

# 2010 Alcorn State University Combined Research and Extension Plan of Work

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## I. Plan Overview

### 1. Brief Summary about Plan Of Work

The Joint Extension and Research Plan of Work (POW) for the Alcorn State University (ASU) School of Agriculture, Research, Extension, and Applied Sciences (AREAS) draws upon the organization's unique strengths and its comprehensive delivery system in conducting original research and delivering educational programs targeted to limited-resource clientele. The joint planned programs reflected in the Plan of Work are implemented by research and extension professionals to facilitate positive change in the Capital River, Delta, and Coastal regions of Mississippi.

The Alcorn State University state-level extension and research staff consists of two groups: (1) researchers who conduct studies to address relevant issues and situations facing the state's limited-resource citizens and (2) extension specialists who draw upon research-based information to design, develop, and implement educational programs to deliver new knowledge to limited-resource clientele, enabling those clientele to develop skills that will improve their quality of life. At the county level, members of the Extension Program Area staff will implement educational programs, events, and activities that enable limited resource clientele to acquire and apply new research-based information and to develop new or expanded skills. Research and education programs are enriched and enhanced by the Model Farm on the ASU campus, three off-campus demonstration centers located in Mount Bayou and at Preston/Kemper, and a farmers market in Natchez. These programs are designed to address issues relevant to specific geographic areas of the state. The Natchez Marketplace was developed in the southwestern part of the state through a partnership between the Alcorn State University Extension Program and the City of Natchez. Accessible marketing opportunity will be provided to limited-resource farmers and businesswomen, who are able to sell vegetables and other produce as well as value-added products such as jam and jellies to consumers. In the North Delta region, the Marks Processing Center provides limited-resource farmers an opportunity to observe research and extension demonstrations on the processing of various crops to produce valued-added products that can increase income.

The Experiment Station, through its own research programs as well as collaborative partnerships with state universities and other related state agencies, conducts research and information interchange on key issues of importance to limited-resource citizens. Located on the ASU campus, the Experiment Station emphasizes research on vegetable and fruit production and collaborates in the research efforts of the Departments of Human Sciences and Industrial Technology. Ongoing research at the Experiment Station focuses on the technical feasibility of new crops and on techniques of cultivation, weed control, and pest management to optimize crop yield.

The Small Farm Development Center (SFDC), a unique entity within the School of AREAS, provides farm loans to limited-resource farmers who otherwise would not have access to the capital needed to pursue innovative alternative enterprises. The Extension Program's 2501 project, conducted in collaboration with the Farm Service Agency (FSA), provides vendor borrowing training to educate farmers in the requirements for accessing capital available from that agency. The project staff collaborates with other USDA agencies to better connect limited-resource farmers with the services they need to improve the profitability of their farming operations. The Mississippi River Research Center focuses on major concerns in the Southern Mississippi River Valley of the United States, such as nonpoint-source pollution of ground and surface waters from agricultural activities. The mission of the Mississippi River Research Center is to conduct research that will protect and enhance the region's water resources while sustaining agricultural production and income for farmers. The center emphasizes collaborative linkages and external funding to achieve its goal.

At the Church Hill Swine Center in the southwestern region of the state, research is conducted on swine production and management. The Swine Development Center is supported by state funds supplemented by federal funds in the form of a Center of Excellence in Swine Research Grant (USDA-ARS) and a USDA-CSREES Capacity Building Grant. The Center has the following objectives: (1) to develop production systems that will enhance swine productivity across the state while conserving air, soil, and water resources; (2) to improve the quality, safety, and composition of pork products; (3) to provide knowledge to enhance the international competitiveness of U.S. animal agriculture; (4) to generate information to enhance the socioeconomic well-being of rural communities; (5) to evaluate new and sustainable swine production systems for small producers; and (6) to conduct research that provides training for graduate and undergraduate students. Current research is focused on nutritional manipulation of gestation sows to increase their productivity. Trials are conducted to increase baby pig survival and litter size in sows through lysine and/or chromium picolinate supplementation of the maternal diet. Other research projects are exploring the use of underutilized plants to enhance the quality of pork products. Purslane and waterleaf plants, known to be rich in omega-3 fatty acids and pectin, are being tested for efficacy in reducing cholesterol in swine as well as in humans. The Center conducts outreach programs collaboratively with the Extension Program, including field days, workshops and demonstrations, and 4-H animal judging contests for junior and senior high school teams.

After careful review of our effectiveness of implementation of nine planned programs of our 2007, 2008 and 2009 Joint

Plan of Work between Extension and Research highlighted various concerns and issues that indicated a need to narrow our planned program scope from nine (9) planned programs with three being Extension only to five (5) Joint planned programs consisting of both Extension and Research. First we carefully reviewed where there were a great demand for programs and where both extension and our research efforts could be most effectively coordinated across the School of AREAS. The reduced programming scope will allow the School of AREAS through both and Extension and Research to more effectively address high priority issues facing limited resource clientele in the Delta, Coastal and Capital River targeted regions of the state of Mississippi. The five planned programs are as follows: 1) Sustainable Plant Production Systems; 2) Sustainable Animal Production Systems; 3) Community Resource Planning & Economic Development; 4) The Small Family Farm Enterprise Financial Analysis, Management, and Marketing; 5) Youth, Family, Nutrition, Health, Fitness, Wellness and Obesity. The decision of the School of Agriculture Research Extension and Applied Sciences (AREAS) for the reduction in the number of planned programs for the 2010-2014 Plan of Work Update was based on both an assessment of the issues that limited resource audiences and stakeholders indicated was high priority issues, Also based on both the most effective utilization of Research and Extension expertise resources to enhance our effectiveness in addressing issues. Therefore, the scope of our programming efforts was combined in primary two areas- plant production systems and in youth, family, nutrition and health. Over the previous years, the Extension Program of School of AREAS was attempting to address three interrelated planned programs separately which lessen our impact with our targeted audiences, rather than working more comprehensive across these three Youth At Risk, Human Development and Family Well Being and the Human Nutrition, Health, Fitness, Wellness and Obesity planned program, now these programs is incorporated in the Youth, Family Nutrition, Health, Wellness and Obesity planned program. Also, in the area of agriculture, it was realized after three years of working across the four programs known as Agriculture and the Environment, Agronomy Production Systems, Forestry Natural Resources and Preservation and Sustainable Horticulture Production Systems has been incorporated into the Sustainable Plant Production Systems.

The Sustainable Plant Production Systems planned program will focus on determining the agronomic requirements of alternative crops for developing high value sustainable horticultural systems for rural Mississippi. Different cropping systems, fertilizer treatments and moisture applications will be used to identify high income generating crop cultivars, under selected Mississippi soils. Both organic and inorganic chemicals, as well as recommended cultural practices such as, crop rotation, multiple cropping, resistant cultivars, differential planting dates, and soil solarization will be used for plant pest control in alternative test crops. The planned program will focus on the chemical, biological, and cultural methods of weed control in alternative crop test plots will be evaluated for the most effective measure(s) recommended. In addition to developing economically viable cropping systems, some easy to use protocols will be developed to generate consumer products to enhance the crop value. AREAS centers will be used to demonstrate needed information to farmers on the agronomic practices and other plant management systems that will enhance the growth, yield and quality of vegetable crops. New technologies will be introduced on crop varieties that tolerate or resist natural environmental and pest management programs. This program will utilize judicious combinations of pesticides, host resistance, and cultural methods to enhance profitability of farming operations; minimize fluctuation in farm income and improve the economic well being that leads to an improved quality of life for limited resource farmers. The information derived from the horticultural and food processing research will be extended to limited resource farmers in the most effective manners. Forestry and Natural Resources will focus on alternative uses of land concentrating on conservation and management practices. The emphasis will be to inform small farmers about the benefits of good forest management practices to prevent erosion and increase timber yields. The Forestry component of this planned program will be geared to educating landowners about multi-use of their property. Also information updates for landowners about new methods and ideas in forest conservation and management. Additionally, the Agriculture and the Environment will be focused of this planned program to identify best management practice(s) and best available technologies to improve crop production and maximize its economic values while minimizing adverse impact to the environment. The results will be used as an approach to support farmers/producers in Mississippi to achieve sustainable agriculture through economic growth and environmental compliance

The Community Resource Planning & Economic Development planned program is formulated within the context of community resource planning, development (CRPD) and Economic Theory & Research Methods (ETRM). CRPD will specifically focus on economic planning and development in Mississippi. This planned program will collaborate with government officials and community institution such as local school districts to plan and implement sustainable social, community and economic development that will likely create jobs, improve employment opportunities through small and home based businesses, enhance human capital development in all forms. Economic theory research methods will emphasize data collection on labor economic issues. Economic theory and research methods will be utilized to better understand various social, economic and demographic phenomena that are constraining limited resource citizens' social and economic well being, and the growth of the communities within which they reside that impedes quality of life. Various research tools and economic models will be developed and targeted to specific communities to promote best practices that are likely to help resolve many of the existing community issues. In partnership with community and faith based organizations strategies will be explored and identified with the distinct aim of empowering people, encourage active participation in social and economic development. Civic engagement strategies will be

implemented specifically to promote people's participation in community and civic activities. Databases development will be created to support community resource development (demographics, census database development) The development of incubator in SW Mississippi will be implemented that supports high technology business that focuses on minority and small business development. Educational efforts will emphasize identification of community leaders through leadership development to enhance leadership and community decision-making skills so they can fervently serve its residents and communities. The School of Agriculture, Research Extension and Applied Sciences (AREAS) of the university has an agenda to seek ways to strengthen the capacity of rural communities to constantly regenerate themselves and improve the quality of life for people.

The Youth, Family, Nutrition, Health Fitness Wellness and Obesity Planned Program will utilize an integrated approach to address relevant issues facing youth and families. Stakeholder from our environmental scanning processes led to the integration of three planned programs into one. Many issues have been identified that youth are facing that leads to risky behaviors that affect their well being. The identified need in this areas among youth highlights that Alcorn State University Extension Program implementing programs to aid youth in resisting risky behaviors such as: tobacco use, high rates of teen pregnancy and infection rate of sexually transmitted diseases, increased dropout rates and juvenile delinquency and lack of recreation activities as relevant issues facing youth in the state. Also, other issues identified were the lack of skills that youth possess to enter in leadership roles and opportunities in schools and communities; lack of job preparedness/readiness and career and business development An area of this planned program will focus on Youth at Risk by exploring methods to provide support systems to aid youth in resisting such risky behaviors. Educational programs will develop negotiation, decision making and coping skills of youth to resist risky behaviors. Also, club development/volunteer management to facilitate the organizing and managing of community and school based clubs will be implemented. Additionally, volunteers will be trained to work with youth in clubs to provide variety of educational, cultural and citizenship opportunities. Youth leadership will be another emphasis of the program to enhance leadership competencies and the necessary personal, social and cognitive skills to become leaders in school and communities. Additionally an emphasis will be on increasing limited resource youth participation in leadership opportunities. Another focused area of youth development is on career development/workforce preparedness to develop job readiness skills to assist youth in the job searches and increased awareness of career options and youth business opportunities. Additionally the planned program will emphasize many issues facing the "Family", educational programs will be implemented on providing an understanding of the social, cognitive, emotional, and physical development of children and families. Providing educational programs on Sudden Infant Death, Shaking Baby Syndrome and other educational program empower parents with the knowledge to provide quality learning environments for children. Creating healthy families will consist of developing parenting skills and quality child care and afterschool programs that promote quality learning environments. Family Resource Management will also be emphasized exploring strategies to assist youth and adults in families to obtain and manage money and financial resources effectively to meet present needs and future goals. Another area of the planned program focuses on Nutrition, Health, Fitness Wellness and Obesity programs to provide information about nutrition, health lifestyles and physical fitness. Current trends in obesity among African-American children, youth and adults remains the highest among all ethnic groups in Mississippi. Since obesity starts early in childhood and extends into the adolescent years and possibly into adulthood. Intervention and or prevention strategies are necessary to addressing this issue. Nutrition behavior modification with healthy eating and increased physical activity are contributing factors to the prevention and management of obesity in all population groups. Also research conducted will be translated into practical application and disseminating on nutrition, health, physical fitness, Wellness and Obesity for youth and families in communities

The Small Family Farm Enterprise Financial Analysis, Management, and Marketing planned program, through both research and Extension Program outreach and the Small Farm Development Center a combination of diverse programming of the School of AREAS at Alcorn State University, strives to serve the needs of small and limited resource farmers. The program encompasses the economics of agricultural production, farm and business management, legal risks, marketing and distribution practices. The Extension Program farm demonstrations at outreach centers and on limited resource farms and research studies will focus on addressing issues associated with production and market selection for alternative enterprises with optimal resource allocation in enterprise management. Educational programs, events and activities are designed and implemented with the ultimate goal of enhancing the economic viability of small and limited resource farms and their families. In the area of Marketing and Distribution practices, programs will place emphasis on local, regional and niche markets to provide a reliable research-based market analysis, and an understanding of the economic environment facing limited resource farmers. In the area of Economics of Agricultural Production and Farm Management, economic analysis will be provided to reinforce the fact that many factors contribute to farm profitability and sustainability. Farm and enterprise budgets that can be easily understood and adopted will be developed and regularly updated. Models of profitable and sustainable operations and strategies would be used through the delivery of extension programs to farmers that are experiencing financial stress on their farming operations. In the area of Business Management, Finance and Taxation, the planned program will focus on the financial situation of the farm family, their access to capital as well as their debt level, spending ability and income generating capacity. An analysis will be done to determine the situation of farmers with regard to their level of knowledge about farm record keeping, financial analysis, decision-making, best management practices, marketing and other critical areas affecting financial viability. Educational

programs, events, activities and technical assistance will be implemented to address the needs of limited resource farm and farm families. Marketing programs will provide information on types of markets, how to market, marketing competition, access, and strategies for success. Program, events and activities will be offered on how to access them successfully, which should enhance their sales and profit.

The Sustainable Animal Production systems planned program will focus on improving meat animal production efficiency and meat quality. The program will focus on reproductive performance of meat producing animals including growth rate, feed availability and survivability. Emphasis will be placed on reproductive efficiency and increasing the prenatal survival livestock. Research studies will involve activities designed to manipulate follicular growth and ovulation; in addition, the role(s) of proteins and hormones associated with the survival of young embryos will be investigated. In addition, the importance of developing a controlled breeding season according to market demands and trends will be stressed. Also the management of animals during gestation and delivery will be emphasized. Nutrient utilization in animals will focus on the nutrient requirements of livestock and the improvement of forages for winter and summer months. Additionally, utilization of feeding and management programs to improve competitiveness of the meat animal industry appropriate to regions of the state will be undertaken. An emphasis will be placed on the genetic improvement of animals for proper selection of breeding stock with the aim of improving the meat quality. The planned program will evaluate the impact of traditional and non traditional feedstuffs on meat quality, safety and consumer confidence and acceptance of meat from cattle, swine, goats and poultry. Also, the program will investigate methods of eradicating or controlling infectious diseases and methods of monitoring harmful organisms to ensure that herds remain free of specific diseases. Additionally, investigations will focus on factors associated with early embryo viability with the view of reducing embryo mortality and exploring more feasible methods of embryo transfer. Improvements in the testing program to accommodate genetic improvement of multiple traits, including growth performance, longevity and carcass merit/quality and shelf life of meat will be researched. The technology transfer component of this program will include the development and dissemination of publications, presentations, and procedures/materials for sustainable livestock production for the improvement meat quality. Also, a wide range of demonstrations, farm tours, group meetings, seminars, applied research, and other activities will be conducted to meet the needs of the targeted audiences.

