Fertile Ground
SCHOOL OF AGRICULTURE, RESEARCH, EXTENSION AND APPLIED SCIENCES

THE RESEARCH FACTOR

Alcorn Experiment Station

Technology Transfer Center
As the recently appointed interim dean and director of land-grant programs for the Alcorn State University School of Agriculture, Research, Extension and Applied Sciences (AREAS), it is my pleasure to introduce to you this issue of the AREAS magazine, Fertile Ground.

The primary focus of this issue is on our research programs; however, through our tripartite mission, we also exemplify our heritage as a historically black land-grant university, incorporating findings from our research programs into teaching and outreach through Extension.

As Interim Dean, I know first-hand that these programs and initiatives tell the AREAS story effectively, and demonstrate our dynamic engagement both within the University and the many communities we serve, particularly poignant this year, as we celebrate 100 years of the Cooperative Extension System.

The intent of the Fertile Ground magazine is to stimulate dialogue about the ongoing evolution of AREAS programs. It serves as a forum to celebrate the work that we do, and as a medium for reflection on where we have been, and where we are going together.

I would like to take this opportunity to thank Drs. Barry L. Bequette and Dalton H. McAfee for their years of service to Alcorn and AREAS.

I welcome your comments, letters and other feedback.

Sincerely,

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The creation of the Agricultural Adjustment Act (AAA) by Congress in 1938 resulted in the establishment of Research Experiment Stations at national, regional, and state levels, among other creations as four different Research Laboratories for each region in the United States.

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This event featured a ribbon cutting ceremony for the newly constructed Extension/Research Farm and Technology Transfer Center, located in Mound Bayou, Mississippi.
HOW THE MAGAZINE GOT ITS NAME

Agriculture starts with the earth…. the ground and all its elements and minerals. When the earth has been blessed, we call it fertile ground. Alcorn State University’s rich legacy speaks to the many souls who labored and gave their love and expertise to the small farmers and ranchers throughout the state of Mississippi.

This gift of sharing and determination has paved the way for generations to be successful in their trade. To all who have helped in this endeavor, I anonymously submit the name, Fertile Ground as a true testament for the School of AREAS’ first school-wide magazine.

The Alcorn State University School of Agriculture, Research, Extension and Applied Sciences (AREAS) offers educational programs, materials, and equal opportunity to all people without regard to race, color, national origin, sex, age, veteran status, or disability.

LETTER FROM THE EDITOR

Freda M. Lawrence, Ed.D.

Greetings,

In 2014, the Cooperative Extension System is celebrating its 100th year anniversary, in which Alcorn State University implemented their Extension Program in 1971. In this issue of Fertile Ground, we focus on the many accomplishments of the School of Agriculture, Research, Extension and Applied Sciences (AREAS).

Alcorn has a very rich history in academics, research and extension. Throughout this issue, we promote that richness by highlighting the research conducted by our scholars and scientists. Also, we feature extension and departmental news as well as alumni on the move, our undergraduates engaged in community service, and our many faculty and staff achievements.

Welcome to Fertile Ground! We look forward to keeping you informed!

Sincerely,

Freda M. Lawrence, Ed.D.
Editor of Fertile Ground and Director of Media and Communications
School of AREAS
Greetings,

The Alcorn State University Extension Program is proud to extend to you its second issue of Fertile Ground magazine. The focus of this publication is on research and advances in the field of agriculture and its diverse entities. This issue looks at some of the momentous changes that have occurred and the on-going progress in agriculture production.

Agriculture has been a continuing evolution since the beginning of time. It is the oldest known profession. One of the most phenomenal things about agriculture is the significant changes in the number of people involved in its output. Over the last 100 years, we have gone from almost 100% participation by our population to less than 2% of the workforce being involved in the production of food, fiber and energy. This change speaks to increased productivity made possible through innovations such as those featured in this issue.

Agriculture is a vital part of our economy, and is essential in our everyday lives. Whether or not we realize it, we utilize agriculture at least three times each day via the meals we consume. These meals provide us with the energy we need to sustain healthy bodies.

In a day, there are also many other ways we participate in agriculture that we seldom realize. From the early morning newspaper that we read to the clothes we wear, many of our daily activities are rooted in agriculture.

We in Mississippi are very fortunate to have the utilization of land, water and timber to sustain the economy through the financial downturn that our nation is experiencing.

While Mississippi has experienced rough economic times, our recession has not been nearly as disastrous as many of our sister states because of the economic base we have in this state as result of our reliance on agriculture. For this purpose, the ASUEP will continue to focus on the issues that impact agriculture, farms, farm families and the citizens of our great state. We hope that you find the articles within these pages stimulating, invigorating and informative.

I would like to take this opportunity to thank Drs. Dalton H. McAfee and Barry L. Bequette for their support, vision and prescience in making Fertile Ground an important part of our outreach artisanal.

Sincerely,

[Signature]

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In Memoriam

Dr. Chinthakuntla Ravindra Reddy

The Alcorn State University community paid tribute to Dr. Chinthakuntla Ravindra Reddy, a world-renowned researcher, teacher and author who died unexpectedly on Friday, April 15, 2011 in Jackson, Mississippi. “Dr. Reddy was a great researcher, teacher and author; he will be sorely missed at Alcorn,” says Dr. Barry L. Bequette, former dean and director of land-grant programs, School of Agriculture, Research Extension and Applied Sciences (AREAS). “His disposition in life was kind, gentle and caring; qualities which were valued and admired by all who knew him”.

A 21 year employee of ASU, Dr. Reddy was conducting research on the development of pepper cultivars with high yield potential, insect and disease resistance, and superior fruit characteristics. His research has contributed substantially to the progress of many limited-resource farmers. As a teacher, he touched the lives of hundreds of students.

Dr. Dalton McAfee, former extension administrator remarked, “He leaves a legacy of service to humanity all over the globe – from Mississippi to India. He was a quiet and gentle man, but his impact was widespread.”
On December 2, 2014, the Alcorn State University community lost another esteemed colleague, Mr. Willie Sanders, who served as mailroom clerk for extension research for 19 years.

“Mr. Sanders was born and raised in Louise, Mississippi. He was a third generation farmer and agriculture was in his blood. Sanders thought, slept and dreamt agriculture. He was also a devoted family man who worked hard to provide for his wife Natasha and kids Kayla and Chad,” said Calvin Broomfield, farm manager, Extension Program.

Dr. Gregory Reed, interim extension administrator, stated, “For Mr. Sanders it has been a lifelong and enriching experience working at Alcorn and even after his retirement he kept in touch with the University. The School of AREAS and the Alcorn family will miss him dearly.”

Mr. Sanders began his career at Alcorn in 1994 as a dairy assistant and then held a number of positions with the School of Agriculture, Research, Extension and Applied Sciences (AREAS) including working with swine research, beef research, and later transferring to the mailroom.

Mr. Sanders, a proud Alcornite, received his bachelor’s degree in agriculture in 1996, and later returned to attain his master’s degree in agriculture economics in 2010.
ALCORN EXPERIMENT STATION

A True Trailblazer

Dr. Patrick Igbokwe
Director of Alcorn Experiment Station/Professor of Horticulture
The creation of the Agricultural Adjustment Act (AAA) by Congress in 1938 resulted in the establishment of Research Experiment Stations at national, regional, and state levels, as 4 different Research Laboratories for each region in the United States. The goals of these agencies include the improvement of agricultural productivity, protection of plants and animals, reduction in the cost of production, increase in product demand, improvement in marketing system and export, and increase in standard of living of residents, among others.

