatically.

If clientele learn to work diverse audiences they will understand and impact public issues affecting communities.

2. Ultimate goal(s) of this Program

The ultimate goal of this program is to develop leadership abilities in volunteers, so that they may become effective community leaders.

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
2012	9.5	0.0	0.0	0.0
2013	9.5	0.0	0.0	0.0
2014	9.5	0.0	0.0	0.0
2015	9.5	0.0	0.0	0.0
2016	9.5	0.0	0.0	0.0

V(F). Planned Program (Activity)

1. Activity for the Program

Extension programming efforts on numerous aspects of leadership and volunteerism.

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 ● Group Discussion ● Demonstrations 	<ul style="list-style-type: none"> ● Newsletters ● Web sites other than eXtension

3. Description of targeted audience

The target audience for this program includes anyone interested in improving their community. Specific groups include master extension volunteers, 4-H volunteers, and community leaders.

V(G). Planned Program (Outputs)

NIFA no longer requires you to report target numbers for standard output measures in the Plan of Work. However, all institutions will report actual numbers for standard output measures in the Annual Report of Accomplishments and Results. The standard outputs for which you must continue to collect data are:

- Number of contacts
 - Direct Adult Contacts
 - Indirect Adult Contacts
 - Direct Youth Contacts
 - Indirect Youth Contact
 - Number of patents submitted
 - Number of peer reviewed publications
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(H). State Defined Outputs

1. Output Measure

- Number of clientele attending workshops, seminars, and short courses.
- Clicking this box affirms you will continue to collect data on these items and report the data in the Annual Report of Accomplishments and Results.

V(I). State Defined Outcome

O. No	Outcome Name
1	Number of clientele who improve their leadership skills.
2	Number of clientele who make use of leadership skills by volunteering for community organizations.

Outcome # 1

1. Outcome Target

Number of clientele who improve their leadership skills.

2. Outcome Type : Change in Knowledge Outcome Measure

2012:3400 2013:3400 2014:3400 2015:3400 2016:3400

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

Outcome # 2

1. Outcome Target

Number of clientele who make use of leadership skills by volunteering for community organizations.

2. Outcome Type : Change in Action Outcome Measure

2012:2500 2013:2500 2014:2500 2015:2500 2016:2500

3. Associated Knowledge Area(s)

- 805 - Community Institutions, Health, and Social Services

4. Associated Institute Type(s)

- 1862 Extension

V(J). Planned Program (External Factors)

1. External Factors which may affect Outcomes

- Economy
- Competing Programmatic Challenges

Description

Economic factors could possibility reduce the number of potential volunteers.Funding for programming could affect the ability of this program to meet goals.

V(K). Planned Program - Planned Evaluation Studies

Description of Planned Evaluation Studies

Before-after studies will be used to measure leadership skill development. Retrospective studies will be implemented to measure efforts of participants.