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

Year	Extension		Research	
	1862	1890	1862	1890
2010	0.0	35.5	0.0	38.5
2011	0.0	37.5	0.0	41.0
2012	0.0	41.5	0.0	43.5
2013	0.0	43.5	0.0	46.0
2014	0.0	45.5	0.0	48.5

**II. Merit Review Process**

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

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

**2. Brief Explanation**

A combined internal and external university and external non-university panel will be selected every two years consisting of individuals to provide a merit review process of the Joint Extension/Research Plan of Work (POW) to establish the merit of the planned programs in the plan of work. Selected individuals will include ASUEP state program leaders, specialists and researchers from both the internal and external land grant institutions in within and outside of the state of Mississippi, and others

as deemed necessary of the state. Additionally, non-university panel members will consist of various partnering agencies with similar types of research and extension priorities in the state. The merit review process will focus on the five planned programs. A comprehensive and detailed program review will be conducted by the panel of the planned programs in the plan of work (POW) at least every other year. Alcorn State University Extension and Research of AREAS will initiate program reviews of all planned programs at various intervals over the next five years. These reviews will be conducted by review panels selected specifically for the purpose of the review. Input obtained from local and state stakeholders from the environmental scanning system as well as from faculty in the respective areas of the plan will be shared in order to assess the merit of planned programs in the POW. The detailed review of the planned program is anticipated to be conducted every other year. This review, conducted by a combined internal and external university and external non-university panel of professionals will result in a review to be used to direct the course of major changes and /or updates in program and research. Also, peer review processes will consist of state program reviews by internal and external extension and research professionals from both land grant institutions of the state. Also, local county program reviews conducted by advisory groups at the county level will be used to guide the program and research direction of the planned programs of the POW. Local program reviews will be conducted in targeted counties by ASU-EP each year by Regional Coordinators, advisory councils and program committees for review to conduct a merit review and provide comments on the effectiveness of program impact. The research program will be reviewed annually by scientific peers and stakeholder groups to evaluate the relevance of research priorities, the thoroughness of research procedures in individual projects, project outcomes, publications, direct and indirect impact of the project on the stakeholders. Internal evaluators will consist of administrators and School of AREAS' scientists. not directly associated with the planned programs. Expert reviewers and peer review participants will be selected from governmental agencies (state and federal), other universities, and local officials directly related to the commodities or other outputs of the research.

### 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?

The proposed planned programs will address the strategic issues identified by the stakeholders by achieving goals in response to high priority issues to each of the five planned programs as listed below: The Youth, Family, Health Fitness Wellness and Obesity planned program goal is to enhance leadership skills of youth to assume leadership roles in schools and communities: develop decision making, communication and coping skills; help youth resist risky behaviors and to have the ability to address relevant issues in their daily lives. The in the area of human development and family well being is to increase the capacity of family groups and agencies to positively impact the lives of families through educational programs, events, and activities which influence the learning, planning processes, experiences, and limited resource clientele interest. In the area of human nutrition, health, wellness and obesity is to develop a healthy and well nourished population through the development interventions and dissemination of information on new and improved methods, practices, and products that will result in increased public awareness of health, promoting dietary and food consumption behaviors. The Small Family Farm Enterprise Financial Analysis, Management and Marketing planned program goal is to enhance the economic viability of small and limited resource farm families by strengthening their technical skills and economics decision making so that they can contribute fully to the agricultural economy; bettering their own lives and the lives of their children or other dependents; ultimately benefiting the society as a whole in rural Mississippi. The Community Resource Planning and Economic Development planned program goal is to empower and improve the quality of life of limited resource citizens and to promote sustainable social and economic development in communities by utilizing research findings and best community and economic development practices as models. The goal of Sustainable Plant Production Systems planned program is to enhance the income potential of the Mississippi limited resource farmers by growing alternative crops through sustainable production practices; and to improve farm profitability of small limited resource farm families. Forestry natural resource and preservation is a component of the planned program which is to educate and make evident to small farmers and landowners the benefits in conservation and sustainability of the forest for enhancing income and awareness of the need for a healthy forest environment. In the Agronomy Production Systems area is to improve the farm profitability of small limited resource. The goal of the Sustainable Animal Production Systems planned program goal is to improve the profitability of livestock and poultry produced by limited resource farmers. This will improve the quality of meats through research and appropriate educational programs for small limited resource farm families through production, and marketing of syrup crops. A well nourished population through the development interventions and dissemination of information on new and improved methods, practices, and products that will result in increased public awareness of health, promoting dietary and food consumption behaviors. The forestry natural resource and preservation area is designed to educate and make evident to small farmers and landowners. Benefits will be emphasized on conservation and sustainability of the forest to enhance income and awareness for a healthy forest environment. Also, the agronomy production systems area is to improve the farm profitability of small limited resource farm families through production, and marketing of syrup crops.

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

The five planned programs of the Combined Extension and Research Plan of Work (POW) of AREAS address the needs of the under-served primarily through the implementation of its mission that targets limited resource audiences, addressing issues for improving the quality of their lives of people in target regions of Mississippi. The stakeholder input highlighted priority issues that the five planned programs are in response regarding issues being experienced by limited resource citizens of the Capital River, Coastal and Delta regions of the state. The planned programs are addressing issues of the under-underserved population focusing on youth at risk, single parents and families and limited resource families. The five planned programs will constantly explore ways to modify its programming efforts by expanding it into different formats to make adjustments to various cultural and socio- economic realities of rural Mississippi, to facilitate the involvement of diverse under-represented populations. Alcorn State University Extension Programs have identified regions of Mississippi where there is a concentration of under represented populations of the State. These regions have been of considerable interests to our programs in the past and will receive significant attention in the future.

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

The expected outcomes and impacts of all planned programs are outlined in terms of short, mid term and long term outcomes, considering inputs and outputs of Extension and Research of the School of AREAS. The short term outcomes were described in terms of the expected knowledge to be gained and increased awareness of information related to key issues of the five planned programs of the POW being experienced by limited resource audiences. The mid term outcomes focus on the development, adoption and use of information related to key issues facing limited resource citizens. The long-term outcomes of the five planned programs are described through the documentation of changes; increases and decreases observed regarding key issues affected by limited resource citizens. (See outcomes of planned program of the POW.

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

The planned program will result in program effectiveness of the planned programs that are designed to respond to the needs of limited resource citizens of Mississippi. The implementation of the planned program of School of AREAS carryout its mission and achieving its vision. Additionally, the planned programs have been logically designed through combined Research and Extension Programs to address key issues of limited resource citizens and determined expected outcomes of the planned programs utilizing FTE and SYS resources of Extension and Research of the School of AREAS, which includes adding new resources to satisfy the objectives of the POW. Also, various assumptions of the planned programs have been identified that allows Extension and Research to enhance our efficiency in addressing key issues of limited resource citizens of the state of Mississippi to be proactive rather than reactive which should enhance our efficiency in addressing key issues of limited resource citizens of the state of Mississippi.

## **IV. Stakeholder Input**

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

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

#### **Brief explanation.**

The use of local and regional print, broadcast and interactive media through existing communications vehicles will be explored to establish Extension and Research as relevant, practical and comprehensive information resource for Mississippi residents. Also to seek stakeholders input to encourage their participation. The School of AREAS' Research and Extension efforts will increase the exposure to five planned programs through various outlets to increase involvement and participation. Local planning committees will be formed in each county to recruit, plan and implement public interaction, i.e. town hall meetings, and focus groups sessions. Several of these activities are ongoing. Invitations will be distributed at public meetings and listening sessions; utilizing letters, flyers, etc. will be provided to targeted traditional and non-traditional stakeholder individuals and groups, to elected and governmental officials, local institutions, organizations and agencies to seek diverse stakeholders of the population in limited resource communities. Efforts will be made during Town Hall

meetings and focus group sessions to increase awareness of the mission of AREAS. In addition, to sharing our

capacity and collaborative efforts of the planned program of Extension and Research at Alcorn State University regarding addressing relevant issues of the state. The primary goal is to facilitate greater access to our limited resource customers and to communicate about the planned programs. Media & Communication unit will publicize and market research efforts and educational programs, events and activities that are conducted at the state and county levels. One on one contact with target clientele of the planned programs will be conducted through an Individual Client Survey Plan to seek input from stakeholders. Stakeholder input is also obtained in collaboration between Extension and Research, with active participation of extension professionals and researchers who will participate in future meetings. The data of the client survey plan outcome will be used in designing research projects and educational programs events and activities that address stakeholders' needs. Some research projects of the planned program requires the administration of surveys to non traditional groups (e.g., cooperatives) or farmers, rural families, and other affected by the research program of the School of AREAS at Alcorn State University. Survey instruments are carefully designed to examine characteristics

directly related to specific objectives of the project. These survey instruments are tested for validity and evaluated to ensure that they contain questions safeguarding the dignity and respect of survey participants. While research projects of planned program are designed so that experiments are conducted on farmers land, and the farmers participate in the research. This allows the individual farmer to provide input and observe first hand the outcomes of the research.

**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**

- Needs Assessments
- Use External Focus Groups
- Open Listening Sessions
- Use Surveys
- Use Advisory Committees

**Brief explanation.**

Multiple approaches will be taken to seek stakeholder input. The approaches include formal surveys, focus groups, key informant approaches, advisory councils (collaborating groups, agencies, and organizations) and combinations of the preceding methods. Efforts will be made to ensure that the stakeholders involved were representatives of the limited resources household in terms of geographic location, family status, income level, age, gender, disability status, and users or nonusers of existing educational programs. Guideline manuals were designed for collecting data from stakeholders to accomplish the program priorities within ASU Extension Program and Research. The manuals were used to train ASU Extension Program county and campus-based educators and staffs. The guidelines provide instructions on how to conduct public surveys, meetings, collect data and summarize the issues for future action plans. The materials were also used with county government oversight committees and advisory committees to help them better understand the importance of seeking a broad base of stakeholder input at the community level. Some of the environment scanning tools that will be used (and have been used in the past) by ASU Extension Program to collect stakeholder input data and its subsequent analysis include the following groups. Advisory Councils – is a process that begins at the grassroots level with Area Extension educators identifying and engaging local advisory councils to gather information about the needs and issues in local counties. The Extension Advisory Council provides recommendations and identifies issues for educational programming. The Research Advisory committee will include researchers from USDA and State agencies, business representation and commodity groups. The Town Hall meeting was implemented to identify issues or needs of limited resource citizens in counties targeting the general public. Information from the analysis of the issues facilitates programming and research efforts through an action-based team response to the critical issue identified from the analysis. Open listening sessions and needs assessments will be conducted jointly between research and extension. A series of Focus groups sessions was implemented to further prioritize the issues identified in the public hearings (i.e. town hall meeting). The focus group session was convened at different timeframes in targeted counties to maximize input from a broad participant base. The Individual Client Service Plan (ICSP) is an individual or family need assessment instrument to collect information on relevant needs and issues of limited resource clientele to enable state researchers and extension specialists and county staff to provide educational programs, information and activities and appropriate technical assistance regarding issues. These four data input components granted the Alcorn State University Extension Program the means to access, analyze issues and needs, and implement programs appropriate to issues of limited resource citizens. A computation of the findings was converted into a county cluster matrix to enhance the issue identification processes of limited resource communities.

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

**Brief explanation**

The Town Hall Meetings are structured to provide a simplistic means of collecting data. The meetings are planned in detail and executed to facilitate the desired end—a gathering of pertinent information that would assist the Alcorn State Extension Program in identifying the critical needs/issues of limited- resource communities as the populace of the communities viewed them. These meetings are a platform created for the residents in limited resource and disadvantage communities to give voice to their needs and concerns. The setup and conducting of the meetings were handled in a manner that made them feel comfortable expressing their thoughts. The role of the program was to listen and support the open discussion of their expressed issues and perspectives in a way that promoted engagement of all participants. Alcorn State University Extension Program develop the Individual Client Service Plan (ICSP) as a proactive approach to assess and determine the most effective method in allocating limited personnel and resources, (technical and practical) in address the increasing critical needs of the citizens in the state of Mississippi. The major objective was the development of a comprehensive assessment instrument, which allows the analysis data collected to direct the appropriate technical assistance to utilize and to implementation of the correct recommended educational activities. The approach of the ASU-EP ICSP is five-folds 1.) a comprehensive assessment of resources and limited resource clientele needs; 2) analysis of data collected on individual families; 3) rapid response to the urgency of the individual families and/or clientele; 4) resource persons required to implement recommendations and 5) implementing the ICSP activities to achieve outcomes. The Extension Advisory Council provides useful information on the Extension education process. The principles of program building involve group action, or organization, and individual action. The Extension Advisory Council makes recommendations and helps build the Extension educational program. Program building is not a ritual we go through for its own sake. Involving local people in planning, implementing, and evaluating educational programs is essential to Extension's mandate. County advisory groups are the basis of a grassroots organization and are the source of leadership for the county. The number and type of advisory councils or committees in counties are determined by the variety of committee and social conditions.

**3. A statement of how the input will be considered**

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

**Brief explanation.**

The stakeholder input process is very helpful in refocusing and reaffirming priorities on an ongoing basis. The process is also critical in identifying emerging issues. However, some stakeholder groups have had difficulty seeing beyond the critical issues they face today. As a result, the ASUEP team will compile and disseminate trend analysis to help stakeholders identify issues and pitfalls of the future. The environmental scanning system, a grassroots information gathering approach, determines how ASU-Extension and Research directs or redirects its research and programming efforts and set priorities. The aim of data gathering is to set aside preconceptions about the high priority issues of limited resources audiences. The data collected from various environmental scanning tools as mentioned above adopted by ASU Extension and Research was used to identify local issues, concerns and programming gaps. The local issues, concerns and programming gaps were gathered on a statewide basis and made available for review by all county and campus based extension educators and other staff within the ASU Extension & Research Program. Finally, the issues were prioritized by the state and county staff and ASUEP/ Management Leadership Committee. The Leadership committee developed a restructuring plan for ASUEP based on stakeholder input



findings. Prioritization of issues in program areas: Agriculture/Environment □ Lack of farm financial management □ Limited knowledge of production, management, and marketing practices for alternative enterprises Nutrition and Health □ High rate of obesity (adult/childhood) □ High incidence of chronic disease. Youth Development □ High incidence of risky behavior engaged in by youth such as tobacco, drugs and alcohol abuse □ High rate of teen pregnancy. Child and Family Development □ High rate of single parent families □ Limited parenting skills. Community and Economic Development □ Lack of jobs (youth and adult) □ Limited community leadership skills. Additionally, the geographic focus of extension and research efforts will focus primary on the aforementioned issues in the Capital River, Delta, and, Coastal regions where limited resource resides in counties of the state. Less emphasis will be placed on other regions of the state and will be served through other delivery mechanisms. Staffing arrangements and budgetary considerations were based on incidence of programming factors and where the greatest need of the limited resource population existed. Action plans will be developed and shared with stakeholders concerning action to be taken to address issues and to form partnerships with local leaders and other agencies and organization to respond to issues identified from the analysis of data gathered through various processes of the environmental scanning system.