The Agricultural Experiment Station at Alcorn State University was jointly established by Mississippi State University (MSU) and Alcorn State University (ASU), as a branch of the Mississippi Agricultural and Forestry Experiment Station (MAFES) by the Act of State Legislation in 1970. This legislation mandated ASU as a Land-Grant Institution to conduct research in agriculture and provide cooperative extension services geared towards improving socioeconomic conditions and quality of life for limited-resource farmers in Mississippi, the nation, and the world.

LOCATION:
Alcorn Experiment Station is located in a low-income rural area in southwest Mississippi where traditional agriculture and off-farm employment do not present a viable solution to the poverty of many families attempting to make a living from the operation of small family farms. Farm populations in the rural south drastically declined since World War II, primarily because of mechanization and consolidation of farms. Most of the farmers who continue to operate farms are either small farmers or farm laborers, old or very young, have little or no formal education, and are either poor or minorities or both.

COLLABORATION:
A cooperative research program established between MSU/ASU resulted in the exchange of ideas, technicians, and use of laboratory facilities. Several research projects in swine, beef cattle, fruits, and vegetable were conducted jointly or separately by scientists at both institutions. All scientists at the Alcorn branch station of MAFES held joint appointments with ASU and MAFES. Scientists at both institutions participated in field days, seminars, and program reviews at both locations and at the other branch stations. These close collaborative efforts were maintained until 1995, when ASU branch experiment Station became autonomous, and the name was changed to Alcorn State University Experiment Station. Although both experiment stations are now separate, collaboration occurs in many ways to enhance agricultural productivity and profitability in Mississippi, the nation, and the world.

GOALS:
Since 1871, Alcorn State University has sought to serve the needs of non-served and under-served, limited-resource farmers and rural residents in Mississippi. The Agricultural Research Program at ASU in general, is therefore designed to discover new knowledge and to provide solutions to problems confronting agricultural productivity and profitability. Although not limited to this scope, the primary mission of the research is to seek answers to problems of limited-resource farmers and rural dwellers in southwest Mississippi. The Agricultural Research Program therefore enables Alcorn State University to carry out one of its important functions as a Land-Grant University.

SPECIFIC OBJECTIVES:
The principal goals of the Alcorn Experiment Station are: to seek answers to problems facing low-income, small farmers and rural dwellers in southwest Mississippi, to enhance income opportunities and quality of life of rural residents in southwest Mississippi, to provide hands on experience in the form of part-time employment to undergraduate and graduate students, and investigate the economic merits of sustainable production of conventional and/or alternative crops.

ACCOMPLISHING OBJECTIVES:
A series of field experiments have been used to compare the adaptability and yield potential of small fruits including blackberry, blueberry, muscadine, and straw-
blackberry at the station. Years of studies indicate that blackberry cultivars (Brazo, Cherokee, Comanche, Miss-1, Miss-2, and Humble); strawberry cultivars (Daybrak, Headliner, Earli Miss, Sunrise, Titan); blueberry cultivars (Climax, Woodard, Bluebell, Southland, Delight, Tiftblue and Briteblue) and muscadine cultivars (Fry, Cowart, Summit, Noble and Carlos) are adapted to the Memphis silt loam soil in southwest Mississippi, and can provide additional income to residents.

Outstanding cultivars are now grown commercially or for personal use in Mississippi. These fruits contribute significantly to the multimillion-dollar industry associated with horticultural crops throughout the world. They are not only important because of the income they generate, but also for the provision of fresh, healthy and nutritious foods to consumers. Profitable returns are possible even when grown on small acreage; therefore, people who have full-time jobs may supplement their income by growing recommended cultivars around their homes or family farms.

Similarly, several varietal, cultural, and fertilizer trials have been conducted at the Station in an effort to identify high income generating vegetable crops in southwest Mississippi. Vegetable crops investigated at the station include cabbage, okra, peppers, tomatoes, peanut, malabar spinach, amaranth, snap beans, pea-geon peas, soybeans, watermelon, cucumber, muskmelon, sweet corn, sweet potato, and squash, among others.

For cultivar trials, newly developed lines of different crops are compared with existing ones, or those already commercialized. They are usually evaluated for survival, growth, yield, pest resistance, and quality.

Several cultural practices such as row preparation, cropping systems, weed control techniques, insect and disease control methods, have been used to determine the best agronomic practices for profitable production of the recommended cultivars. Currently, more environmentally friendly methods are employed as crop management techniques. For example, multiple cropping is being used instead of monocropping, and organic mulches and pesticides are being used instead of the synthetic types. Different forms of fertilizers (organic and inorganic), time, and rates of applications have been investigated. Additional studies with new lines of crops and types of chemicals are being conducted at the Station.

Field studies have been used to evaluate some medicinal plants and herbs for survival, and yield potential. Medicinal plants being evaluated include Echinacea, Feverfew, Catnip, Valerian, Lemongrass, Vetiver Grass and Shiitake Mushroom, among others. These plants can be successfully grown in southwest Mississippi. The culinary herbs evaluated include thyme, dill, basil, cilantro, marigold, oregano, parsley, mint and rosemary.

PRODUCT DEVELOPMENT:
Adding value to harvested fruits and vegetables has led to the development of a number of new products at the station. Delicious native wines have been developed from muscadine grapes, blueberries, pineapple, and sweet potato among others. Hot pepper sauce has been developed from “Alcorn Long Pod” cayenne peppers. “Alcorn Pat” peanut (obtained through mass selection) has excellent taste when boiled, roasted or fried. Alcorn meat and fish seasoning from harvested culinary herbs enhance the taste of cooked products.

PRODUCTION COST:
The experimental field plots provide the input and/or cost information needed for each study. Both physical inputs and labor requirements applied to field plots during each study period are recorded, and used for the development of enterprise budgets. Returns above operating and fixed costs are used as measures of profitability for each crop grown under the different weed management methods and sustainable production practices. The budget generator developed at Mississippi State University and the Small Farm Development Center are used to summarize costs and returns associated with the various enterprises. Each enterprise budget is updated annually for future use by producers, and all research findings are made available to farmers and consumers.
DISSEMINATION OF INFORMATION:
Findings are presented at professional meetings, as well as published in professional journals, magazines, local newspapers and radio broadcast’s. Annual Field Days, workshops and seminars are other means of sharing research-based information with farmers and the public. Specific publications such as research reports, information sheets, bulletins and brochures are means of sharing information through Cooperative Extension Agents and Educators at Alcorn State University.

SOME IMPACT OF AGRICULTURAL RESEARCH AT EXPERIMENT STATION:

1) Some farmers are now switching or incorporating identified alternative crops in their framing systems.

2) Both sustainable and organic cropping systems are now being used by some farmers in their farm operations to reduce or eliminate the use of chemicals in crop production, which lead to contamination of the environment.

3) Provided information needed for the daily operations of Alcorn Demonstration Farms on campus, as well as those outside the campus.

4) Some graduate students have completed their thesis research using Echinacea, Feverfew, Lemongrass, and Amaranth as test crops. Undergraduates develop term papers from these crops, as a requirement for the completion of some courses in this department.

FUTURE PLANS:
The Agricultural Research Program at ASU offers exciting possibilities for significantly contributing to the economy of the State, and for improving the quality of life of low-income rural dwellers. However, future benefits from these research programs will depend on the level of investment provided by the state and federal government, alumni, and friends of Alcorn State University. Other studies that will enable scientists to meet set objectives will continue to be investigated depending on the availability of funds.

ACKNOWLEDGEMENT:
The Alcorn State University President, Dean, School of AREAS, Administration, Faculty, Staff, and Students extend their appreciations to the State Legislators for providing the financial and other in-kind support needed for the successful operation of the Alcorn Experiment Station. Contributions from Experiment Station Scientists, Research Associates, Technicians, and students are highly appreciated.

DISCLAIMER:
The mention of a trademark or proprietary product does not constitute a guarantee or warranty of the product by Alcorn State University and School of Agriculture, Research, Extension, and Applied Sciences and does not imply its approval to the exclusion of other products that also may be suitable. Alcorn State University does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, or veteran status.
Farmers need research based on information and support that will assist them in their farming operations. Therefore, Alcorn State University Extension Program (ASUEP) established educational centers that will help farmers meet their farming objectives.

The centers serve as permanent teaching laboratories for the University, and provide an opportunity for small farmers to acquire hands-on training as it relates to sustainable vegetables and fruits production practices, value-added processing and marketing of their produce. To this end, three demonstration/research centers, a vegetable processing facility and a farmers market were established.

**EXTENSION/ RESEARCH FARM AND TECHNOLOGY TRANSFER CENTER**

Alcorn State University Extension/ Research Farm and Technology Transfer Center was established in the spring of 1995 with forty-five acres of land leased from the North Bolivar County Development Corporation. The center is located in Mound Bayou (Bolivar County) – the heart of the Mississippi Delta. The center is proud to be the first off-campus agricultural educational facility in Alcorn’s history devoted to demonstration and research activities.

It is used to demonstrate research-based technology as it relates to different fruit and vegetable production for the region. Furthermore, the University has chosen sweet potato as an alternative crop on which the institution places special research and demonstration emphasis. The center is one of the focal points of all research and demonstration by the University for sweet potato farmers in the state. Therefore, training sessions on various aspects of sweet potato production and marketing are conducted at the center with collaboration from USDA/ARS and local farmers.

**THE SMALL FARM INCUBATOR CENTER**

The Small Farm Incubator Center located in Preston, Mississippi began in the summer of 1997. The center was established as a training site for small and/or minority farmers wishing to farm, but with limited farming experience. The Center is used as a teaching laboratory by the university for small farmers that are interested in the production of commercial vegetables to acquire hands-on training.
on commercial vegetable production. Farmers are selected annually to participate in this project.

Farmers selected for the project will be required to participate in a comprehensive training program. The extent of the training required will be based upon individuals’ past farming experiences. Individuals with significant years of farming experience will only be required to participate in a short-term training program. Individuals with little or no farming experience will be required to participate in a long-term training program prior to moving to the farm. Therefore, selected farmers will be given the opportunity to utilize the farmland, rent-free, for a period of two-three years depending on the farmer’s experience in farming. During this period, the participants will be evaluated annually. At the end of the training period, participant(s) that made satisfactory progress will be assisted in purchasing of farm land.

THE MODEL FARM
The Model Farm was established in 1984 on Alcorn State University campus in Lorman, Mississippi. The farm was established to demonstrate research-based information as it relates to crop production practices of limited-resource farmers interested in environmentally sustainable fruit and vegetable production. Therefore, practices such as varietal trials, cultural and fertilizer application methods and crop rotation on selected small fruits and vegetables “that show promise as income generating crops for low-income rural residents” of southwest Mississippi are being demonstrated at the farm.

VEGETABLE PROCESSING FACILITY
The Vegetable Processing Facility was established in 1999. Located in Marks, Mississippi, the facility serves as a value-added processing assembly and temporary storage facility for fresh vegetables that are either ready for immediate consumption or will be prepared for additional processing. In 2008, the facility was certified by USDA as a good handling processing facility.

THE NATCHEZ FARMERS MARKET
The Natchez Farmers Market located in Natchez, Mississippi was established in 1999. The center was established to educate farmers on various marketing techniques for their produce, and also assist local farmers in marketing of their produce.
We hear that “Everything is bigger in Texas.” However, Dr. Patrick Igboke, director at the ASU Experiment Station can beg to differ, since many watermelons grown at the Experiment Station could be much bigger and sweeter than those grown in the entire country. This year’s crop of “Bush Sugar Baby” watermelons have exceeded past years of melons grown since the creation of the station.

“There were seventy-two lines of watermelons grown at the station during the 2012 summer growing season. The lines were either yellow meat or red meat, round or oblong in shape,” he states. “The seeds for this evaluation were provided by USDA through their program called Trueness – to – Variety Test,” he states. Mr. Kevin Robinson, marketing specialist, USDA in Gastonia, North Carolina collaborated in this effort with Dr. Igboke and other scientists at ASU.

Watermelons are thought to have originated in southern Africa; however, they are also mentioned biblically as a food eaten by the ancient Israelites while they were in bondage in Egypt. Today, farmers in approximately 44 states grow watermelons, with Georgia, Florida, Texas, California and Arizona being the U.S. largest watermelon producers.

Dr. Igboke conducted a “come and get your free sweet and juicy watermelon drive,” in the ASU greenhouse, compliments of the ASU Experiment Station.

“We are not selling any melons, so we encourage the community, churches, hospitals and clinics to participate in this drive.” The melons are sweet, very nutritious, and a delicious morning or afternoon treat. There will be more opportunities for viewing watermelons in the future.

For additional information, please contact Dr. Igboke at (601) 877-6542 or patigboke@alcorn.edu.
DEVELOPMENT OF VALUE-ADDED SPECIALTY SWEETPOTATOES

The Center for Biotechnology & Genomics at Alcorn State University has been working to develop value-added specialty sweetpotatoes that are better suited for making quality chips or fries. The Center has successfully identified traits of sweetpotatoes that critically impact sensory and texture qualities of chips and fries. Some of their newly bred lines that possess desired traits are now being tested by Dr. Victor Nijiti, assistant professor.

SAVING OUR FOOD

At Alcorn State we are striving towards finding ways to grow organic food crops with no chemicals (or with the minimal use of them) that would not interfere with the environment and animal diversity. We are looking at non-chemical “safe” compounds which will kill insects, but are non-toxic. These compounds have a biological origin; thus, called biological pesticides or “biopesticides.”

We are utilizing insect behavior, especially their attraction to light and different colors. Insect traps of different colors are used to predict field populations and when to control them. Some crop varieties are naturally resistant to insect feeding, because of chemical contents within them, which are non-preferred by insect feeders. In addition, we are studying those compounds to determine their role in providing such resistance. Our ultimate goal is to promote the organic production of vegetables and other crops without any harmful insecticides and to enhance the income potential of small farm families by reducing production costs, according to Dr. Tahir Rashid, assistant professor of entomology.
Swine Development Center

Scientists in the Department of Agriculture are making their mark in the heart disease prevention arena with their published findings that vegetable purslane leaves lower the risk of cardiovascular disease in humans. Heart disease continues to be a leading cause of mortality and morbidity in the United States. As a result of these concerns for potential side effects and consequent increase in health care costs, there is a growing demand for non-traditional and/or diet related approaches to lower blood lipids and cholesterol, and prevent cardiovascular disease and stroke. In a feeding trial conducted at Alcorn State, scientists explored the efficacy of purslane leaves in lowering cardiovascular diseases risk in patients with high blood cholesterol and other blood lipids.

The study was conducted for five weeks to evaluate whether or not adding a small quality of freeze-dried purslane leaves (3 grams each at lunch and dinner) in the diets of free-living human subjects with elevated blood cholesterol level, a cardiovascular disease risk factor, can lower blood fat and/or confer other health benefits.

The study demonstrated that using a novel food product rich in omega-3 fatty acids, pectin, and other essential nutrients, produced a marked improvement in the lipid profile of the patients. LDL-cholesterol (bad cholesterol) was reduced by 27%, suggesting a remarkable improvement in heart disease risk, a primary culprit in the development of cardiovascular disease and stroke.

At the end of this study, purslane seeds and planting directions were disseminated to farmers during agricultural and swine field days.

Dr. Micheal Ezekwe, professor and Center director as well as Dr. Samuel Besong (Delaware State University) and Mrs. Edith Ezekwe (Alcorn State) collaborated on this project. The research study has been published in the International Journal of Nutrition and Metabolism.