**V. Planned Program Table of Content**

S. NO.	PROGRAM NAME
1	Sustainable Animal Production Systems
2	Sustainable Plant Production Systems
3	Youth, Family, Nutrition, Health, Fitness, Wellness and Obesity
4	Small Family Farm Enterprise Financial Analysis, Management, and Marketing
5	Community Resource Planning & Economic Development

**V(A). Planned Program (Summary)****Program #1****1. Name of the Planned Program**

Sustainable Animal Production Systems

**2. Brief summary about Planned Program**

The Sustainable Animal Production systems planned program will focus on benefits beyond the feed yard because it fits the packers demands for increased yield of closely trimmed, boneless retail cuts, while maintaining eating quality. The program will focus on reproduction for increased yield, reproductive efficiency and increasing the prenatal survival livestock. Research studies will involve activities designed to manipulate follicular growth and ovulation; in addition, the role(s) of proteins and hormones associated with the survival of young embryos will be investigated. In addition, the importance of developing a controlled breeding season according to market demands and trends will be stressed. Also the management of animals during gestation and delivery will be emphasized. Nutrient utilization in animals will focus on the nutrient requirements of livestock and the improvement of forages for winter and summer months. Additionally, utilization of feeding and management programs to improve competitiveness of the meat animal industry appropriate to regions of the state will be undertaken. An emphasis will be placed on the genetic improvement of animals for proper selection of breeding stock with the aim of improving size and herd and quality. The planned program will evaluate the impact of traditional and non traditional feedstuffs on meat quality, safety and consumer confidence and acceptance of meat from cattle, swine, goats and poultry. Also, the program will investigate methods of eradicating or controlling infectious diseases and of monitoring harmful organisms to ensure that the herds remain free of specific diseases. Additionally, investigations will focus on factors relating to early embryo viability to reduce embryo mortality and feasible of embryo transfer. Test will be performed to improve genetics of multiple traits, including growth performance, longevity and carcass merit/quality and shelf life of meat. The planned program received its direction from feed back or requests from producers from town hall meetings, livestock advisory groups, needs assessment from agricultural educators, livestock specialist and other community leaders. The target audiences for these programs are limited resource farmers and producers and rural dwellers within the state of Mississippi. Current researched based educational programs, activities, and events have not reached many rural farm families and small livestock and poultry producers. Therefore, limited resource producers, for the most part, have not made appropriate production management practices in order to remain profitable and sustainable in the market place. The technology transfer component of this program will include the development and dissemination of publications, presentations, and procedures/materials for sustainable livestock production for the improvement meat quality. Also, a wide range of demonstrations, farm tours, group meetings, seminars, applied research, and other activities will be conducted to meet the needs of the targeted audiences. The planned program is considered an integral part of this long tradition, especially for the limited resource farmers and farm families of southwest Mississippi, and surrounding areas.

**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
301	Reproductive Performance of Animals		25%		20%
302	Nutrient Utilization in Animals		20%		25%
303	Genetic Improvement of Animals		5%		10%
305	Animal Physiological Processes		15%		10%
308	Improved Animal Products (Before Harvest)		20%		30%
311	Animal Diseases		15%		5%
	<b>Total</b>		100%		100%

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

### 1. Situation and priorities

Agriculture is Mississippi's number one industry, employing approximately 29% of the state's workforce either directly or indirectly. Agriculture in Mississippi is a 6.3 billion-dollar industry. In Mississippi, animal production accounts for 40% of the agricultural cash receipts (poultry/eggs/eggs- \$2.34 billion, cattle and calves \$180 million etc.). A strong livestock industry is essential to maintaining economic diversity in the state's economy. Animal production will face many challenges of specialization in the next decade, and economic survival for many small-scale producers will be difficult. Specialization will favor the adoption of expensive, capital-intensive confinement facilities and technologies. However, the main constraints, for the development of a viable small-scale livestock industry in the state, will remain unsophisticated breeding system, poor veterinary management, insufficient utilization of feedstuffs in the region, and weakness of the marketing system. Other constraints for the limited resource producer include the seasonal variation in the availability of feed ingredients. Medium to low input systems and crop livestock (mixed) systems dominate livestock production in rural Mississippi. Low input systems provide all – or at least the major part of – the livelihoods of the livestock keeping households, many of whom have few resources beyond their smallholdings and livestock. Information regarding these or alternative technologies must flow from, to, and among researchers, students and producers to ensure that new technologies will address problems and is user-friendly for producers. The overall goal of this planned program is to overcome the challenges that the farmers are expected to face in the future. This will be accomplished by altering quality characteristics of meat and carcass while maintaining or improving progress on performance and productivity of the breeding herd. To achieve this goal, research projects and educational programs will be designed to improve nutrient utilization as well as to use of novel feed ingredients to partition nutrients towards protein and other essential fatty acids deposition. On going research supplementation of animal feeds with highly nutrient should be emphasized rich vegetable has shown reduced bad cholesterol and improved good cholesterol and vitamin levels. In addition, studies aimed t the rate of genetic improvement, feed availability, and reproductive survivability, including research aimed at reducing the prevalence and impact of infectious disease

### 2. Scope of the Program

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

**V(D). Planned Program (Assumptions and Goals)****1. Assumptions made for the Program**

Limited livestock and poultry producers are often not fully aware of management practices that may help maximize their operations for economic sustainability. Producers' unawareness of potential environmental impacts of their operation and/or requirements and opportunities of environmental regulations and programs will have major impact on their potential for economic well being on farms. Educational programs and current research based information have not reached many rural farm families and small livestock and poultry producers. Therefore, they, for the most part, have not incorporated appropriate production management practices in order to remain profitable and sustainable in the market place. Integrated livestock management systems are needed to expand understanding and development of best management practices that address current and future challenges as well as meet economic sustainability goals.

**2. Ultimate goal(s) of this Program**

The goal is to improve the profitability of livestock and poultry produced by limited resource farmers by improving the quality of meats through research and appropriate educational programs.

**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
2010	0.0	4.0	0.0	14.0
2011	0.0	4.0	0.0	14.0
2012	0.0	5.0	0.0	14.0
2013	0.0	5.0	0.0	14.0
2014	0.0	5.0	0.0	14.0

**V(F). Planned Program (Activity)****1. Activity for the Program**

This livestock educational program will provide a wide range of demonstrations, farm tours, group meetings, seminars, applied research, and other activities to meet the needs of the targeted audience. Extension personnel and research scientists are involved in designing, implementing, and evaluating the educational efforts depending on the focus and scope of the program. Our dissemination strategy involves a process requiring a careful match among target audiences and (a) the creation and context of the research and educational knowledge and programs and (b) the media outlets, and delivery approaches used in disseminating it to limited resource farmers. A wide variety of dissemination methods will be employed which include: field days, on farm demonstration and student involvement in research (graduate, undergraduate certificate programs). Also, seminar, workshops, trade shows, distance and flexible learning options will be utilized. Various articles, publications, reports, thesis, and patents will be developed and disseminated. In general, but not exclusively, the research program will identify priority areas with respect to sustainable animal production systems. The areas identified encompass the followings: The impact of traditional and non traditional feedstuffs on quality, safety and consumer confidence and acceptance of meat will be studied. A key approach is to continue work on novel feedstuff rich in minerals, omega fatty acids, pectin and antioxidants (Purslane and waterleaf). Other promising ingredients need to be screened for favorable nutrients contents. Studies will target the development of technology for the prediction of intramuscular fat (marbling) and detection of quality defects from measurements taken on the live animal. A key approach will be to investigate the feasibility of predicting intramuscular fat in the longissimus muscle in live animals from a single real-time ultrasonic longitudinal or cross sectional image, and to assess the merit of using ultrasound predicted IMF values to classify animals into specific IMF groups. The research output will include peer reviewed publications poster presentations, procedures/material manuals for improving meat quality. The livestock/poultry educational planned program will provide a wide range of demonstrations, farm tours, group meetings, seminars, applied research, and other activities to meet the needs of the targeted audience. Extension personnel and research scientists are involved in designing, implementing, and evaluating these educational efforts.

**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"> <li>● Demonstrations</li> <li>● Group Discussion</li> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Other 1 (Field days)</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Distance and flexible learning)</li> <li>● Newsletters</li> <li>● Web sites</li> <li>● Other 2 (Research Publications)</li> </ul>

**3. Description of targeted audience**

The target audiences are limited resource farmers and producers and rural dwellers within the State of Mississippi. The ultimate targeted audience is customers/consumers of livestock and poultry products throughout the State of Mississippi.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	500	400	200	200
2011	600	500	150	150
2012	700	550	150	150
2013	700	600	150	150
2014	700	600	200	250

**2. (Standard Research Target) Number of Patent Applications Submitted**

**Expected Patent Applications**

2010 :0                      2011 :0                      2012 :0                      2013 :0                      2014 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2010	2	1	3
2011	2	2	4
2012	2	2	5
2013	2	3	5
2014	2	3	5

**V(H). State Defined Outputs****1. Output Target**

- Conduct educational programs, activities or events on forage production practices for limited resource farm families

<b>2010</b> 4	<b>2011</b> 6	<b>2012</b> :8	<b>2013</b> :10	<b>2014</b> :12
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- Conduct educational programs, activities or events to improve herd genetics for limited Resource farm families

<b>2010</b> 6	<b>2011</b> 8	<b>2012</b> :10	<b>2013</b> :12	<b>2014</b> :14
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- Conduct educational programs, activities or events on pastured livestock production practices for limited Resource farm families

<b>2010</b> :10	<b>2011</b> :12	<b>2012</b> :14	<b>2013</b> :16	<b>2014</b> :18
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- Conduct educational programs, activities or events on reproduction performance, nutrient utilization in animals to decrease livestock production cost for limited resource farm families

<b>2010</b> :12	<b>2011</b> :14	<b>2012</b> :16	<b>2013</b> :16	<b>2014</b> :20
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- Conduct educational programs, activities or events on alternative livestock production practices for Limited Resource farm families

<b>2010</b> 6	<b>2011</b> 8	<b>2012</b> :10	<b>2013</b> :12	<b>2014</b> :14
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- Number of research publications published in the field on animal /meat production systems.

<b>2010</b> 2	<b>2011</b> 3	<b>2012</b> :4	<b>2013</b> 6	<b>2014</b> 8
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- Number of research based reader friendly pamphlets and leaflets developed by extension educators for farmers and farm families

<b>2010</b> 2	<b>2011</b> 6	<b>2012</b> :8	<b>2013</b> :10	<b>2014</b> :10
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- Develop M.S. thesis on animal production systems

<b>2010</b> 3	<b>2011</b> 3	<b>2012</b> :3	<b>2013</b> 3	<b>2014</b> 3
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**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Percentage of farmers / producers to utilize swine waste as a source of energy to operate farm equipment
2	Percentage of producers that will improve pasture grass fed to beef cattle.
3	Percentage of farmers to utilize artificial insemination and / or embryo transfer to decrease the need to purchase quality bulls and improve herd genetics
4	Increase percentage of farmers to adopt pasture poultry and / or alternative livestock as an alternative enterprise
5	Decrease input cost of livestock production with the implementation of pasture poultry or best management practices



**Outcome #1**

**1. Outcome Target**

Percentage of farmers / producers to utilize swine waste as a source of energy to operate farm equipment

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :2                      **2011** :3                      **2012** :4                      **2013** :5                      **2014** :6

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 303 - Genetic Improvement of Animals

**Outcome #2**

**1. Outcome Target**

Percentage of producers that will improve pasture grass fed to beef cattle.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :15                      **2011** :20                      **2012** :25                      **2013** :20                      **2014** :20

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 308 - Improved Animal Products (Before Harvest)

**Outcome #3**

**1. Outcome Target**

Percentage of farmers to utilize artificial insemination and / or embryo transfer to decrease the need to purchase quality bulls and improve herd genetics

**2. Outcome Type :** Change in Action Outcome Measure

**2010** :5                      **2011** :7                      **2012** :9                      **2013** :11                      **2014** :13

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 303 - Genetic Improvement of Animals

**Outcome #4**

**1. Outcome Target**

Increase percentage of farmers to adopt pasture poultry and / or alternative livestock as an alternative enterprise

**2. Outcome Type :** Change in Action Outcome Measure

**2010** :10                      **2011** :12                      **2012** :14                      **2013** :16                      **2014** :18

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 308 - Improved Animal Products (Before Harvest)

**Outcome #5**

**1. Outcome Target**

Decrease input cost of livestock production with the implementation of pasture poultry or best management practices

**2. Outcome Type :** Change in Action Outcome Measure

**2010 :**10                      **2011 :** 10                      **2012 :** 5                      **2013 :**10                      **2014 :**10

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 303 - Genetic Improvement of Animals
- 311 - Animal Diseases

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

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

**Description**

Livestock enterprises operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, competitive land uses and shifting developmental patterns, evolving consumer demands, and globally influenced markets. Fundamental change is occurring in the state and regional economies within which agricultural and horticultural enterprises operate. The specific implications of these external factors vary greatly by locale and across commodities and business forms. Population and land use changes in farming communities can lead to producer/neighbor issues that influence choice of production practices. The outcome of this problem will be influenced mainly by such external factors as variations in climate during each growing season, inadequate appropriations, public policy changes, and governmental regulations. The ability or willingness of younger men and women to become involved in production agriculture will enhance productivity and profitability.

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

**1. Evaluation Studies Planned**

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

**Description**

Research will be evaluated according to its relevance to needs limited resource clientele in Mississippi. The documentation and dissemination of research in this area will be the evaluated through publications, presentation and adoption of animal production practices based on the results of research. Evaluation instruments will be developed and utilized by participants in extension programs. An evaluation form will be used to assess program effectiveness with limited resource audiences. Input is also solicited from stakeholders that used in planning future programs.

## 2. Data Collection Methods

- On-Site
- Observation
- Other (Participants Feedback,)
- Tests

### Description

Research will be evaluated according to its relevance to Mississippi and the nation. Productivity will be measured by publication in scientific and popular literature and other means of communicating results as well as amount of external funding. Interdisciplinary research is encouraged, bringing together expertise to address the broad-based issues that face animal agriculture. All evaluations will go through the Research Director or Dean. The Dean will use these evaluations for program development. Program success is important in deciding where future school resources will be used.

Extension will be evaluated by participants in extension programs. An evaluation form will be used to assess program effectiveness. Input is also solicited from extension agents and advisory committees. This information is used in planning future programs. Interdisciplinary and multi-state programs are encouraged to improve quality and efficiency.

**V(A). Planned Program (Summary)****Program #2****1. Name of the Planned Program**

Sustainable Plant Production Systems

**2. Brief summary about Planned Program**

The planned program will focus on determining the agronomic requirements of alternative crops for developing high value sustainable horticultural systems for rural Mississippi. These studies will encompass the following subject areas: Soil, Plant, Water, and Nutrient Relationships. Different cropping systems, fertilizer treatments and moisture applications will be used to identify high income generating crop cultivars, under selected Mississippi soils. Plant Management Systems: The impact of plant density, row preparation, irrigation sources and application methods, staking and pruning techniques and other management practices on the growth and development of each test crop will be determined. Insects, Mites and other Arthropods Affecting Plants: Both organic and inorganic chemicals, as well as recommended cultural practices such as, crop rotation, multiple cropping, resistant cultivars, differential planting dates, and soil solarization will be used for plant pest control in alternative test crops. Weeds Affecting Plants: Chemical, biological, and cultural methods of weed control in alternative crop test plots will be evaluated for the most effective measure(s) recommended. In addition to developing economically viable cropping systems, some easy to use protocols will be developed to generate consumer products to enhance the crop value. New and Improved Food Processing Technologies. The Alcorn State University vegetable processing facility in Marks, MS will be used to educate farmers on how to add value to and package harvested alternative crops. Research based information will be provided to farmers through on farm demonstrations at ASU EP Demonstration Centers located in Mound Bayou, Northwest Mississippi; Preston, East Mississippi, and Lorman, and Southwest Mississippi. The Centers will be used to demonstrate needed information to farmers on the agronomic practices and other plant management systems that will enhance the growth, yield and quality of vegetable crops. The centers will also be used to demonstrate and educate on new technologies suited to the needs of the small farmer. Such technologies include crop varieties that tolerate or resist natural environmental and pest management programs that utilize judicious combinations of pesticides, host resistance, and cultural methods. Educational programs will be provided to farmers on adding value to crops produced under sustainable agriculture systems. This value added technology could enhance profitability of farming operations; minimize fluctuation in farm income and improve the economic well being that leads to an improved quality of life for limited resource farmers. Alternative crop evaluation studies at the Alcorn State University Experiment Station have been in existence since the establishment of the station on campus in 1971. The information derived from the horticultural and food processing research will be extended to limited resource farmers in the most effective manners. Forestry and Natural Resources will focus on Alternative uses of land concentrating on conservation and management practices. The emphasis will be to inform small farmers about the benefits of good forest management practices to prevent erosion and increase timber yields. The Forestry component of this planned program will be geared to educating landowners about multi-use of their property. Also information updates for landowners about new methods and ideas in forest conservation and management. Researchers of Alcorn State University will explore new avenues through research initiatives in this area for the financial betterment of the under privileged communities in Southwest Mississippi, in particular the limited resource farmers. Income generating alternative enterprises appropriate to limited resource farmers will be emphasized in the planned programs. In addition methods utilized to conserve their existing property for future generations, and ecologically preserve the land as well as the environment by continuous forestation. Finally, Agriculture and the Environment will be focused of this planned program to identify best management practice(s) and best available technologies to improve crop production and maximize its economic values while minimizing adverse impact to the environment. The results will be used as an approach to support farmers/producers in Mississippi to achieve sustainable agriculture through economic growth and environmental compliance.