Conservation Research Center

The Conservation Center has sent C-factor (cover and management) data on seven horticultural crops of Brassica species to the USDA/ARS of North Central Region for multivariate analysis and publication in international journals, according to Dr. Girish Panicker, director.
TECHNICAL ASSISTANCE SUPPORT FOR MISSISSIPPI FARMERS

The Mississippi Small Farm Development Center provided comprehensive technical assistance to approximately 5,000 farmers and farm families that included farm planning, risk management, access to resources, production technology, value-added product development, food safety, and marketing. The Center approved an additional 10 loans totaling $200,000 last year and serviced approximately 200 existing loans for small-scale farmers and ranchers. Since 1996, the Center has approved loans totaling $3,200,000 that have had economic impact exceeding $13,000,000.

EXPERIMENT STATION: ON-GOING RESEARCH

The Experiment Station currently evaluates the effects of progesterone supplementation on the survival of transferred embryos; and elucidates the mechanisms used by progesterone to alter survival of the embryos in cattle. The strategy evaluated and recommended by our scientists to supplement progesterone is now being used by many farmers practicing embryo transfer as a means to improving the fertility and genetics of herds. Dr. Patrick Igbokwe serves as director/professor.

Investigating new biological insecticides or biopesticides to control insect pests, a reliable insect pest monitoring system is helping to minimize expensive chemical insecticide applications by avoiding unnecessary treatments; thus, reducing production costs and increasing profitability.

Further, we have expanded the market for sweetpotatoes through increased industrial utilization and human consumption. Technology has been developed to process sweetpotatoes into high quality chips, and is now being prepared for patent and transfer to industry.

ASU scientists are currently using greenhouse experiments to investigate the effects of agronomic practices on ground-bed grown noni plant survival, growth and fruit production potentials. The scientists also intend to add value to the harvested fruits. The noni plant can be used as a remedy for ailments like heart disease, obesity, cancer, arthritis, and depression, as well as your immune system, because it is anti-oxidant filled, and completely natural. In addition, the plant increases human physical performance and provides a healthier cardiovascular system. Several plants now fruiting in the Alcorn State greenhouse are being harvested for processing. Seeds are also being extracted from ripe fruits. For more information, contact Dr. Patrick Igbokwe.

A feasibility study on obesity is currently underway in Fayette, Mississippi with middle school-aged children. Focus group discussions were conducted with adult women (28 women from Warren, Claiborne, and Jefferson counties), and children in Jefferson County (63 males and 99 females). The feasibility study exposed 287 middle school-aged children to nutrition education focused on following the Dietary Guidelines for Americans. One conclusion drawn from the focus groups is that there is a significant need for marketing to encourage these cultural groups to utilize the website, Mypyramid.gov.

DELTA OBESITY

The Department of Human Sciences secured a grant through Delta Obesity Prevention Research Unit (OPRU), "Adaptation and Adoption of the Dietary Guidelines" by Af-
rican-American children in Southwest Mississippi. The project is currently on-going. The project promotes investigation of the impact of nutrition education (alone or combined with physical fitness) on the *Adaptation and Adoption of the Dietary Guidelines for Americans* (DG) among rural, limited-resource African-American middle school children. The project will add to the body of knowledge regarding low income, rural African-American adolescents’ understanding of the DG as it applies to their individual lives. In addition, it helps identify if increased knowledge of the DG recommendations alone or paired with physical activity within its population can impact adoption of the DG. Dr. Mattie Rasco, serves as project director.
Approximately 200 participants from surrounding counties of Mississippi attended the annual Agricultural, Research and Extension Field Day held recently on the Alcorn State University in Lorman. Agency personnel participants from United States Department of Agriculture (USDA), Farm Service Agency (FSA), Rural Housing and Development, and other federal officials were present.

“We were delighted to have in our presence, Mr. Michael Sullivan, state executive director, USDA FSA, as the keynote speaker, who discussed several program areas and pertinent loan information for farmers,” says Dr. Igboke, director of the Alcorn State Experiment Station.

Additionally, an Alcornite, Mr. Timothy Bradford, class of 1985 Agricultural Education and Agronomy program, and owner of Bradford Farms in Belzoni, Mississippi addressed the audience. He shared the importance of being a farmer in Mississippi, and how success can be obtained by one of the most important areas in life, which is Agriculture.

The theme of this year’s conference was “Improving the Quality of Life through Agriculture.” The speakers spoke on the importance of eating right, exercising and the nationwide drive in educating our youths on health issues and obesity. The state of Mississippi is still ranked number one in the area of obesity.

Several research scientists held sessions in their fields of expertise. The areas included muscadine grapes, red pepper, basil, watermelons, shiitake mushrooms, and other vegetables, herbs and spices. Dr. Girish Panicker, director of the Center for Conservation Research and associate professor of agriculture, discussed Horticultural Crop Production, and emphasized that participants should begin farming or train other farmers and consumers to produce high quality vegetables and fruits through sustainable and economically, feasible farming practices.

The Center for Conservation Research consisted of approximately seven acres containing various fruits such as muscadine grapes, watermelons, and blueberries. Dr. Panicker also discussed the importance of raising fruits and vegetables and his global initiatives utilizing the C-factor data for multivariate analysis and publications in international journals.
“Alcorn Experiment Station, where different research activities are being used to provide needed answers to problems facing agricultural productivity and profitability within and outside the State of Mississippi, was one of the sites toured by the field day participants,” says Dr. Igbokwe. While at the station, participants were provided with a series of information on sustainable production of different small fruits, vegetables, and other specialty crops as they approached different experimental plots.

The participants were amazed to see the 72 lines of watermelon, which are being evaluated for Trueness to Variety (TTV test). They were amazed to see the “Bush Sugar Baby” line of watermelons where fruit weights ranged from 40 to 90 pounds. This study is one of the seed regulation programs conducted jointly by Alcorn Experiment Station and the USDA. Mr. Kevin Robinson, USDA marketing specialist represented USDA in this study.

A variety of value-added products, such as meat and fish seasoning, natural hot pepper sauce, pickled okra, muscadine wine, muscadine jelly, and tomato paste developed at the station were either given away to participants or used for displays. Dr. Igbokwe assured the participants that adding value to harvested crops means adding dollars to their overall profits, in addition to enjoying harvested crops beyond the growing seasons.

“Alcorn Experiment Station will continue to identify opportunities to enhance income potential and quality of life of limited-resource farmers and rural dwellers in Mississippi through basic and applied research efforts,” says Dr. Igbokwe. The participants also visited the Demonstration Farm where hogs, alpacas, and miniature horses were displayed.

“I truly enjoyed my visit and it was very informative. Dr. Cedric Sims’ presentation was spectacular, and I am now thoroughly educated by his workshop topic on Basil,” said Mrs. Wille Jean Turner, of Fayette, Mississippi. Ms. Turner attended the sessions along with her husband, Robert and nephew, Arthur Clark. “We obtained a lot of valuable information from each one of the sessions and were both excited and delighted to receive the muscadine grapes, hot sauce and other items that were given to us.”

During the luncheon, Dr. Barry L. Bequette, former dean and director of land-grant program, School of AREAS, and Dr. Donzell Lee, interim executive vice president and provost, academic affairs, extended greetings.

Dr. Igbokwe thanked everyone for being part of the annual Agricultural, Research and Extension Field Day. He encouraged them to incorporate what they learned in their daily struggles to become more productive in their respective areas of interest. He also expressed his gratitude towards the Alcorn administrators, and USDA for supporting agricultural research at Alcorn State. In closing, he extended special thanks to the keynote speakers for their valuable suggestions, encouragements and friendship, and he assured the participants that the future field days will be even more knowledgeable and entertaining.
ALCORN OPENS NEW TECHNOLOGY TRANSFER CENTER IN MOUND BAYOU, HOLDS SWEET POTATO JAMBOREE
On September 26, 2014, Alcorn State University held its annual Sweet Potato Jamboree with over 300 participants in attendance to witness the ribbon cutting ceremony of the newly constructed Extension/Research Farm and Technology Transfer Center, located in Mound Bayou, Mississippi.

Farmers, members of the surrounding community and high school students interested in agriculture enjoyed farm tours where they learned about the research being conducted on sweet potato, aimed at identifying pest and disease-resistant varieties that are suitable for local conditions. They were also introduced to an alternative crop—giant miscanthus—that has potential application for biofuel production.

Additionally, the participants learned about the importance of healthy soil for crop growing and everyday life, witnessed sustainable vegetable production practices, and had a chance to visit displays that informed them about the Alcorn Center for Conservation Research project, entitled “103 Varieties of Melons from Around the Globe” for dissemination to small farms, as well as the Center’s research on muscadine grape production. The National Black Growers Association also took part in the event, sharing about their mission of “sustaining diversity in production agriculture.”

The pinnacle of the event was the ribbon cutting ceremony for the newly constructed Extension/Research Farm and Technology Transfer Center, followed by a tour of the state-of-the-art building.

Alcorn President, Alfred Rankins Jr. thanked everyone who came to take part in this momentous occasion with Alcorn State University and its Bolivar County affiliates. “Considering the history of Bolivar County, I cannot think of a better place for our facility. Alcorn will continue to provide quality applied research for farmers in Bolivar County and across the state of Mississippi.”

The event concluded with a delicious lunch, during which the results of the Sweet Potato Bake-off Contest were announced. The winner of the contest was Taliah Brown, whose two dishes—sweet potato soup and sweet potato cheese cake—tied for first place.

Second place was taken by Rose Marie McKnight with her sweet potato cake, and third by Whitney Brown, who also submitted a sweet potato cake recipe. The first, second and third place winners received monetary prizes, as well as the honor of having their recipes included in the Alcorn Extension Sweet Potato Cookbook.

For more information on the Extension/Research Farm and Technology Transfer Center, call 662.741.3375 or contact Dr. Franklin Chukwuma, coordinator of Off-Campus Centers, at franclinc@alcorn.edu or 601.877.2321.
Alcorn State University scientists in the Department of Agriculture are making their mark in the heart disease prevention arena with their published findings that vegetable purslane leaves lower the risk of cardio-vascular disease in humans.

Heart disease continues to be a leading cause of mortality and morbidity in the United States. Researchers have already documented that high blood fat in the form of cholesterol is a major risk factor in the development of heart disease. Although several studies have shown that cholesterol lowering drugs such as statins have been quite effective in lowering total cholesterol, low-density lipoprotein cholesterol (LDL-C), and prevent the incidence of coronary heart disease. However, some of these drugs are associated with side effects such as increased liver enzymes, muscle pain, joint aches, diarrhea, and constipation.

As a result of these concerns for potential side effects and consequent increase in health care costs, there is a growing demand for non-traditional and/or diet related approaches to lower blood lipids and cholesterol, and prevent cardiovascular disease and stroke. Therefore, there is a renewed effort from nutritional scientists to identify natural sources from vegetable or fruits biochemical’s capable of lowering blood fats and cholesterol.

In a feeding trial conducted at Alcorn State University, scientists explored the efficacy of purslane leaves in lowering cardiovascular diseases risk in patients with high blood cholesterol and other blood lipids. Purslane (P. oleracea, figure 1) is a wild or cultivated vegetable in many parts of the world, the leaves are eaten extensively
in soups and salads in Mediterranean countries, in tropical and sub-tropical areas of the world where they are consumed and/or used for their medicinal properties.

The uniqueness of vegetable purslane is its high content of omega-3 fatty acids, antioxidant vitamins (vitamin E, beta carotene and minerals) and soluble fiber (pectin). The study was conducted for five weeks to evaluate whether or not adding a small quality of freeze-dried purslane leaves (3 grams each at lunch and dinner) in the diets of free-living human subjects with elevated blood cholesterol level, a cardiovascular disease risk factor, can lower blood fat and/or confer other health benefits. The patients were screened for general and medical history and those with overt high cholesterol were selected for the study.

Chemical analysis of purslane leaves confirmed that they are a rich source of beneficial lipids (polyunsaturated fatty acids), crude protein, vitamins, and minerals. Baseline values of variables measured for each subject were used to determine changes overtime. Blood hematocrit levels increased by 15.7% at the end of the trial. Total cholesterol significantly decreased by 15% at the end of the trial and more importantly, the HDL cholesterol (good cholesterol) increased by 9% in patients receiving dried purslane leaves.

The study demonstrated that using a novel food product rich in omega-3 fatty acids, pectin, and other essential nutrients, produced a marked improvement in the lipid profile of the patients. LDL-cholesterol (bad cholesterol) was reduced by 27%, suggesting a remarkable improvement in heart disease risk, a primary culprit in the development of cardiovascular disease and stroke.

At the end of this study, purslane seeds and planting directions were disseminated to farmers during agricultural and swine field days. With obesity and coronary heart disease so prevalent among many Mississippians, a non-traditional and/or diet related approach to lowering blood fats and cholesterol is likely to provide an additional means of preventing/reducing cardiovascular diseases and stroke.

Two other scientists who collaborated in this research are Dr. Samuel Besong (Delaware State University) and Mrs. Edith Ezekwe (Alcorn State University). The research study has been published in the International Journal of Nutrition and Metabolism.
THE 4 C’s OF OBESITY CRISIS, CONSEQUENCES, CAUSES, AND CURES
A MISSISSIPPI APPROACH

Dr. Martha D. Ravola, Principal Investigator
and Associate Professor, Department of Human Sciences

Ms. Ouida Pittman, Ret., Co-investigator and Instructor, Head Child Development Unit

“Because of the increasing rates of obesity, unhealthy eating habits and physical inactivity, we may see the first generation that will be less healthy and have a shorter life expectancy than their parents.” — U.S. Surgeon General, Richard Carmona, March 2004

CRISIS: OBESITY EPIDEMIC

Obesity is a physical condition where excess fat is accumulated in the human body. The epidemic of obesity is blamed for over 300,000 deaths and nearly $100-billion in medical bills to human society each year. Statistics have demonstrated that there are as many dying from obesity as there are from hunger and starvation. Obesity is currently eating into our economy and eroding away human health and wellness.

Among the adult population, obesity was considered to be a big problem; however, in recent years the grim state of childhood obesity has surfaced. It is attacking even the youngest children and youth. Statistics noted that childhood obesity has more than tripled in the past 30 years. In the US, 40% of children are obese or overweight, and 22% of preschoolers are overweight (PedNSS, 2007). In the low-income community, 1 of 7 preschoolers is obese, and 1 of 3 has become obese before his/her 5th birthday (Center for Disease Control, 2011). By the time an obese child turns six, his/her chance of becoming an obese adult is over 50%. Overweight adolescents have an 80% chance of becoming overweight adults, and the obesity during adolescence has increased mortality rates during their adulthood.

While childhood obesity is affecting every state in the U.S., Mississippi is most serious because it topped the list as the fattest state in the nation for six years in a row. The state’s current adult obesity rate is 33.8% (42.9% for African-Americans). Mississippi’s child population, rate is 40%, a 6.9% higher than the second place and the largest margin between state rankings by far. Painting a very dismal picture, the staggering facts of childhood obesity in Mississippi have raised serious concerns to everyone, from policy makers to school teachers and parents.

While we understand the gravity of the problem, what is more important is to investigate its consequences, its causes and, thereby arrive at a plausible solution.