**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
102	Soil, Plant, Water, Nutrient Relationships		20%		20%
205	Plant Management Systems		20%		20%
211	Insects, Mites, and Other Arthropods Affecting Plants		20%		20%
213	Weeds Affecting Plants		20%		20%
501	New and Improved Food Processing Technologies		20%		20%
	<b>Total</b>		100%		100%

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

#### 1. Situation and priorities

Plant production systems an essential component of small farm agriculture among limited resource farmers in rural Mississippi. Small limited farmers often grow and market fresh vegetables and fruits such as greens, sweet corn, tomatoes, okra, watermelons and other alternative crops to increase their farm income. Due to their lack of knowledge on new production techniques, small limited farmers are not able to maximize the yield per acre causing a decline in farm income. Small farmers lack the best management practices, and skills resulting in inadequately managed their crops during the growing season. Studies have shown that low input alternatives for fertility, pest, weed and disease control and labor enhances the productivity and sustainability on vegetables farms in rural Mississippi. Conventional crops have the potential for production has exceeded demand, thus depressing prices below the level of profitability. The number of farms, farm family income, and opportunity for employment are declining, and urban population increasing. Fruit and vegetable crop productions have been suggested as agricultural alternatives that could improve the income situation of small scale farmers in Mississippi. This has become an issue because most farmers who benefit from agricultural research at Alcorn State University are limited resource farmers seeking scientific methods to improve their crop production potential and profitability. Studies have shown that low input alternative agriculture using alternative crops and environmentally friendly production practices will enhance productivity without polluting the environment. (Igbokwe et al., 1996; Igbokwe and Hollins, 2000; Panicker et al., 2004). Environmental scanning processes conducted by Alcorn State University Extension Program staff with farm families and cooperatives across counties of Mississippi revealed especially among farm families that previously considered alternative traditional production practices unacceptable, are now interested in transitioning into organic agriculture. Limited farmers highlighted the needed for cutting edge research and innovative program on new production practices, in which the AREAS research can address denoted in the following articles; (Igbokwe, P.E., D. Alipoe, and M. Rizvi) 1996; Sustainable agriculture for vegetable production in Mississippi. *Journal of the MAS* 41(3):136 142; Igbokwe, P.E. 1996. Mulching for nutsedge control in field grown peppers; *Journal of Vegetable Crop Production*, 2(1):47 52. Igbokwe, P.E., and N.V.K. Nkongolo. 1996. Peanut yield potential as influenced by cropping system and plant density. *Peanut Science*. 23:129 133; Igbokwe, P.E. and S. Hollins. 2000. Field Evaluation of Vegetable Amaranth; *Journal of Vegetable Crop Production*. 6(2):75 85. G.K. Panicker, A.H. Al Humadi, C.A. Sims, J.L. Silva and F.B. Matta. 2004; Animal and Forest Wastes on Muscadine Grapes (*Vitis rotundifolia*) Production, and Water and Fruit Quality. *Acta Horticulturae*. Vol. 659. P.657 662 and G.K. Panicker, S.C. Tiwari, A.H. Al Humadi, C. Sims, L.C. Huam, P Igbokwe, O.P. Vadhwa, A. Johnson, J. Harness, G.A. Weesies, D.E. Stott, J. Bunch and T.E. Collins. 2002. Research on biomass development and residue decomposition of horticultural crops for erosion prediction models- *Acta Horticulture*. Vol. 638. p.53 58. Additionally, forested lands are an important natural resource especially in Mississippi, often underutilized by limited resource landowners. Mississippi has over 18.5 million acres of forested lands [Mississippi State University Extension Service, 2005]. The forest creates economical impacts of 1.25 billion to the quality of life for Mississippians by providing jobs, forest products, livestock forage areas, wildlife habitats and scenic areas. Limited resource farmers has also identified the need for information on practices to improve their management to maintain and sustain the current forested lands for present and future generations Additionally soil

erosion is a social and economic issue that is an essential factor in assessing ecosystem health and function. Soils found in a forest can have a direct effect on tree species composition and productivity. Trees prevent soil erosion, and they conserve energy.

## 2. Scope of the Program

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

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

### 1. Assumptions made for the Program

This program assumes that with contributions from the School of AREAS Research and Extension Program' highly qualified, experienced and knowledgeable staffs, appropriate production practices will be identified and utilized for the profitable production of adopted alternative crops. The program is based on ensure full participation of the limited resource farmers and we will grant permission to conduct research findings from our research on their farming fields. Planning and execution of the plans will continue to be in collaboration with limited-resource farmers with the willingness utilize the plant Production best management practices that are recommended and disseminated by Alcorn State University researchers, state specialists, area educators. Therefore, another assumption is whether the results and recommendations from previous studies. (Igbokwe, 1996; Igbokwe and Nkongolo1996) are appropriate to limited resource farmers farming operations and will enhance income opportunities of farm families through sustainable production of alternative crops. We also assume that the planned program that if fully implemented according what is being proposed, both through research and Extension programs, the programming aspects of the planned program will have an impact of limited resource farmers of the state of Mississippi. Another assumption is that limited resource farmers will have the labor and economic resources to incorporate plant management systems improved cultural practices, such as crop rotation, conservation tillage, mulching, multiple cropping, nutrient management and other factors of optimal production will be recommended and. insects, mites and other arthropods affecting plants pests for their crops controlled with appropriate pesticides, to increase productivity, and enhance profitability. Also farmers will utilized Weeds affecting plants weeds in croplands for controlling appropriate herbicides, mulching with organic and/or synthetic materials, cover cropping, and solarization, among other measures that determined to be suitable through research of the Scholl of AREAS at Alcorn State University. Additionally this planned assumes that new and improved food Processing technologies will be adopted by farmers to used modern value added processing and packaging technology of alternative crops. Also, it is a belief that farmers will be receptive to engage in commercial, alternative crop production such as shiitake mushroom, create some marketing opportunities than can have an ultimately effect on improving their quality of life. Lastly an assumption of the planned program that the success of alternative uses of land by small farmers and non-agricultural landowners must be have access to valuable information concerning techniques used for multi purpose land practices. In is assumed that small farmers and non-agriculture landowners must be provided with innovative and new ideas to prevent soil erosion and increase timber yields of their property. Without this knowledge, small farmers and non-agriculture landowners little progress will be preserve of our environment for future generations.

### 2. Ultimate goal(s) of this Program

1) To enhance the income potential of the Mississippi limited resource farmers by growing alternative crops through sustainable production practices.2) To improve the quality of life of small limited resource farm families.

## 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
2010	0.0	13.5	0.0	16.0
2011	0.0	14.5	0.0	17.0
2012	0.0	15.5	0.0	18.0
2013	0.0	16.5	0.0	19.0
2014	0.0	17.5	0.0	20.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Soil, Plant, Water, Nutrient Relationships Identified high yielding alternative crops suitable for western Mississippi will be made available to limited resource farmers for incorporation into their production plan. Production manuals will be developed as well as other information sheets will be used as guides by farmers in their efforts to incorporate these crops, increase productivity, and enhance profitability. Plant management Systems Improved cultural practices, such as crop rotation, conservation tillage, mulching, multiple cropping, nutrient management and other factors of optimal production will be recommended. Insects, Mites and other Arthropods Affecting Plants Pests of the crop plants will be controlled with appropriate pesticides. Major principles of integrated pest management system will be demonstrated and made available to farmers. The need to use the identified pest resistant cultivars will be emphasized. Weeds Affecting Plants Weeds in crop lands will be controlled with appropriate herbicides, mulching with organic and/or synthetic materials, cover cropping, and solarization, among other measures that will be found suitable through research at Alcorn State University. New and Improved Food Processing Technologies Farmers will be educated on modern value added processing and packaging technology of alternative crops. The processing plant will serve as a laboratory where limited resource farmers will receive hands on experience on the activities associated with value added processing and packaging of alternative crops. This value added technology will also encourage farmers to engage in commercial, alternative crop production, create some marketing opportunities and ultimately improve their quality of life. Workshops, and seminars, group meetings, on farm laboratories, field day expositions will be used to emphasize the need to use approved field preparation practices, proper fertilizer types and rates of applications in all form of alternative crop production. The importance of crop rotation, cover cropping, intercropping and use of non organic materials to enhance productivity, while protecting the environment will be demonstrated. Handouts and production manuals will be made available to all program participants. The need to practice teamwork through farmers' cooperatives will be encouraged. Value added product developments using raw materials from these investigations will be encouraged. The efforts between Alcorn scientists, extension educators, specialists, and off campus collaborators from NRCS, ARS and other 1890 and 1862 institutions will lead to the success of the plan. This program will be designed specifically for the limited resource farmers, extension educators, and rural dwellers within the State of Mississippi. We hope to obtain trademarks and patents for some of the products, through the collaborative efforts with the Department of Human Services on campus. Recipe booklets developed at Alcorn State University and information sheets will be used to disseminate generated results to the public, particularly for food processing initiatives. Also test plots will be establish for erosion control using native trees as treatment and non-tree areas as 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"> <li>● Workshop</li> <li>● Group Discussion</li> <li>● Other 1 (Curriculum Development)</li> <li>● Demonstrations</li> <li>● One-on-One Intervention</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Reports)</li> <li>● Newsletters</li> <li>● Web sites</li> <li>● Public Service Announcement</li> <li>● Other 2 (Patents)</li> </ul>

**3. Description of targeted audience**

This program will be designed specifically for the limited resource farmers and rural dwellers within the State of Mississippi.

We hope to provide the farmers and dwellers in Mississippi and the nation with findings related sustainable production, preservation and utilization of identified alternative crops.

### V(G). Planned Program (Outputs)

#### 1. Standard output measures

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	1000	600	150	200
2011	1150	700	175	250
2012	1250	800	200	300
2013	1000	1300	150	300
2014	1000	1400	299	400

#### 2. (Standard Research Target) Number of Patent Applications Submitted

##### Expected Patent Applications

2010 :0                      2011 :1                      2012 :1                      2013 :0                      2014 :0

#### 3. Expected Peer Review Publications

Year	Research Target	Extension Target	Total
2010	2	1	3
2011	2	1	3
2012	2	1	3
2013	2	1	3
2014	0	0	0

### V(H). State Defined Outputs

#### 1. Output Target

- Development of research papers and publications of the findings of studies focusing on plant systems

2010 :15                      2011 :20                      2012 :25                      2013 :30                      2014 :35

- Conduct educational programs for limited resource farm families and youth in communities on soil, plant, water, and nutrient relationships

2010 :20                      2011 :25                      2012 :28                      2013 :30                      2014 :32

- Conduct educational activities(demonstrations and workshops) for limited resource farm families and youth in communities on plant management systems.

2010 :15                      2011 :20                      2012 :25                      2013 :28                      2014 :30

- Conduct educational field days for limited resource farm families and youth on sustainable crop production practices.

2010 :6                      2011 :8                      2012 :10                      2013 :12                      2014 :14



- Conduct educational tours for limited resource farm families and youth on sustainable crop production practices.

<b>2010</b> 4	<b>2011</b> 4	<b>2012</b> 4	<b>2013</b> 4	<b>2014</b> 4
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- Conduct educational training on sustainable horticulture production practices to limited resources farm families.

<b>2010</b> 4	<b>2011</b> 6	<b>2012</b> 8	<b>2013</b> 10	<b>2014</b> 10
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- Develop educational fact sheets on sustainable horticulture production practices to limited resources farm families.

<b>2010</b> 4	<b>2011</b> 6	<b>2012</b> 8	<b>2013</b> 10	<b>2014</b> 12
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- Number of Research Projects

<b>2010</b> 4	<b>2011</b> 4	<b>2012</b> 4	<b>2013</b> 4	<b>2014</b> 0
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- Conduct educational workshop for limited resource farm families on forest soil erosion/management.

<b>2010</b> 6	<b>2011</b> 9	<b>2012</b> 12	<b>2013</b> 15	<b>2014</b> 18
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- Conduct educational demonstrations for limited resource farm families on best management practices and best available technologies.

<b>2010</b> 5	<b>2011</b> 5	<b>2012</b> 8	<b>2013</b> 8	<b>2014</b> 10
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**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Percent of program participants adopted integrated nutrient management to increase crop production.
2	Percent of program participants utilized integrated pest management to improve the quality of vegetable production.
3	Percent of producers adopted new crop systems to improve crop yield and quality
4	Percent of producers adopted value added product development to improve Food Processing Technologies
5	Percent of producers adopted forestry management to enhance productivity and erosion control
6	Percent of producers and farmers adopted grass hedges as a mean of increasing production for integrated pest management
7	Percent of farmers switched to sustainable agricultural practices for environmental pollution
8	Percent of participants improved product handling and sanitation
9	Percent of participants used recommended cultivar and other production practices to enhance productivity and profitability
10	Percent of participants that improved product handling and sanitation .
11	Percent of participants making crop choices for sustainability and profitability.
12	Percent of program participants to improve production efficiency through best management practices.

**Outcome #1**

**1. Outcome Target**

Percent of program participants adopted integrated nutrient management to increase crop production.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :20                      **2011** : 25                      **2012** : 30                      **2013** 35                      **2014** :40

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships

**Outcome #2**

**1. Outcome Target**

Percent of program participants utilized integrated pest management to improve the quality of vegetable production.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :15                      **2011** : 20                      **2012** : 25                      **2013** 30                      **2014** :35

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 211 - Insects, Mites, and Other Arthropods Affecting Plants

**Outcome #3**

**1. Outcome Target**

Percent of producers adopted new crop systems to improve crop yield and quality

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :10                      **2011** : 15                      **2012** : 20                      **2013** 25                      **2014** :30

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 205 - Plant Management Systems

**Outcome #4**

**1. Outcome Target**

Percent of producers adopted value added product development to improve Food Processing Technologies

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :10                      **2011** : 15                      **2012** : 20                      **2013** 25                      **2014** :30

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 501 - New and Improved Food Processing Technologies

**Outcome #5****1. Outcome Target**

Percent of producers adopted forestry management to enhance productivity and erosion control

**2. Outcome Type :** Change in Knowledge Outcome Measure

<b>2010</b> :15	<b>2011</b> :20	<b>2012</b> :25	<b>2013</b> 30	<b>2014</b> :35
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**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 211 - Insects, Mites, and Other Arthropods Affecting Plants

**Outcome #6****1. Outcome Target**

Percent of producers and farmers adopted grass hedges as a mean of increasing production for integrated pest management

**2. Outcome Type :** Change in Action Outcome Measure

<b>2010</b> :10	<b>2011</b> :15	<b>2012</b> :20	<b>2013</b> 25	<b>2014</b> :30
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**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 211 - Insects, Mites, and Other Arthropods Affecting Plants

**Outcome #7****1. Outcome Target**

Percent of farmers switched to sustainable agricultural practices for environmental pollution

**2. Outcome Type :** Change in Condition Outcome Measure

<b>2010</b> 5	<b>2011</b> :7	<b>2012</b> :10	<b>2013</b> :12	<b>2014</b> :14
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**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 102 - Soil, Plant, Water, Nutrient Relationships

**Outcome #8****1. Outcome Target**

Percent of participants improved product handling and sanitation

**2. Outcome Type :** Change in Knowledge Outcome Measure

<b>2010</b> :15	<b>2011</b> :20	<b>2012</b> :25	<b>2013</b> 30	<b>2014</b> :35
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**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 501 - New and Improved Food Processing Technologies

**Outcome #9**

**1. Outcome Target**

Percent of participants used recommended cultivar and other production practices to enhance productivity and profitability

**2. Outcome Type :** Change in Action Outcome Measure

**2010** 20                      **2011** : 25                      **2012** : 30                      **2013** 35                      **2014** :40

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 501 - New and Improved Food Processing Technologies

**Outcome #10**

**1. Outcome Target**

Percent of participants that improved product handling and sanitation .