CONSEQUENCES: ON PHYSICAL AND MENTAL HEALTH

Children who are overweight or obese usually have or are at higher risk of breathing problems, sleep apnea, allergies, arthritis, cardiovascular diseases, early puberty or menarche. Obesity complications include liver diseases and eating disorders such as anorexia and bulimia, which could worsen the problem. Some of these disorders may lead to stroke, Type-2 diabetes, cancers, and other life-threatening conditions.

In addition to health and wellbeing problems, obese children are prone to many psychological or emotional issues, such as anxiety, stress, depression, eating disorders, negative self image, discrimination, social stig-
matization, and poor academic performance, to name a few. In social life, obese children often suffer from teasing by their peers. Some are even harassed or discriminated against by their own family members and/or friends. In terms of health care, childhood obesity causes a big financial burden to the families and the society, as children treated for obesity and its associated health problems are roughly three times more expensive than children of normal body weight (American Heart Association, 2011).

CAUSES: MULTIPLE FACTORS

Although obesity is primarily brought on by over-eating carbohydrates (e.g. sugars) and/or fat in diets, multiple factors including genetic, environmental, and socioeconomic ones often act in concert. Genetic factors are often blamed for childhood obesity. In one it was found that 80% of the children of two obese parents were obese or overweight in contrast to less than 10% of the children of two normal-weight parents. Certain types of genes have been found in the human body that affect a number of body-weight related parameters or biological processes, such as metabolic rate, appetite, blood glucose level, fat deposition and storage, and hormone secretion (Collins, 2000-2007). While those types of genes do play a role in obesity, the contribution of genetic factors to obesity; however, is generally not more than 1% (American Journal of Clinical Nutrition, 2010), although this rate can vary from 6% to 85% depending on the population examined.

Environmental and behavioral factors play important roles in causing people to be overweight or obese (U.S. Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity, 2001). As preschool children are too young to understand things and make their own decisions, the behaviors of parents, the environment parents provided, and the choices parents made at home have a major influence on children’s behaviors, food choices, and life styles.

While conventional wisdom holds the notion that preschool children are physically very active, ample studies have found enough facts proving that preschool children do not get the amount of activity that is required for their age. Compounding this problem is a fact that modern lifestyles have adapted to more sedentary behaviors among family members including children, and it is the combination of faulty eating habits and sedentary lifestyles that are raising the childhood obesity statistics to alarming numbers.

Ethnicity and socioeconomic factors also contribute to obesity. Low-income families have relatively less access to healthy foods, as well as to the opportunities of physical exercises. The underserved families dwell in low income neighborhoods where crime and violent activities are rampant, and therefore, parents do not deem it safe for their children to play outside. This leaves children with no options but to stay home and develop sedentary lifestyles. Also due to financial constraints, these parents usually are forced to take up more than one job, as a result of which they have no time to monitor their children’s eating and physical activities. They often quickly procure to serve fast foods than home-made healthy meals. Some medical illness, such as Cushing’s syndrome (a condition in which the body contains excess amounts of cortisol) and Prader-Willie syndrome (a genetic disorder in which seven genes deleted or unexpressed), can lead to childhood obesity or overweight. Some drugs for certain illness, such as the anti-asthma steroids, can also lead to childhood obesity.

CURE: MULTIPRONGED APPROACH

Obesity is such a medical condition that can be easily diagnosed but difficult to be treated. The soaring rates of childhood obesity in Mississippi and the nation do call for urgent action. Having examined the causes, it is clear that the lifestyle modifications including behaviors, eating habits, and physical exercise have a larger influence on bodyweight gain in comparison to the genetic factors, thus demonstrating the possibility of cure. However, there is no one-step formula or a quick fix to solve the problem.

To bring down the growing rate of obesity among young children it does require a multipronged approach which includes promoting, healthy eating, restructuring the environment and augmenting communication.

Promote Healthy Eating

Preschool years are very important for children to develop eating habits and learn to consume and appreciate a variety of healthy foods. Practicing healthy eating behaviors during early childhood will not only promote child’s growth and development, but also help children to achieve and maintain appropriate body weights, and ensure their overall health. Therefore, to condition children for healthy eating right from the beginning, nutritional education at the young age is deemed very necessary.

Home-time meal experiences can shape a child’s eating behaviors. Parents can serve as role models in shaping a child’s healthy behaviors. The importance of modeling cannot be undermined as it is parents, if not only parents, who provide most daily meals to their children and supervise the child’s eating behaviors at home.
**Restructure Environment**

The Sedentary behaviors, such as watching television and playing video games, not just make children inactive but also encourage their unhealthy snacking. The food-related TV ads can promote unhealthy food choices, and it is estimated that on an average 122 hours of food ads are reviewed by children annually. Therefore, parents should restructure their home environment by reducing their child’s time that would be spent in sedentary behaviors and by incorporating physical activities into child’s daily routines.

**Augment Communication**

It takes much more than just diet and physical activity to keep a child’s body weight down. Many parents of preschoolers do not recognize that their children are obese or overweight. Since parental perception can hinder the school efforts to reduce childhood obesity, parent education is also a very important aspect in the childhood obesity reduction campaign. Therefore, it is critical to augment the communication between child care providers and parents or preschools and parents. Communication can help parents to understand their role in reducing childhood obesity. Once proper understanding is established parents’ perceptions can be easily altered.

**OUR APPROACH IN MISSISSIPPI**

The research program titled, “My Body Matters” at Alcorn State University is an initiative to reduce the prevalence of obesity among preschool children in Mississippi. The target location is Head Start centers in Adams and Jefferson counties. The program is aligned based on the ecological perspective that individual characteristics such as age, gender and sex are not the only factors that contribute to obesity. It is also the environmental factors such as home, school and community that serve as potential risk factors for obesity. This project employs a multi-pronged approach, which encompasses physical fitness, healthy eating, caregiver involvement and teacher awareness.

Interventions undertaken include age appropriate physical fitness regimes in combination with healthy eating interventions through behavior modification. Children are active participants in the seed to the table interventions which include vegetable gardening and sensory experiences to enhance vegetable eating consumption. The project also targets child care providers and parents by conducting informational sessions, seminars, participatory field experiences and training programs. Local community resources such as medical, nutritional and physical education professionals have also been drawn to support our efforts.

Even though the current scenario of childhood obesity, especially in Mississippi, does present a grim picture, solace rests in the fact that there is hope. The key to reducing obesity is early identification and intervention. By influencing children early in their lives for active lifestyles and healthy nutritional choices, childhood obesity is likely to be prevented and even reversed.

**References**


Centers for Disease Control and Prevention, Obesity and Overweight: Childhood Obesity http://www.cdc.gov/nccdphp/dnpa/obesity/childhood/index.htm


For additional information about our efforts to reduce childhood obesity, please contact Dr. Martha Ravola at 601.877.4717 or email mravola@alcorn.edu.
The current trend of producing biofuel from agricultural products has reduced agricultural land available for the production of food and feed. A large portion of the land previously devoted for the production of grains for cattle feeding, is now dedicated to crops for ethanol production.

“Therefore, it is imperative to make changes and adjustments to improve production efficiency in the cattle industry through innovative research,” Dr. Evelin J. Cuadra, animal science professor says.

“Relevant biological factors to advance production in the livestock industry deal with reproduction efficiency and genetic improvement on traits associated with production.”

Researchers at Alcorn State are currently working on manipulating follicular dynamics to enhance reproduction efficiency of beef cattle.

“Additionally, an embryo transfer research project has been established since 2003 as a means to improve the genetic of beef herds,” Dr. Cuadra says. As a second objective this project aims to improve retention rate of the transferred embryos with the use of hormonal protocols.

In a recent article in the Natchez (Mississippi) Democrat newspaper, Dr. Cuadra says Alcorn State has started a program that will provide a handful of high-quality cattle for sale annually for years to come.

“A recent sale of nine bulls produced from embryo transfers marked the start of the program. Normally, these high genetic animals are too expensive for small farmers to buy. At around $800 each, ASU sold the animals essentially at a price that covered its investment,” he said. “If you bought from one of those breeders (who provided the embryos), you’d probably have to pay three times that much,” Cuadra says.

It is believed that improving retention rate would consequently make small-and medium size farmers more receptive to the use of the technique of embryo transfer. Embryonic retention remains as one of the main concerns limiting application of embryo transfer within cattle producers. This concern is based on data reporting embryo losses of more than 40% during the first 18 days of gestation in cattle and sheep, and even higher during summer months.

It is difficult for our team to realistically evaluate the impact of this research. However, our studies have demonstrated that the use of progesterone supplementation at the moment of the transfer greatly enhances embryonic retention. Additionally, the strategy evaluated and recommended by our lab to supplement progesterone is now being used by many farmers practicing embryo transfer as mean to improve fertility and genetics of the herd.

Funding Source: Evans-Allen Grant Funds
Contact: Dr. Evelin J. Cuadra, associate professor of Animal Science; 1000 ASU Drive, Box 750, Lorman, MS 39096 Phone: 601.877.6539; email: cuadra@alcorn.edu
Center for Conservation Research

Formerly: USDA/NRCS Conservation Research Project Established in 1989
The largest C-factor databank on horticultural crops in the world
Best Research Center – HBCU 2013 Awards – Finalist

Dr. Girish K.S. Panicker, an authority on C-factor (cover and management) research and an internationally renowned agricultural scientist, is an associate professor and director of the Center for Conservation Research, which was established by the USDA/NRCS in 1989. The main objectives of this research center are: to conduct (1) C-factor (cover and management) research on horticultural crops for erosion prediction, nutrient management, and conservation planning, and to prevent soil erosion and climate change, (2) conservation research on organic, inorganic, and no-till production of horticultural crops; fruit and water quality; and C:N ratios and residue management; and (3) outreach programs.

A native of Kerala State of India, and an alumnus of Alcorn State University and Mississippi State University, Panicker earned B.S. Agriculture with major in agronomy from University of Agriculture, Kerala State, India, M.S. in agronomy from Alcorn State University with highest distinction, and Ph.D. in horticulture from Mississippi State University with Dr. Joseph B. Edmond Award for outstanding achievement in graduate school. He is a nationally Certified Professional Agronomist (CPAg) and Certified Crop Adviser (CCA), and has worked largely in conservation field on three continents, Asia, Africa and North America. He was formerly the assistant director of agriculture (soil survey and land use planning), Soil Conservation Unit of the Department of Agriculture, Ministry of Agriculture, Kerala State of India, and Principal Inspector of Agriculture for a UN Project in West Africa.

Alcorn’s federally funded research center has the world’s largest C-factor data bank on horticultural crops with over 120,000 readings on 37 crops at an investment of almost $6 million. The entire data has been submitted to the USDA National Soil Erosion Research lab (NSERL), Purdue University, Indiana, and USDA National Plant Data Center (NPDC), Baton Rouge, Louisiana. The information generated is used in major erosion prediction models, including Universal Soil Loss Equation (USLE), Revised Universal Soil Loss Equation (RUSLE), Water Erosion Prediction Project (WEPP), and Wind Erosion Prediction System (WEPS). In addition, this information is used by conservationists, agronomists, and horticulturists around the world on farmlands for nutrient management and conservation planning as well as prevention of soil erosion and climate change. The center applies C-factor research program for thesis work and these graduate students find employment before their commencement. More than 40 undergraduate students have been trained on conservation research and most of them have been hired by USDA/NRCS. Dr. Panicker has over 90 publications to his credit, including abstracts, leaflets, pamphlets, bulletins, and articles in journals and proceedings, and presented more than 50 research papers at regional, national, and international level. More than 30 Technical Notes have been developed for farmers and conservationists in collaboration with USDA/NRCS.
Dr. Panicker, who has represented the US several times to deliver lectures on conservation research on horticultural crops at international conferences abroad, provides free consultation services to research organizations and universities in many countries, and his advanced research methodologies on C-factor research, residue decomposition studies, sustainable agriculture, and organic and no-till crop production practices for a healthier environment are being pod-casted globally by the American Society for Horticultural Science, International Society for Horticultural Science with headquarters in Belgium, American Society of Agronomy, USDA, e-Organic, and e-Ex-tension.

Links to global podcasts:
(1) http://ashs.org/db/horttalks/detail.lasso?id=703
(3) http://www.extension.org/pages/64359/2nd-international-organic-fruit-research-symposium

The URL to the Center’s website is: http://www.alcorn.edu/Academics/Schools/AREAS/crp.aspx OR http://www.alcorn.edu/Academics/Schools/AREAS/crp.aspx?id=4147

In 2012, Panicker exhibited his outstanding research findings on increasing the anthocyanin content with worm castings at the Smithsonian Institution, Washington D.C, the largest educational, research, and museum complex in the world.

Panicker’s research collaborators include USDA/NRCS, USDA/ARS, US Army, Mississippi State University, the University of Arkansas at Fayetteville, the University of Arkansas at Pine Bluff, Oklahoma State University, New Mexico State University, Louisiana State University, Alabama A&M, and West Virginia State University.

Dr. Panicker succeeded in developing the first Co-operative Research and Development Agreement (CRADA) between Alcorn and the US Army. The center published the first technology transfer bulletin (41 pages) on C-factor research in collaboration with USDA/NRCS and USDA/ARS, and copies have been sent to all libraries of 1862, 1890, and 1994 land grant universities, other non-land grant universities offering agricultural science, and all state conservationists in 50 states. This technology is being used around the globe.

In addition to the ongoing research programs, Dr. Panicker has succeeded in getting two other research grants last year; one from the US Army for $99,916.00 to conduct conservation research on bio-fuel crops, and the other from the USDA/NIFA for $498,645.00 to conduct conservation research on Melons.
He has been a member of several national and international agricultural societies, including American Society of Agronomy, American Society for Horticultural Science, International Society for Horticultural Science, Soil and Water Conservation Society of America, and World Association of Soil and Water Conservation, during his international career. He has served as chairman of the National Committee for Publication Awards of the American Society for Horticultural Science and chairman of the division of Agriculture of Mississippi Academy of Sciences. He was recently appointed as an advisory committee member of the National Organic Farming Research Foundation where he represents all 1890 land grant universities. He was honored with the Pride of India 2011 award during India’s annual event for its international diaspora held in New Delhi. This prestigious award is conferred to distinctive non-resident Indians for their valuable contribution, dedication, and remarkable services that give India reasons to be proud of them. He is the recipient of the Chapter Award of Soil and Water Conservation Society of America and best research presentation award of the Mississippi Academy of Sciences. Dr. Panicker, who has travelled extensively and conducted studies in more than 20 countries in the world, is the recipient of a letter of appreciation from the former president Bill Clinton for his valuable recommendations on wildfire control. He has been inducted into the most prestigious biographical publications, American Biography, Who’s Who in America, Who’s Who in the World, Outstanding Scientists of the 21st Century, Great Lives of the 21st Century, and Hall of Fame for Agriculture. In recognition of his outstanding contributions in the field of agriculture at international level, he was recently appointed as a member of the director board of International Women’s Think Tank, a non-profit international organization working to empower the New Emerging Market, Women and Girls, as they engage in intercultural understanding and economic growth. Through this international organization, Dr. Panicker helps women around the globe in establishing kitchen gardens with fruits and vegetables to sustain healthy families.
Sweetpotato (Ipomoea batatas Lam.) is the seventh largest food crop in the world. Its storage roots offer excellent nutrition and health benefits due to abundant vitamins (ß-carotene, Vitamin B1 and C, and one of the few non-fat sources of Vitamin E), antioxidant micronutrients, beneficial complex carbohydrates, minerals and dietary fibers, etc. Despite these benefits, sweetpotatoes in the U.S. are vastly underutilized and undervalued. The average annual per capita consumption of sweetpotatoes from 2000 to 2010 in the U.S. is a mere 4.7-lb, about 30 times lower than 127.9-lb of that of potato (ERS-USDA).