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 25                      **2011** : 30                      **2012** : 35                      **2013** 35                      **2014** :0

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 501 - New and Improved Food Processing Technologies

**Outcome #11**

**1. Outcome Target**

Percent of participants making crop choices for sustainability and profitability.

**2. Outcome Type :** Change in Action Outcome Measure

**2010** 30                      **2011** : 35                      **2012** : 40                      **2013** 25                      **2014** :0

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 205 - Plant Management Systems
- 501 - New and Improved Food Processing Technologies

**Outcome #12**

**1. Outcome Target**

Percent of program participants to improve production efficiency through best management practices.

**2. Outcome Type :** Change in Action Outcome Measure

**2010** 30                      **2011** : 35                      **2012** : 40                      **2013** 25                      **2014** :0

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 205 - Plant Management Systems

**V(J). Planned Program (External Factors)****1. External Factors which may affect Outcomes**

- Public Policy changes
- Natural Disasters (drought, weather extremes, etc.)
- Populations changes (immigration, new cultural groupings, etc.)
- Economy
- Government Regulations
- Other (Personnel availability)

**Description**

Natural Disasters (drought, weather extremes, etc. can be a external factor - Planned agricultural/horticultural enterprises operate in a complex and volatile context involving susceptibility to weather which prevents or delays planting and drought conditions that reduces yield and quality of the crop. Economy-fundamental change occurring in the state and regional economies within which agricultural and horticultural enterprises operate. Public Policy changes- Another constraint that may affect outcomes is public policy, especially those relating to comparative prices of inputs and harvested crops. If it is politically feasible to provide farmers a high price for their product while holding down input cost, farmers will utilize the inputs as they accept the new technology. Government Regulations-changing government regulations such as competitive land uses, shifting development patterns and global market influence. Populations changes (immigration, new cultural groupings, etc.)- Population changes in farming communities can lead to producer/neighbor issues that influence choice of production practices. Agricultural/horticultural enterprises operate in a complex and volatile context involving susceptibility to weather extremes, changing governmental policies and regulations, competitive land uses and shifting development patterns, evolving consumer demands, and globally influenced markets. Fundamental change is occurring in the state and regional economies within which agricultural and horticultural enterprises operate. The specific implications of these external factors vary greatly by locale and across commodities and business forms. Population and land use changes in farming communities can lead to producer/neighbor issues that influence choice of production practices.

**V(K). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Case Study
- Before-After (before and after program)
- Comparison between locales where the program operates and sites without program intervention

**Description**

Comparison of crop performances under improved production practices with those produced under the conventional production practices. Comparisons of quality of crops produced and additional income to be generated by the farmers who adopted such resources/program, with those still using conventional production practices. The outcome of this problem will be influenced mainly by such external factors as variations in climate during each growing season, inadequate appropriations, public policy changes, and government regulations. The ability or willingness of younger men and women to become involved in production agriculture will enhance productivity and profitability.

Research will be evaluated according to its relevance to Mississippi and the nation. Productivity will be a measure of the number of publications in refereed journals and other delivery methods. It will also be measured by the extent to which the farmers are switching to alternative crop production through sustainable agronomic production practices. The extent to which our findings will enhance scientific studies in other institutions will serve as another evaluation measure of our efforts.

**2. Data Collection Methods**

- Observation
- Mail
- Journals
- Telephone
- Whole population
- Tests

**Description**

Soil sampling will be used to determine nutrient requirements for crop evaluation studies. Questionnaires to be completed by limited resource farmers and the community will be used to determine crop production and forest soil erosion problems in the State of Mississippi. Personal observation and communication will also be used to identify major crop of interests to growers. The impact of all field management practices would be observed and findings reported. Statistical analysis to be used to compare findings from these studies will depend on experiment design and outcome desired. Data collection on growth and yield components will be based on the procedures established by the American Society of Agronomy and Horticulture. Journals will be used to collect information on previous work related to the project.

**V(A). Planned Program (Summary)****Program #3****1. Name of the Planned Program**

Youth, Family, Nutrition, Health, Fitness, Wellness and Obesity

**2. Brief summary about Planned Program**

The Youth, Family, Nutrition and Health Planned Program will utilize an integrated approach to address relevant issues facing youth and families. Stakeholders from our environmental scanning processes led to the integration of three planned programs into one. The identified a need for the Alcorn State University Extension Program to aid youth in resisting risky behaviors such as: tobacco use, high rates of teen pregnancy and infection rate of sexually transmitted diseases, increase dropout rates and juvenile delinquency and lack of recreation activities as relevant issues facing youth in the state. Also other issues identified were the lack of skills that youth possess to enter in leadership roles and opportunities in school and communities; lack of job preparedness/readiness and career and business development. An area of the planned program will focus on Youth at Risk by exploring methods to provide support systems to aid youth in resisting risky behaviors such as teen pregnancy, STD's and tobacco use, dropouts, alcohol and drug abuse, juvenile delinquency, etc. Educational programs will develop negotiation, decision making and coping skills of youth to resist risky behaviors. Also, club development/volunteer management to facilitate the organizing and managing of community and school based clubs will be implemented. Additionally, volunteers will be trained to work with youth in clubs to provide variety of educational, cultural and citizenship opportunities. Youth leadership will be another emphasis of the program to enhance leadership competencies and the necessary personal, social and cognitive skills to become leaders in school and communities. Additionally an emphasis will be on increasing limited resource youth participation in leadership opportunities. Another focused area of youth development is on career development/workforce preparedness to develop job readiness skills to assist youth in the job searches and increased awareness of career options and youth business opportunities. Additionally the planned program will emphasize many issues facing the "Family", educational programs will be implemented on providing an understanding of the social, cognitive, emotional, and physical development of children and families. Providing educational programs on Sudden Infant Death, Shaking Baby Syndrome and other educational programs empower parents with the knowledge to provide quality learning environments for children. Creating healthy families will consist of developing parenting skills and quality child care and afterschool programs that promote quality learning environments. Family Resource Management will also be emphasized exploring strategies to assist youth and adults in families to obtain and managing money and financial resources effectively to meet present needs and future goals. Our stakeholders also identified the lack of parenting and money management skills; the lack of child care training and facilities and high rate of obesity among children, youth and adults. Another area of the planned program focuses on Nutrition, Health, Fitness Wellness and Obesity programs to provide information about nutrition, health lifestyles and physical fitness. Current trends in obesity among African-American children, youth and adults remains the highest among all ethnic groups in Mississippi. Since obesity starts early in childhood and extends into the adolescent years and possibly into adulthood. Intervention and or prevention strategies are necessary to addressing this issue. Nutrition behavior modification with healthy eating and increased physical activity are contributing factors to the prevention and management of obesity in all population groups. Also research conducted will be translated into practical application and disseminating on nutrition, health, physical fitness, Wellness and Obesity for youth and families in communities

**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
703	Nutrition Education and Behavior		20%		20%
724	Healthy Lifestyle		20%		20%
801	Individual and Family Resource Management		20%		20%
802	Human Development and Family Well-Being		20%		20%
806	Youth Development		20%		20%
	<b>Total</b>		100%		100%

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

#### 1. Situation and priorities

In Mississippi youth are faced with staggering issues that put them at risk such as pregnancy, and sexually transmitted diseases and tobacco use. Mississippi has the one of the highest percentages of birth to teens in the nation of 17.1 percent. Of 214,190 girls' between ages 10 to 19, 7,583 became pregnant in 2002. Also in 2002, 2,831 dollars were spent on teen childbearing. For every dollar invested in teen pregnancy prevention \$2.65 in medical and social cost are saved. In 2002, Mississippi State Department of Health (MSDH) reported many cases of sexually transmitted diseases, 11,815 cases of Chlamydia, 6,859 cases of gonorrhea and 248 cases of syphilis. There were 379 new cases of HIV and 348 of AIDS. 16 percent of youth in Mississippi are in unsupervised care after school each day and these youth are more likely to become involved in risky behavior. Youth of limited resource families experience fewer opportunities to become leaders and gain skills to enhance their own development to build their self confidence within their schools and in communities. Also, due to limited financial resources they experience fewer chances to develop skills through involvement in school and community activities and events. Another issue facing youth, was reported in the 2006 State Youth Tobacco Survey (YTS) which found that 22.4 % of Mississippi's high school student's smoke and 15.5% of high school males use spit tobacco. 6,800 students under the age 18 become smokers each year and 192,000 youth under 18 are exposed to secondhand smoke at home each year. According to the Mississippi Labor Market Data the unemployment rate of youth is 15 percent. Half of the graduating seniors in Mississippi will leave high school lacking the skills necessary to secure a job. The key to the future of rural youth and their communities will be investing in career development/ workforce and business programs. Parents are faced with a significant number of issues in raising their families today. Annie E. Casey Foundation (2006) states that Mississippi statistics for children are alarming: one in four children spends part of their childhood in poverty, lives in a single parent household and are latch key children. One in six lack adequate health insurance, one in five become a teenage parent. According to the 2000 US Census, more than 2.4 million grandparents indicate they are responsible for meeting the basic needs of their grandchildren. Difficult situations such as poverty and violent communities or a lack of positive parenting techniques in the parents' backgrounds impede healthy family functioning. As a result of the lack of parenting education, child care, in the area of human development and family well-being, the emotional, physical and social welfare of individuals and family members are threatened. Also, individual and family resource management research findings describe a challenging financial situation for many individuals and families. Consumer credit indebtedness is rampant and the number of personal bankruptcies continues to rise. The personal savings rate is lower than in any other industrialized nation. Few limited resource individuals and families have adequately prepared to achieve financial goals and their basic personal financial management skills are at an all time low (Economic and Commerce, 2006). Also quite alarming is children, youth and adults in Mississippi suffer from an alarming rate of overweight and obesity that continues to rise. Overweight children significantly miss more school days and perform less well academically than healthy weight children. The risk factors for heart disease (such as high cholesterol and high blood pressure) and type 2 Diabetes occur more frequently in overweight children, youth and adults. In the past ten years there has been a dramatic increase in the prevalence of type 2 Diabetes in youth and adults. In addition to the health consequences, there are risks of developing potentially life-threatening

psychological problems as well, such as depression, eating disorders, discrimination and stigmatization, negative self image, and passivity and withdrawal from peers. Mississippi is leading the nation in obesity and obesity related health conditions. Living conditions, behavioral factors, and lifestyles have been identified as some of the major factors responsible for excessive weight gain and obesity, and the lack of physical activity (J.P. Peter, 2002). In 2005, 66.7% of Mississippi adults were overweight. Obesity has been linked to the increased risk of chronic disease such as hypertension, Type II diabetes, heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and colon cancer. The goal of Youth, Family Nutrition, Fitness, Wellness and Obesity planned program is to plan and deliver educational programs, activities and events that will enable at risk limited resource children, youth and families to address high priority issues facing as stated above.

## 2. Scope of the Program

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

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

### 1. Assumptions made for the Program

Situational barriers, lack of income and time can be possible barriers that prevent caregivers from participating in nutrition education programs on a regular basis. Aggressive recruitment strategies will be implemented to increase program participation. With innovative, non traditional promotional advertisement of planned program, rural communities will welcome the opportunity to participate and volunteer to help with improving health conditions within their communities. Enhancement of program attendance will result in improved dietary status and maintaining proper management of chronic diseases. Training and implementation of nutrition health educational programs will slow down excess weight gain and prevent and/or delay the onset of nutrition related chronic diseases. Disparities in the prevalence of overweight and obesity exist in many segments of the population based on race, ethnicity, gender, age and socioeconomic status. For example, overweight and obesity are particularly common among minority groups and those with a lower family income. Research will reveal the culturally appropriate health and nutrition promotion, prevention and treatment of obesity in underserved and under represented population groups. Furthermore, research efforts will uncover emerging technologies to provide access to nutrition therapies to treat related problems/diseases and evaluate intervention success.

### 2. Ultimate goal(s) of this Program

The ultimate goal of the proposed plan is to enhance coping skills of youth by developing decision-making, communication and refusal skills; to help youth resist risky behaviors and to have the ability to address relevant issues in their daily lives. This will include knowledge and awareness concerning career development/workforce preparedness, and development of job readiness skills of at-risk, limited resources youth to obtain employment or pursue a career in a desirable workplace. This plan will also develop a healthy and well-nourished physically fitness population through the dissemination of new and innovative delivery methods, practices, and products that will result in increased public awareness of healthy life style choices. The plan will increase the capacity of family improve parenting practices that result in better family development and relationship outcomes; improve parent/caregivers practices to increase and provide high quality, accessible and affordable childcare and improve financial management skills of targeted limited resource residents to improve their financial stability.

## 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
2010	0.0	9.5	0.0	2.0
2011	0.0	10.5	0.0	3.0
2012	0.0	11.5	0.0	4.0
2013	0.0	12.5	0.0	5.0
2014	0.0	13.5	0.0	6.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Area Extension Educators will conduct educational sessions in local schools and communities using educational programs, events and activities to aid youth in resisting risky behaviors such as tobacco use, alcohol and drug abuse, becoming sexual active, STD's and high school dropouts and juvenile detention, etc . Extension educators, community volunteers, state specialists and other collaborators will plan and organize programs, summits and events that will provide additional educational information to youth. Career days/fairs will be conducted at local schools and communities. The development of skills of volunteer leaders to organize school and community based clubs. Youth and volunteer leaders will participate in the following activities and events: 4 H Project Achievement Day; 4 H State Club Congress; 4 H State Fair Exhibit/4 H Day at Fair; National 4 H Congress; leadership camp and career days/fairs. Additionally, educational programs, events and activities will be implemented to improve parenting practices to improve parent and child relationship. Also, information will be disseminated and programs conducted on child development for developing and enhancing after school programs child care and other learning environments of children. Educational workshops, tours and career days/fairs will be conducted at local schools and in communities on financial resource management. Another aspect of this planned program will focus on the implementation of educational programs, events and activities along with research to address the nutrition, health fitness wellness and obesity issues facing limited resources families and youth in communities. Educational programs and workshops will be conducted to promote nutrition and other factors contributing to healthy lifestyles. Activities will be implemented that focused on behavior changes needed for proper weight management. Educational programs will be implemented focusing on recipe modification, portion control, food safety and calorie reduction. The educational program in this area of the planned program will provide participants adequate knowledge and information to make wise decisions concerning nutrition, health and their lifestyles to decrease weight gain and delay the onset of chronic diseases such as: heart disease, diabetes and hypertension.

**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"> <li>● Other 1 (Regional Youth Summits)</li> <li>● Group Discussion</li> <li>● Demonstrations</li> <li>● Education Class</li> <li>● Workshop</li> <li>● One-on-One Intervention</li> <li>● Other 2 ((Summer Camps) Mini Conference)</li> </ul>	<ul style="list-style-type: none"> <li>● TV Media Programs</li> <li>● Newsletters</li> <li>● Public Service Announcement</li> <li>● Web sites</li> <li>● Other 1 (Fact Sheets)</li> <li>● Billboards</li> <li>● Other 2 (Youth Newsletters)</li> </ul>

**3. Description of targeted audience**

The target audiences are at risk resource children and youth age 5 19 and adult volunteers

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	400	600	2500	1600
2011	450	700	2900	1800
2012	500	800	3300	2000
2013	600	900	3700	2200
2014	700	1000	4000	2500

**2. (Standard Research Target) Number of Patent Applications Submitted**

**Expected Patent Applications**

2010 :0                      2011 :0                      2012 :0                      2013 :0                      2014 :0

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2010	1	2	3
2011	1	2	3
2012	2	2	4
2013	2	3	5
2014	3	3	6

**V(H). State Defined Outputs**

**1. Output Target**

- Conduct educational programs, events and activities on risky behaviors affecting youth

2010 :15                      2011 :20                      2012 :25                      2013 :30                      2014 :35

- Conduct educational programs, events and activities on developing career pathways, workforce and business development

2010 :15                      2011 :20                      2012 :20                      2013 :25                      2014 :30

- Conduct career/ workforce and business development educational sessions in local schools and communities

2010 :20                      2011 :25                      2012 :30                      2013 :35                      2014 :40

- Conduct leadership development educational programs, events and activities to provide opportunities at the county, regional, state and national level

2010 :10                      2011 :12                      2012 :14                      2013 :16                      2014 :18

- Involvement of minority youth in county, state, district and national 4-H leadership activities and events: Youth leadership Academy; 4 H: Achievement Day, State Club Congress, Mississippi State Fair, National 4-H Conference and National 4-H

Congress.

	2010	2011	2012	2013	2014
	20	30	40	45	50
● Identify community learning projects to provide opportunities for youth leaders to develop community projects	10	15	20	25	30
● Conduct science, technology and environment programs events and activities to attract the interest of youth in educational fields	5	8	10	12	14
● Conduct educational programs, events and activities on family financial resource management	5	7	10	12	14
● Conduct educational programs, events and activities on effective parenting practices	8	10	12	14	16
● Implement a series of family management institutes for limited resource families and youth	3	3	3	3	3
● Implement a series of family management institutes for limited resource families and youth	4	6	8	10	12
● Conduct educational programs, events and activities on characteristics of quality childcare, selection, afterschool programs, and effective childcare learning environments	8	10	12	14	16
● Conduct research on nutrition, health, wellness, obesity and opportunities for physical fitness on youth and adult.	1	2	2	2	3
● Conduct nutrition and health and wellness seminars for limited resource youth and adults	3	4	5	6	8
● Disseminate information about nutrition, chronic diseases and weight management	3	3	3	3	3
● Conduct educational programs, events and activities on nutrition, and physical fitness to improve health related diseases among limited resource youth and adults	5	10	15	20	22
● Conduct demonstrations and disseminate information related to physical fitness and weight management	10	15	20	25	30
● Conduct educational programs, events and activities on food safety practices to preserve food quality and food sanitation	4	6	8	10	12
● Develop presentations on research results on nutrition, chronic diseases and physical fitness; via seminars, summits and conferences					

2010 4

2011 6

2012 8

2013 10

2014 12

**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Increase the number of youth who resisted risky behavior that impacts their social and educational development.
2	Increase the percentage of youth skills developed and utilized for career, workforce and business development.
3	Increase in number of minority youth competing in leadership competitions, youth events, activities and community projects
4	Percent of limited resource parents and caregivers to involve children in library and book clubs programs to improve literacy among children
5	Increase in the number of trained volunteer leaders to organize and manage school and community youth clubs
6	Percent of limited resource participants to adopt parenting practices to improve parent/child relationships
7	Percentage of limited resource families to gain child development knowledge and skills and used to make quality decisions on child care, afterschool programs, and early childhood learning environments.
8	Percent of limited resource families and youth to utilize their skills to analyze their financial well-being and make effective financial management decisions
9	Percentage of limited resource families and youth who utilize both healthy eating practices and physical fitness to manage obesity, weight and health related diseases.
10	Percentage of participants that will use nutrition and physical fitness strategies and tips for weight management and obesity
11	Percentage of participants to utilize knowledge gained and made adjustments in their nutrition and lifestyle behaviors
12	Percentage of limited resource families who utilize tips in food preparation and storage to maintain food quality and sanitation
13	Percentage of participants who gain increased accessibility to fruit and vegetables consumption through the development of community gardens in communities.
14	Percentage of limited resource parents who gain knowledge/practices on childhood obesity for management of chronic diseases

**Outcome #1**

**1. Outcome Target**

Increase the number of youth who resisted risky behavior that impacts their social and educational development.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :30                      **2011** : 40                      **2012** : 50                      **2013** 60                      **2014** :60

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**Outcome #2**

**1. Outcome Target**

Increase the percentage of youth skills developed and utilized for career, workforce and business development.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 20                      **2011** : 30                      **2012** : 35                      **2013** 40                      **2014** :45

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 806 - Youth Development

**Outcome #3**

**1. Outcome Target**

Increase in number of minority youth competing in leadership competitions, youth events, activities and community projects

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 25                      **2011** : 30                      **2012** : 40                      **2013** 45                      **2014** :50

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 806 - Youth Development

**Outcome #4**

**1. Outcome Target**

Percent of limited resource parents and caregivers to involve children in library and book clubs programs to improve literacy among children

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :15                      **2011** : 20                      **2012** : 25                      **2013** 30                      **2014** :35

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 806 - Youth Development



**Outcome #5**

**1. Outcome Target**

Increase in the number of trained volunteer leaders to organize and manage school and community youth clubs

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :15                      **2011** : 20                      **2012** : 25                      **2013** 30                      **2014** :35

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 806 - Youth Development

**Outcome #6**

**1. Outcome Target**

Percent of limited resource participants to adopt parenting practices to improve parent/child relationships

**2. Outcome Type :** Change in Action Outcome Measure

**2010** :15                      **2011** : 17                      **2012** : 19                      **2013** 21                      **2014** :25

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**Outcome #7**

**1. Outcome Target**

Percentage of limited resource families to gain child development knowledge and skills and used to make quality decisions on child care, afterschool programs, and early childhood learning environments.

**2. Outcome Type :** Change in Action Outcome Measure

**2010** :12                      **2011** : 15                      **2012** : 18                      **2013** 20                      **2014** :25

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**Outcome #8**

**1. Outcome Target**

Percent of limited resource families and youth to utilize their skills to analyze their financial well-being and make effective financial management decisions

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :12                      **2011** : 14                      **2012** : 16                      **2013** .18                      **2014** :20

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 802 - Human Development and Family Well-Being

**Outcome #9**

**1. Outcome Target**

Percentage of limited resource families and youth who utilize both healthy eating practices and physical fitness to manage obesity, weight and health related diseases.

**2. Outcome Type :** Change in Action Outcome Measure

**2010** 20                      **2011** : 25                      **2012** : 30                      **2013** 35                      **2014** :50

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 724 - Healthy Lifestyle

**Outcome #10**

**1. Outcome Target**

Percentage of participants that will use nutrition and physical fitness strategies and tips for weight management and obesity

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :14                      **2011** : 16                      **2012** : 18                      **2013** 20                      **2014** :25

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 724 - Healthy Lifestyle

**Outcome #11**

**1. Outcome Target**

Percentage of participants to utilize knowledge gained and made adjustments in their nutrition and lifestyle behaviors

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :16                      **2011** : 18                      **2012** : 20                      **2013** 22                      **2014** :25

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**Outcome #12**

**1. Outcome Target**

Percentage of limited resource families who utilize tips in food preparation and storage to maintain food quality and sanitation

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** 5                      **2011** : 10                      **2012** : 12                      **2013** :14                      **2014** :16

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**Outcome #13**

**1. Outcome Target**

Percentage of participants who gain increased accessibility to fruit and vegetables consumption through the development of community gardens in communities.

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :5                      **2011** :7                      **2012** :10                      **2013** :12                      **2014** :14

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**Outcome #14**

**1. Outcome Target**

Percentage of limited resource parents who gain knowledge/practices on childhood obesity for management of chronic diseases

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :10                      **2011** :12                      **2012** :14                      **2013** :16                      **2014** :18

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 703 - Nutrition Education and Behavior

**V(J). Planned Program (External Factors)**

**1. External Factors which may affect Outcomes**

- Other (Relocation of youth)
- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Public Policy changes
- Appropriations changes

**Description**

External factors that may affect the outcome of these programs are the shift or change in staffing patterns and resources available to conduct the various educational session activities and events. Natural disasters such as: hurricanes, tornados and floods that cause families to relocate and cause economic distress. Youth and families participating in the program can leave programs because of relocation of the family (youth leaving the school district, parent relocating because of employment). Parents or guardians not giving youth permission to participate in the program (lack of parental consent). Policy changes in local and state public and private schools counties and the availability of transportation for participants could affect program implementation.

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

**1. Evaluation Studies Planned**

- Before-After (before and after program)

**Description**

The evaluation plan for the programs will be evaluated before and after the program using appropriate evaluation

instruments and tools for the educational curriculum, events and activities as it relate to the Youth, Family, Nutrition, Health, Wellness and Obesity planned program.

## 2. Data Collection Methods

- Mail
- Telephone
- Case Study
- Observation
- On-Site
- Unstructured
- Sampling

### Description

Data will be gathered from participants of the programs before and after using pre post tests, observation, and portfolio reviews. Probability sampling will be used because it is the preferred process for youth program evaluations. The programs will have a targeted population and utilized indicators related to the program objectives and evaluation assessment conducted for programs..

**V(A). Planned Program (Summary)****Program #4****1. Name of the Planned Program**

Small Family Farm Enterprise Financial Analysis, Management, and Marketing

**2. Brief summary about Planned Program**

The Small Family Farm Enterprise Financial Analysis, Management, and Marketing planned program, through both research and Extension Program outreach and the Small Farm Development Center combination of diverse programming of the School of AREAS at Alcorn State University, strives to serve the needs of small and limited resource farmers. The program encompasses the economics of agricultural production, farm and business management, legal risks, marketing and distribution practices. The Extension Program farm demonstrations at outreach centers and on limited resource farms and research studies focuses on addressing problems associated with production and market selection for alternative enterprises with optimal resource allocation in enterprise management. Educational programs, events and activities are designed and implemented with the ultimate goal of enhancing the economic viability of small and limited resource farms and their families. In the area of Marketing and Distribution practices, programs will place emphasis on local, regional and niche markets to provide a reliable research-based market analysis, and an understanding of the economic environment facing limited resource farmers. In the area of Economics of Agricultural Production and Farm Management, economic analyses will be provided to reinforce the fact that many factors contribute to farm profitability and sustainability. Farm and enterprise budgets that can be easily understood and adopted will be developed and regularly updated. Models of profitable and sustainable operations and strategies would be used through the delivery of extension programs to farmers that are experiencing financial stress on their farming operations. In the area of Business Management, Finance and Taxation, the planned program will focus on the financial situation of the farm family, their access to capital as well as their debt level, spending ability and income generating capacity. An analysis will be done to determine the situation of farmers with regard to their level of knowledge about farm record keeping, financial analysis, decision-making, best management practices, marketing and other critical areas affecting financial viability. Educational programs, events, activities and technical assistance will be implemented to address the needs of limited resource farm and farm families. Marketing programs will provide information on types of markets, how to market, marketing competition, access, and strategies for success. Program, events and activities will be offered on how to access them successfully, which should enhance their sales and profit. Marketing agreements and memorandum of understanding is our continual target for the small farmer that will assure them of guaranteed markets for quality products. The Marketing program will continually educate our farmers along side marketing with food safety and certification on Hazard Analysis and Critical Control Point (HACCP).

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
601	Economics of Agricultural Production and Farm Management		30%		0%
602	Business Management, Finance, and Taxation		40%		50%
604	Marketing and Distribution Practices		30%		50%
	<b>Total</b>		100%		100%

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

#### 1. Situation and priorities

Small and limited resource farms (i.e., farms generating less than \$100,000 annual sales) constitute approximately 90% of Mississippi's 42,186 farms, according to the 2002 Census of Agriculture (USDA, NASS, 2003). Small and limited resource farmers are important to Mississippi's economy because of the unique nature of farm structure in this state. A significant proportion of farmers are small and limited resource farmers in the service area of in Alcorn State University Extension Program. These farmers are engaged in a variety of crop and livestock enterprises, including traditional field crops, beef, and new alternatives enterprises targeted to niche markets. Agriculture and forestry contributes significantly to the economy of the State of Mississippi, producing more than \$ 5 billion worth of goods and services. The income created in agriculture and forestry generates more than \$20 billion impact on the overall state economy via multiplier effects. Small farmers are facing numerous challenges having negative impact on financial and economic performance. Fox et al. (1993), Sonka, et al. (1989), Abbott and Yarbrough (1993), are examples of past studies that investigated large farms managerial performance and income variability, and computer technology use in decision making. Similarly, some past studies have examined the effects on farm management, marketing, policy and farm structure from the perspective of small and limited resource farmers (Nelson et al., 1999; Anderson and Roth, 1997; Gebremedhin and Christy, 1996). The planned program will expand on The School of Agriculture, Research Extension and Applied Sciences (AREAS) previous research, extension and outreach efforts. For example, research will continue to address problems associated with enterprise and market selection, optimal resource allocation in production and risk management. Additionally focus on farm business management, and financial and marketing strategies to enhance farm income, overall farm profitability, and individual/family resource allocation. - Abbott, E. and Paul Yarbrough. (1993); "The Unequal Impacts of Microcomputer Adoption and Use on Farmers"; Proceedings, International Conference on Information Technology and People, ITPA '93, Moscow, Russia .Anderson, G. and M. Roth. (1997);. "A Role for the Land Grant System in Strengthening the Marketing Skills, Practices and Opportunities of Small Farmers"; In D. Ebodaghe (ed.), Proceedings of the National Small Farm Conference, USDA, CSREES. Fox, G. P., A. Bergen, and E. Dickson. (1993); "Why are Some Farms more Successful than others?; A Review, "In Size, Structure, and the Changing Face of American Agriculture. Ed., A. Hallman, pp. 232 50; Boulders, Co: Westview Press .Gebremedhin, T.G. and R. Christy. (1996). "Structural Changes in Agriculture: Implications for Small Farms, "Journal of Agricultural and Applied Economics, Volume 28, number 1.Nelson, B., M. Roth and J. Maestro Sherer. (2000); Direct Marketing Today Challenges and Opportunities. U.S. Department of Agriculture, AMS. Sonka, S. T., R. H. Hornbaker, and M.A. Hudson. (1989); " Managerial Performance and Income Variability for a Sample of Illinois Cash Grain Producers and " North Central Journal of Agricultural Economics. Vol. 1, pp. 219 226.USDA, NASS. (2003). Census of Agriculture.

#### 2. Scope of the Program

- In-State Extension
- In-State Research

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

#### 1. Assumptions made for the Program

An assumption of the planned program is by providing technical assistance in financial management that the farmers' profit will not increase; the farmers' debt will decrease and if their quality of life is not adequate. If this is not sufficient, the assumption

is that farmers will adapt the best business management practices to increase their chances of getting a loan and other assistance made available by both federal and state agencies. The planned program is expected to increase the knowledge of small and limited resource farmers in farm management, business management, finance, marketing and distribution of farm products. Also that personnel/FTE allocation and funding of the internal environmental variables are adequate and operates appropriately for achieving intended outcomes. The targeted limited audiences of this planned program are expected to be small and limited resource farmers with varying educational background and limited access to capital for startup. Other factors may affect their ability to participate in programs which will influences proposed outcomes. Another assumption is that limited resource farmers and producers have a desire to improve their current situation. Additionally, the existing county staff will provide adequate liaison between the state staff in the effective implementation of programs for participating farmers. Profitable marketing is assumed to require a logical approach in deciding at what price to sell or buy and by what method to establish that price. The decision of how to market and at what price requires an informed understanding of how markets work and why prices move up and down. But, also understanding the various marketing methods and tools helps in making the right marketing decisions. Also there is already knowledge among farmers of the basics of supply and demand.

**2. Ultimate goal(s) of this Program**

The ultimate goal is to enhance the economic viability of small and limited resource farm families by strengthening their technical knowledge, skills and economic decision making so that they can contribute fully to the agricultural economy; better their own lives and the lives of their children or other dependents, ultimately benefiting the society as a whole in rural 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
2010	0.0	4.0	0.0	1.5
2011	0.0	4.0	0.0	2.0
2012	0.0	5.0	0.0	2.5
2013	0.0	5.0	0.0	3.0
2014	0.0	5.0	0.0	3.5

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research activities will consist of a collection of primary data from farmers, retailers and other economic units along the supply chain; gathering and collation of relevant secondary statistical data; analysis of production, managerial, marketing and financial data. Additionally, the development of enterprise budgets; development of models of effective strategies; dissemination of results will be emphasized in our programs One small farm conference presentation per year; one non refereed publication per year; two presentations annually at meetings and workshops for farmers. Extension Programs will consist of the development (or identification) of relevant content materials to address knowledge gaps needed by farmers. Focus groups survey instruments will be developed and one research project will be conducted per year. Various workshops, meetings, development of curricula, and other learning resources will be utilized for effective program implementation. Evaluation assessment methods will be implementation to document the impacts of our programs. Research methods will include observations, surveys to obtain primary data. Data analysis will be performed through cross tabulations, analysis of variance, regression techniques, enterprise, whole farm and partial budgeting techniques, linear programming. Also, extension outreach methods of the planned program will encompass educational classes, group meetings and one on one technical assistance sessions with farmers, field days tours and conferences. Additionally, farmers will be reached via indirect methods, such as, public service announcements, news bulletins, media programs and web sites.

**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"> <li>● Demonstrations</li> <li>● Education Class</li> <li>● Workshop</li> </ul>	<ul style="list-style-type: none"> <li>● Newsletters</li> <li>● Web sites</li> </ul>

**3. Description of targeted audience**

Small farmers; limited resource farmers; family farmers and disadvantaged farmers, low-income rural families.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	1700	2000	150	175
2011	1950	2200	200	200
2012	2175	2400	250	225
2013	2325	2600	250	225
2014	0	0	0	0

**2. (Standard Research Target) Number of Patent Applications Submitted**

**Expected Patent Applications**

2010 :1                      2011 :1                      2012 :1                      2013 :1                      2014 :1

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2010	0	1	1
2011	0	1	2
2012	0	2	3
2013	0	3	4
2014	0	3	4

**V(H). State Defined Outputs**

**1. Output Target**

- Conduct educational programs, event and activities on financial management of farm families.

2010 :8                      2011 :10                      2012 :12                      2013 :14                      2014 :16



- Conduct educational programs, events and activities on farm legal risk
 

<b>2010</b> 6	<b>2011</b> 8	<b>2012</b> :10	<b>2013</b> :12	<b>2014</b> :14
---------------	---------------	-----------------	-----------------	-----------------
- Conduct educational programs, events and activities on farm management of farming operations
 

<b>2010</b> :10	<b>2011</b> :12	<b>2012</b> :14	<b>2013</b> :16	<b>2014</b> :18
-----------------	-----------------	-----------------	-----------------	-----------------
- Conduct research studies on farm and financial management and marketing.
 

<b>2010</b> :1	<b>2011</b> 2	<b>2012</b> :2	<b>2013</b> 3	<b>2014</b> 3
----------------	---------------	----------------	---------------	---------------
- Conduct educational programs events, activities and provide technical assistance on the farm loans and other governmental agencies requirements and application processes
 

<b>2010</b> :10	<b>2011</b> :12	<b>2012</b> :14	<b>2013</b> :16	<b>2014</b> :18
-----------------	-----------------	-----------------	-----------------	-----------------
- Conduct educational programs, events and activities on the development a how to utilized marketing plans
 

<b>2010</b> 8	<b>2011</b> :10	<b>2012</b> :12	<b>2013</b> :14	<b>2014</b> :16
---------------	-----------------	-----------------	-----------------	-----------------
- Conduct demonstrations on record keeping of sales and expenses on farming operations and outreach centers.
 

<b>2010</b> 4	<b>2011</b> 6	<b>2012</b> :8	<b>2013</b> :10	<b>2014</b> :12
---------------	---------------	----------------	-----------------	-----------------
- Conduct educational programs, events and activities on new marketing techniques.
 

<b>2010</b> 6	<b>2011</b> 8	<b>2012</b> :10	<b>2013</b> :12	<b>2014</b> :14
---------------	---------------	-----------------	-----------------	-----------------
- Conduct educational programs, events and activities on making adjustments in produce marketing.
 

<b>2010</b> 4	<b>2011</b> 6	<b>2012</b> :8	<b>2013</b> :10	<b>2014</b> :12
---------------	---------------	----------------	-----------------	-----------------
- Development of research publications and presentations and fact sheets
 

<b>2010</b> 2	<b>2011</b> 4	<b>2012</b> :6	<b>2013</b> 8	<b>2014</b> :10
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**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Percentage of farmers and producers utilized knowledge gained on farm and financial management minimize cost on their farm operations to increase production and revenues.
2	Percentage increase of limited resource farmers and land owners minimized land and farm loss.
3	Percentage increase of farmers increased access to capital on their farming operations
4	Percentage increase of farm families demonstrated the use of farm and financial management
5	Percentage of limited resource farmers who developed and utilized marketing plans
6	Percentage of the number of farmers and cooperatives demonstrated the use of marketing and distribution practices.
7	Percentage of small-scale and limited resource farmers keeping records of sales and expenses
8	Percentage of farmers and cooperatives gained knowledge on new marketing techniques
9	Percentage of the number of participants made adjustments in produce marketing.
10	Percentage of the number of participants made adjustments in produce marketing.

**Outcome #1**

**1. Outcome Target**

Percentage of farmers and producers utilized knowledge gained on farm and financial management minimize cost on their farm operations to increase production and revenues.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** :15                      **2011** : 16                      **2012** : 17                      **2013** :18                      **2014** :20

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 602 - Business Management, Finance, and Taxation

**Outcome #2**

**1. Outcome Target**

Percentage increase of limited resource farmers and land owners minimized land and farm loss.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 5                      **2011** : 7                      **2012** : 8                      **2013** 0                      **2014** :10

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 602 - Business Management, Finance, and Taxation

**Outcome #3**

**1. Outcome Target**

Percentage increase of farmers increased access to capital on their farming operations

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 4                      **2011** : 5                      **2012** : 8                      **2013** 7                      **2014** :9

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #4**

**1. Outcome Target**

Percentage increase of farm families demonstrated the use of farm and financial management

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** 5                      **2011** : 7                      **2012** : 8                      **2013** 9                      **2014** :10

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 601 - Economics of Agricultural Production and Farm Management

**Outcome #5**

**1. Outcome Target**

Percentage of limited resource farmers who developed and utilized marketing plans

**2. Outcome Type :** Change in Action Outcome Measure

**2010 :**13                      **2011 :** 16                      **2012 :** 19                      **2013 :** 22                      **2014 :**30

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 604 - Marketing and Distribution Practices

**Outcome #6**

**1. Outcome Target**

Percentage of the number of farmers and cooperatives demonstrated the use of marketing and distribution practices.

**2. Outcome Type :** Change in Action Outcome Measure

**2010 :**13                      **2011 :** 16                      **2012 :** 19                      **2013 :** 22                      **2014 :**30

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 604 - Marketing and Distribution Practices

**Outcome #7**

**1. Outcome Target**

Percentage of small-scale and limited resource farmers keeping records of sales and expenses

**2. Outcome Type :** Change in Action Outcome Measure

**2010 :**4                      **2011 :** 5                      **2012 :** 6                      **2013 :** 7                      **2014 :**9

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 602 - Business Management, Finance, and Taxation

**Outcome #8**

**1. Outcome Target**

Percentage of farmers and cooperatives gained knowledge on new marketing techniques

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010 :** 6                      **2011 :** 8                      **2012 :** 10                      **2013 :** 12                      **2014 :** 14

**3. Associated Institute Type(s)**

•1890 Extension

**4. Associated Knowledge Area(s)**

- 604 - Marketing and Distribution Practices

**Outcome #9**

**1. Outcome Target**

Percentage of the number of participants made adjustments in produce marketing.

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** : 2                      **2011** : 3                      **2012** : 4                      **2013** : 4                      **2014** : 5

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 604 - Marketing and Distribution Practices

**Outcome #10**

**1. Outcome Target**

Percentage of the number of participants made adjustments in produce marketing.

**2. Outcome Type :** Change in Knowledge Outcome Measure

**2010** : 2                      **2011** : 3                      **2012** : 4                      **2013** : 4                      **2014** : 5

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 604 - Marketing and Distribution Practices

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

**Description**

External environmental factors that may affect the outcome of the planned program are: growth and availability of markets, domestic and international agricultural policies, USDA and state-funded programs affecting the clientele, the weather and related natural disasters.

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

**1. Evaluation Studies Planned**

- Retrospective (post program)
- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

**Description**

Baseline data will be collected (or assembled) on the clientele in year one; the data will include demographic variables, skill levels, farm characteristics; acreage, crops and livestock produced, etc. Program evaluation will take place at the end of each year; summative program evaluation will be conducted in year 5.

**2. Data Collection Methods**

- Tests
- Mail
- Case Study
- Sampling
- Telephone
- Observation
- Structured
- On-Site
- Journals

**Description**

Evaluation processes (mail, telephone, on site, structured as well as unstructured processes) will be used to determine the management decision making knowledge and skills gained and adoption of research based techniques. Both before and after (before and after program) evaluation assessment, during (during program) time series (multiple points before and after program) will be implement for our programs.

**V(A). Planned Program (Summary)****Program #5****1. Name of the Planned Program**

Community Resource Planning &amp; Economic Development

**2. Brief summary about Planned Program**

The planned program is formulated within the context of community resource planning, development (CRPD) and Economic Theory & Research Methods (ETRM). CRPD will specifically focus on economic planning and development in Mississippi. This planned program will collaborate with government officials and community institution such as local school districts to plan and implement sustainable social, community and economic development that will likely create jobs, improve employment opportunities through small and home based businesses, enhance human capital development in all forms. Economic theory research methods will emphasize data collection on labor economic issues. Economic theory and research methods will be utilized to better understand various social, economic and demographic phenomena that are constraining limited resource citizens' social and economic well being, and the growth of the communities within which they reside that impedes quality of life. Various research tools and economic models will be developed and targeted to specific communities to promote best practices that are likely to help resolve many of the existing community issues. In partnership with community and faith based organizations strategies will be explored and identified with the distinct aim of empowering people, encourage active participation in social and economic development. Civic engagement strategies will be implemented specifically to promote people's participation in community and civic activities. Databases development will be created to support community resource development (demographics, census database development) The development of incubator in SW Mississippi will be implemented that supports high technology business that focuses on minority and small business development. Educational efforts will emphasize identification of community leaders through leadership development to enhance leadership and community decision-making skills so they can fervently serve its residents and communities. Alcorn State University Extension and Research, especially through its tripartite land grant functions, has carefully formulated short and long term agenda of human capital, community and economic development. It has expanded its commitment to better understand the issues and concerns of people and communities in Mississippi so that it can position itself to find ways by which to offer educational and technical assistance. The School of Agriculture, Research Extension and Applied Sciences (AREAS) of the university has an agenda to seek ways to strengthen the capacity of rural communities to constantly regenerate themselves and improve the quality of life for people. The School of AREAS of Alcorn State University is the ideal land grant institution through which this planned program should be executed, and have the technical expertise and knowledge base to deliver on its objectives.

**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
401	Structures, Facilities, and General Purpose Farm Supplies		20%		20%
402	Engineering Systems and Equipment		20%		20%
608	Community Resource Planning and Development		20%		20%
609	Economic Theory and Methods		20%		20%
805	Community Institutions, Health, and Social Services		20%		20%
	<b>Total</b>		100%		100%

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

#### 1. Situation and priorities

A great number of counties in Mississippi are largely socio economically depressed and the region faces other problems that contribute to further deterioration of social and physical infrastructure and economic decline. For example, the unemployment rate in Mississippi is high, approximately 8 percent compared to the national average of 7.6 percent (US Department of commerce, 2004). Indeed, the unemployment rate in the persistently impoverished counties ranges between 11.2 and 20.7 percent. Most of the counties have per capita income of less than the state's average of (approximately twenty thousand dollars) and others have even lower average income less than fifteen thousand (15,000) dollars. Many companies have moved out of SW Mississippi which presents the need for new companies to be increased. The focus on high technology companies with either an agricultural or non agricultural focus is greatly needed. The absence of base line data affects the ability to make assessments and related improvements. While there is no data currently available, it is evident that a large number of the employed labor force can be classified as underemployed. This situation contributes to the poor quality of life that many residents experience, and is one of the reasons why they struggle to extricate themselves from the brutality of low economic well being. Historically, many regions of the state depended largely on small-scale agriculture. Additionally, they were attractive locations for light manufacturing and service industries such as processing of wood, textile and consumer durables because they offered low cost land and relatively cheap labor. Today, many of these advantages are being lost. Hence, per capita income has fallen to low levels in many regions; people are migrating to more prosperous areas, and unemployment is escalating, leaving many areas of the state deeply impoverished and with few signs of social and economic progress. cursory examination and evidence from national organizations such as the Association of Community and Economic Development Extension Professionals (NACDEP) have identified two of the crucial constraints to community development are (a) the deficiency in citizen participation in local community and economic development and civic participation and (b) the impaired quality of leadership skills among the ranks of community leaders. The latter of these issues is of particular concern. Beaulieu (2002) argues that a vibrant rural America depends in part, on expanding the quality of human capital development and promoting broad based involvement of individuals in civic life of communities. In this case, resources are invested in individuals today in order to significantly enhance the quality of their labor related skills, augment their future job related earnings and increase their contribution to community development (Becker 1975, Schultz 1960; Mincer 1974). A priority will be to consistently find ways by which to build the human capital base of communities.

#### 2. Scope of the Program

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



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

### 1. Assumptions made for the Program

An assumption of the planned program is that it will work successfully because objectives are grounded in theory and research. According to the Mississippi Economic Councils assessment report, the fundamental approaches are based on experience from many of the most affluent and progressive communities around the country and even in Mississippi. It assumes that expenditure on education, health care, supportive social services and other elements essential to high quality human resource development are available and accessible to an adequate rural response to economic change. In many of our least vibrant Mississippi communities a common belief is that leaders have been deeply entrenched in their traditional leadership methods; they are averse to innovations and they may fail to seek coalition building and new paradigm that could likely initiate social and economic progress for their people and communities.

The mandate of this program is community development which encompasses a strong synergy between research and extension in socioeconomic issues, human resource development, civic involvement, training and improvement in the quality of life of people and communities. Alcorn State University Extension and Research successful alliance, which has a long history of collaboration, recognizes the inherent strength of people and programs working together to achieve common goals. These planned programs and activities are within the realm of achievement for our experienced, committed team at Alcorn. This team has a wide range of knowledge of theory and practices of socio-economic issues. We will, at varying times, also seek to solicit additional support and expertise of volunteers and professionals to work on specialized tasks as determined by program directors.

The benefits of this project will be unfolded by the cooperative effort of a collaborative research and extension staff that will seek to exploit all necessary assets, internal and external, to resolve problems and build capacity.

SAMPLE TEXT FOR SPACE

The Joint Extension and Research Plan of Work (POW) of the Alcorn State University, School of Agriculture Extension, Research and Applied Sciences (AREAS) possesses unique strengths and utilizes a comprehensive delivery system to address high priority issues facing limited resource citizens in communities throughout the state of Mississippi. The delivery system provides educational and research efforts to limited resource clientele through its staffing arrangements, Outreach centers, Experiment Station and collaborative partnerships with state universities and other related state agencies as well as through its technology and communication and media network. Delivery approaches and strategies of its research, educational programs, events, activities and information dissemination addresses relevant issues to improve the quality of life of limited resource citizens with a major emphasis on Southwest and Delta counties of Mississippi. These regions are well documented as the most impoverished; experiencing multi-faceted issues affecting the quality of life. The proposed joint planned programs of the POW will implement both research and extension educational efforts to address such issues to facilitate changes in these regions. program specialists designing, developing and implementing educational programs, events and activities to address relevant issues and situations facing limited resources citizens of the state. At the county level, its area staffing plan will implement and disseminate research based information through its educational programming in counties especially in the Capital River, Delta and Coastal regions of the state. Its three off-campus demonstration centers, the campus model farm, a farmers market and other delivery approaches, have a multi-faceted purpose that relies on research and extension educational demonstrations needed to address relevant issues specific to geographic areas of the state. In the southwestern part of the state, Alcorn State University Extension Program has partnered with the City of Natchez establishing the Natchez Marketplace to provide an accessible market to limited-resource farmers and business women to sell vegetables and other produce as well as value added products such as jam and jellies to consumers. Alcorn State University, through its Model Farm Center, provides educational demonstrations that focus on conservation practices in partnership with the Natural Resource Conservation Service (NRCS) utilizing crop rotation in order to enhance year around production of vegetable crops on small acreage to farmer and producer income. Additionally, an Experiment Station located at the university emphasizes research on vegetable and fruit production. At the Agricultural Experiment Station, horticulturalists conduct experiments on high value agricultural enterprises, e.g., hot peppers, peanuts, sweet potatoes, Asian vegetables, muscadines, grapes, peaches, pears, pecans, and natural products. Research at the experiment station is ongoing to investigate the technical feasibility of new crops, as well new techniques of cultivation, weed and pest control to optimize crop yield. necessary to pursue inn

The Alcorn State University Extension and Research staff at the state level consists of state researchers conducting studies and

Mississippi River Research Center focuses on major concerns in the Southern Mississippi River Valley of the United States such as non-point pollution of ground and surface waters resulting from agricultural activities. The goal of the Mississippi River Research Center is to conduct research that will protect and enhance the region's ground and surface water resources, while sustaining agricultural production and income of farmers. The center emphasizes collaborative linkages and external funding to achieve its goal. Currently, the center has working linkages with the Mississippi Water Resources Research Institute at Mississippi State University, The Center for Advanced Spatial Technology near Fayetteville, AR, the Wetland Geochemistry Institute at Louisiana State University, USDA Forest Service, USDA APHIS, U.S. Department of Commerce/NOAA, and the Gulf of Mexico Program.

At Church Hill in the Southwest region of the state, animal research is being conducted on swine production and management. The Swine Development Center at Alcorn State University is supported by state funds, and federal funds in the form of a Center of Excellence in Swine Research (USDA-ARS) and USDA-CSREES Capacity Building Grant projects. The Mission of the Swine Development Center at Alcorn encompasses the following: (1) to develop production systems that will enhance swine productivity across the state while conserving air, soil and water resources; (2) to improve the quality, safety and composition of pork products; (3) to provide knowledge to enhance international competitiveness of U.S. Animal Agriculture; (4) to generate information to enhance the socioeconomic well-being of rural communities; (5) to evaluate new and sustainable swine production systems for small producers; and (6) to conduct research that provides graduate and undergraduate training to students. Current research is focused on nutritional manipulation of gestation sows in order to increase their productivity. Trials are conducted to increase baby-pig survival and litter size in sows through lysine and/or chromium picolinate supplementation of the maternal diet. Other research projects are exploring the use of underutilized plants to enhance the quality of pork products. Purslane and waterleaf plants, known to be rich in omega-3 fatty acids and pectin are being tested for efficacy in reducing cholesterol in swine as well as in humans. The Center conducts outreach programs working collaboratively with Extension in the form of field days, workshops and demonstrations, and 4-H animal judging contests for junior and senior high school teams.

In the North Delta region, the Marks Processing Center provides limited-resource farmers opportunity to observe research and extension demonstrations with respect to the processing of various types of crops to produce value-added products to increase their income. The Small Farm Development Center (SFDC), a unique capacity of AREAS, provides farm loans to limited resource farmers, who otherwise would not have access to capital

**2. Ultimate goal(s) of this Program**

Empower and improve the quality life of people to promote sustainable social and economic development in communities by utilizing research findings and best community and economic development practices as models.

**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
2010	0.0	4.5	0.0	5.0
2011	0.0	4.5	0.0	5.0
2012	0.0	4.5	0.0	5.0
2013	0.0	4.5	0.0	5.0
2014	0.0	4.5	0.0	5.0

**V(F). Planned Program (Activity)**

**1. Activity for the Program**

Research and Extension will partner with local officials and other entities in communities to explore and promote best practices in community capacity building as a means of impacting community changes through research, educational programs and demonstrations. Research will be conducted to identify the factors that prevent community and economic development such as the shift in demographics, employment opportunities, education and attitudes of community leaders, etc. Research will be conducted by synthesizing existing knowledge and integrated empirical data on the above factors from local residents, community organizations, institutions and other secondary sources. Various quantitative techniques will be undertaken to facilitate analysis of data collected. The research findings will be used to develop community and economic models that are appropriate to promote sustainable integrated community planning and development. The planned program will conduct educational sessions and disseminate information through workshops, seminars, lectures, training sessions, brochures and research papers, leadership development planning, demonstrations, asset mapping and other activities within communities. These efforts will be geared toward building human capital and effectively, empowering people to become the main asset of community and economic development. In energy consumption control Research and Extension will partner with community leaders in identifying facilities to pilot projects, including, schools, medical facilities and community government facilities. Detailed measurements of energy consumption will be conducted over a period of a least one year in different meteorological conditions. Measurements will be analyzed in order to devise energy conservation policies and suggested cost effective technological improvements in facilities energy management and control. Pilot projects will be used to educate community leaders and public on energy consumption issues and opportunities to cut energy cost. In addition, energy saving programs for youth will be implemented

**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"> <li>● Other 1 (Community Forums)</li> <li>● Demonstrations</li> <li>● One-on-One Intervention</li> <li>● Other 2 (Surveying)</li> <li>● Group Discussion</li> </ul>	<ul style="list-style-type: none"> <li>● Other 1 (Curriculum)</li> <li>● Other 2 (Mass mailing)</li> <li>● Public Service Announcement</li> <li>● Web sites</li> <li>● TV Media Programs</li> </ul>

**3. Description of targeted audience**

Limited Resource Audiences Families • Community Based Organizations • Entrepreneurs. • Elected and appointed Political Officials .Business owners and community Based Farmer Markets.

**V(G). Planned Program (Outputs)**

**1. Standard output measures**

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

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
2010	3350	1400	200	500
2011	3500	1600	300	600
2012	3500	1800	300	600
2013	3500	1800	300	600
2014	3500	1800	300	600

**2. (Standard Research Target) Number of Patent Applications Submitted****Expected Patent Applications**

**2010 :0                      2011 :0                      2012 :0                      2013 :0                      2014 :0**

**3. Expected Peer Review Publications**

Year	Research Target	Extension Target	Total
2010	2	0	2
2011	2	0	2
2012	2	0	2
2013	2	0	2
2014	2	0	2

**V(H). State Defined Outputs****1. Output Target**

- Conduct educational programs events and activities on leadership development to development skills facilitate economic and community development opportunities in communities.

**2010 :20                      2011 :22                      2012 :24                      2013 :26                      2014 :26**

- Conduct educational programs, events and activities to facilitate workforce development opportunities for limited resource audiences in communities.

**2010 :5                      2011 :8                      2012 :10                      2013 :12                      2014 :15**

- Conduct educational programs events and activities on cooperative development, home based and agricultural and non agricultural business development to enhance economic development opportunities in communities.

**2010 :10                      2011 :12                      2012 :14                      2013 :16                      2014 :18**

- Conduct educational demonstrations and tours on Agro tourism to promote awareness of community economic development and other opportunities for Limited Resource Audiences

**2010 :4                      2011 :6                      2012 :8                      2013 :10                      2014 :12**

- Conduct social psychological and economic and impact surveys and develop profiles of communities and their economic landscape. (Number of Surveys)

**2010 :2                      2011 :2                      2012 :2                      2013 :2                      2014 :2**

- Develop educational bulletins, manuscripts and documentation of findings and disseminate results and models to promote community development and empowerment of residents (Number of Special Reports, News Letters and Fact sheets).

**2010 :7                      2011 :10                      2012 :12                      2013 :14                      2014 :16**

- Development of database to support and promote research in community resource development

**2010 :1                      2011 :1                      2012 :2                      2013 :2                      2014 :2**

- Conduct educational research on high tech small minority and or expand businesses incubator.

**2010 :2                      2011 :2                      2012 :2                      2013 :2                      2014 :2**

- Conduct impact surveys and develop methods and policies for cutting cost of energy in running farms, communities, offices, business, schools and medical facilities

2010 :1                      2011 :1                      2012 :1                      2013 :1                      2014 :1

- Develop educational research on energy saving technologies to disseminate to communities

2010 :1                      2011 :1                      2012 :1                      2013 :1                      2014 :1

**V(I). State Defined Outcome**

<b>O. No</b>	<b>Outcome Name</b>
1	Percent of community leaders that will gain knowledge, develop leadership skills and become involved in civic activities and community and economic development opportunities.
2	Percentage of participants to utilize research data, knowledge and skills disseminated to encourage retention and to attract businesses and other economic development projects.
3	Increase the percentage of members of cooperatives to improve their production and management practices.
4	Increase the percentage of individuals who gained awareness of opportunities in Agro tourism and other agricultural based economic development opportunities.
5	Increase in the percentage of community officials and organizations who gained awareness of economic and demographic profile of communities
6	Increase the percentage of individuals gained leadership and decision-making skills to become involved in community planning and development projects.
7	Increase the percentage of community participation in the of the database to enhance community resource developmen
8	Increase the dissemination of high-tech business information to minority and small businesses on community resource development.
9	Increase the percentage of the community participation to gain awareness of cutting cost of energy.
10	Increase the percentage of individuals in their communities gained awareness in use of energy saving techniques

**Outcome #1****1. Outcome Target**

Percent of community leaders that will gain knowledge, develop leadership skills and become involved in civic activities and community and economic development opportunities.

**2. Outcome Type :** Change in Knowledge Outcome Measure

2010 :10                      2011 : 15                      2012 : 20                      2013 : 25                      2014 : 30

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development
- 805 - Community Institutions, Health, and Social Services

**Outcome #2****1. Outcome Target**

Percentage of participants to utilize research data, knowledge and skills disseminated to encourage retention and to attract businesses and other economic development projects.

**2. Outcome Type :** Change in Action Outcome Measure

2010 :6                      2011 : 8                      2012 : 10                      2013 : 12                      2014 : 14

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #3****1. Outcome Target**

Increase the percentage of members of cooperatives to improve their production and management practices.

**2. Outcome Type :** Change in Condition Outcome Measure

2010 :12                      2011 : 14                      2012 : 16                      2013 : 18                      2014 : 20

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #4****1. Outcome Target**

Increase the percentage of individuals who gained awareness of opportunities in Agro tourism and other agricultural based economic development opportunities.

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :5                      **2011** :7                      **2012** :10                      **2013** :12                      **2014** :14

**3. Associated Institute Type(s)**

- 1890 Extension

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #5**

**1. Outcome Target**

Increase in the percentage of community officials and organizations who gained awareness of economic and demographic profile of communities

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :4                      **2011** :8                      **2012** :10                      **2013** :12                      **2014** :14

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #6**

**1. Outcome Target**

Increase the percentage of individuals gained leadership and decision-making skills to become involved in community planning and development projects.

**2. Outcome Type :** Change in Condition Outcome Measure

**2010** :5                      **2011** :7                      **2012** :9                      **2013** :10                      **2014** :12

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #7**

**1. Outcome Target**

Increase the percentage of community participation in the of the database to enhance community resource developmen

**2. Outcome Type :** Change in Action Outcome Measure

**2010** :1                      **2011** :1                      **2012** :2                      **2013** :2                      **2014** :2

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development



**Outcome #8****1. Outcome Target**

Increase the dissemination of high-tech business information to minority and small businesses on community resource development.

**2. Outcome Type :** Change in Condition Outcome Measure

2010 2                      2011 : 2                      2012 : 3                      2013 3                      2014 :3

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 608 - Community Resource Planning and Development

**Outcome #9****1. Outcome Target**

Increase the percentage of the community participation to gain awareness of cutting cost of energy.

**2. Outcome Type :** Change in Condition Outcome Measure

2010 5                      2011 : 10                      2012 : 15                      2013 20                      2014 :25

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 401 - Structures, Facilities, and General Purpose Farm Supplies

**Outcome #10****1. Outcome Target**

Increase the percentage of individuals in their communities gained awareness in use of energy saving techniques

**2. Outcome Type :** Change in Condition Outcome Measure

2010 5                      2011 : 8                      2012 : 10                      2013 :12                      2014 :14

**3. Associated Institute Type(s)**

- 1890 Extension
- 1890 Research

**4. Associated Knowledge Area(s)**

- 402 - Engineering Systems and Equipment

**V(J). Planned Program (External Factors)****1. External Factors which may affect Outcomes**

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

**Description**

These include periods of drought, ice storm, etc).legislative policies and variations in appropriation priorities may affect funding. This shift will hamper funding for community and economic development projects. Federal and local government policies may change which would constrain some of our programs. Local community and municipalities may enact laws and regulations in certain communities that would likely counter some of the programs and policies articulated by the project. Laws in the area of interest change, Public Policy changes, social, economic and demographic changes in various communities may force certain authorities to modify their public priorities. Pending changes in Immigration laws may affect migration and other demographic issues, public policies and may affect program priorities.

**V(K). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

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

**Description**

The success and accomplishments of this project will be evaluated based on the following measures: (a) the number of communities and county officials showing interest in and wanting to continue support for the project in consecutive years; (b) degree of improvement in the attitudes and experiences of the residents in terms of social consciousness and appreciation for community life and the needs of the poor. These are critical criteria for testing the effectiveness and accomplishments of a project of this nature. No matter how elaborate a behavioral research/extension project associated with a educational institution is or how enthusiastic the faculty and extension staff are, unless in the end, communities of reference benefit, and the experiences of the residents are changed so that attitudes, participation and outreach outcomes are better than before, the work cannot be considered successful. (c) The amount of additional financial support received and the number of cooperating organizations involved each year, over the life of the project. (d). Participants of all community resource development activities will be requested to evaluate, submit comments and reflections on the relevance of the educational programs(e) Peer reviews will be done on an ongoing basis by researchers, sociologists and extension professionals within the extension and academic communities. Effort will be made to ensure that peer reviews are done through area professional publications both internally and externally. The evaluation of the plan and best practices will be ongoing and the assessment by stakeholders and clients will address final impact at the conclusion of the projects.

**2. Data Collection Methods**

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

**Description**

Census data will be compiled and analyzed to delineate various aspects of the social, economic and demographic features of the respective communities. • Comprehensive survey instruments will be developed and used to collect pertinent data on human capital development, labor and social psychological issues within the community study areas• Standard mailing and telephone sampling techniques will be used to select and collect respondents data. • Questionnaires will be pre tested in each of the study areas before they are actually administered. Criteria for an acceptable response rate of return of questionnaires will be developed by the principal investigators• Various statistical tests will be used to evaluate the reliability of the secondary data. • Labor economic interviews, sampling and polling will be conducted in targeted communities • Reliability coefficient tests will be done to estimate and determine the reliability and consistency of the data. • Observations will be documented of community leaders implementing and completing ongoing local community and economic projects.