To increase its consumption and commercial value, efforts have been made in recent years to use sweetpotatoes or their processed products including flour, puree and frozen cooked products for making popular food items, e.g. bread (up to 65% sweetpotato flour), ready-to-eat breakfast cereal, bread pudding, casserole, tart, muffins, pancake mix, snack food items (chips, french-fries and flakes) and beverages, etc. Some of these products such as sweetpotato chips and fries are commercially produced by several large companies, e.g. various brands of sweetpotato chips from the Terra Chip Co. of New Jersey, Seneca Foods Corporation of New York, UTZ of Maryland, the Pringles brand from P&G, Route 11 Potato Chips of Virginia and Zapps of Louisiana, etc., and fries from Lamb and Weston of Idaho and UTZ of Maryland, etc.

However, typical U.S. sweetpotato cultivars, which were developed to be a fresh market type, are not entirely suited for making chips and fries. The Center for Biotechnology & Genomics, Alcorn State University has been working to develop value-added specialty sweetpotatoes that are better suited for making quality chips or fries. They have successfully identified traits of sweetpotatoes that critically impact sensory and texture qualities of chips and fries. Some of their newly bred lines that possess desired traits are now being tested.
Mississippi Senate Agriculture Committee Members Visit Alcorn, 2013
Mississippi Senate Agriculture Committee Members Visit Alcorn, 2014

“This visit has been an eye-opening experience. We were elated to see what Alcorn is doing to benefit our state and especially small farmers,” said Mississippi Senate Agriculture Committee Chair Billy Hudson as he and other members of the Committee visited Alcorn State University on August 21 and 22, 2014.

The tour, hosted by the School of Agriculture, Research, Extension and Applied Sciences (AREAS), showcased Alcorn State’s academic, service, research and extension programs in southwestern Mississippi. The senators also had the opportunity to interact with Alcorn President Alfred Rankins Jr.; Interim Executive Vice President of Academic Affairs and Provost Donzell Lee; students, faculty and staff during the campus tour.

“Alcorn State is grateful to Senator Hudson and the Mississippi Senate Agriculture Committee for a very informing and engaging visit and tour of our beautiful campus and its excellent academic, research, service and extension centers. Our senators gained first-hand knowledge of the local, statewide, national and global economic impact and contribution Alcorn is making as the oldest public historically black land-grant university in the nation,” said Alcorn Vice President for Institutional Advancement and Director of Government Affairs Marcus Ward.

The legislators were first shown the Mississippi Natural Products Center (MNPC) Shiitake Mushroom Production Facility in New Hebron, Mississippi. Afterwards, they travelled to Natchez, Mississippi to visit the proposed site of the Natchez Farmers Market. The next stop on the senators’ tour agenda was the Lorman campus, where they visited the Ecology and Natural Resources Building, the Experiment Station and the Goat Production Center, among other on-campus locations.

The group also heard a presentation by Dr. Barry L. Bequette, former dean and director of land-grant programs on the many successes of the School of AREAS, and interacted with faculty and University administrators.

On tour with Agriculture Committee Chair Hudson were Vice Chair Russell Jolly of Houston, Mississippi; senators Angela Burks Hill of Picayune, Mississippi, Willie Simmons of Cleveland, Mississippi, Phillip Gandy of Waynesboro, Mississippi, Albert Butler of Port Gibson, Mississippi, and Haskins Montgomery of Bay Springs, Mississippi; committee staff attorney Larry Richardson and administrative assistant Ben Parker.

According to Dr. Bequette, the tour was given to allow the legislators to view first-hand how Alcorn State is making use of state funding allocated for work in research and extension.

“Through showcasing the quality research and extension programs conducted by the School of AREAS, the tour provided assurance to legislators that taxpayer funds are being invested wisely,” Bequette said. “It also stressed the importance of adequate funding for the School, and the impact we make on the citizens and economy of Mississippi.”

Several senators commented on the two-day tour.

“This was an educational and inspirational visit,” said Vice Chair Jolly. “We were impressed with Alcorn’s research efforts and its work with small farmers.”

Senator Simmons, a proud graduate of Alcorn State University, said, “Alcorn is not just a training institution. It impacts the economy of the state and helps small farmers to cultivate their businesses. The research being done here has the potential of growing more businesses in the state such as Shiitake mushroom and meat production. These are very promising fields as the demand is greater than the supply, and Alcorn is doing a great job in assisting small farmers in creating these businesses and generating revenue.”

Senator Hill said, “The research being done here is Mississippi’s number one resource for assisting small farmers in making money by following trends across the country such as the farm-to-table trend, aimed at growing natural organic fruit and vegetables on small plots for local sale. We were also very impressed with Alcorn’s Shiitake mushroom and medicinal plant research.”

In his speech at the conclusion of the tour, Chairman Hudson thanked President Rankins, Ward, and Dr. Bequette for a “great two days” and commended Alcorn on its efforts to educate small farmers. He also encouraged them to work hard on involving more people in agriculture. He said, “We have seen things done at Alcorn that we have not seen in other parts of the state, and we will make sure that Alcorn receives funding to continue and expand its positive impact.”
Small and limited-resources farmers, representatives of state and federal agencies, special interest groups from the state of Mississippi, Congressman Bennie Thompson, and Alcorn administrators, faculty and staff gathered for the Small Ruminant (Goat) Field Day and Workshop held by Alcorn State University Extension Program, USDA Natural Resource Conservation Service and the Royal International LLC at the Royal’s family farm in Crystal Springs, Mississippi.

Considering the fact that goat is the most widely consumed meat in the world with the demand for it constantly growing, Mississippi farmers have a great opportunity to prosper in this rapidly developing market. Those who want to invest in the business of growing goats received valuable information on production and marketing of goats during the workshop.

The participants toured Royal’s goat and lamb meat farm to see with their own eyes the thriving operation that was established less than two years ago and during this short time expanded tremendously. They now have about 1000 goats on this property and about 4,000-6,000 animals altogether on their three farms.

“We have been pretty successful in what we do and our mission is to become the largest goat meat producer and exporter in the United States,” stated Charles Pickett, CEO and president of Royal International LLC. “We believe in doing things right and supporting our community. We are proud to enter into the partnership with Alcorn and NRCS to make things happen for Mississippi.”

Under the agreement between Alcorn and Royal International, the University receives a site for farming and research providing its faculty and students with valuable hands-on experience, providing Royal with research, extension and educational services, and activities that will result in improved farming technology and management systems.

In his comments, Congressman Bennie Thompson recognized Alcorn and Royal International for being “vital partners in the project that helps Mississippi’s small and limited resource farmers to be better farmers” and ultimately boosting the state’s economic development.

The event concluded with the participants sampling tasty goat and lamb meat dishes prepared by celebrity Chef Joe Durio, known for his Louisiana style authentic Creole cuisine and promoting healthy eating for all ages.

For more information on the project, please contact ASU Extension Program at 601.877.6128.
The Mississippi River Research Center (MRRC) in the School of Agriculture, Research, Extension, and Applied Sciences (AREAS) at Alcorn State University was created in the mid-1990s to combine and integrate research, teaching, and outreach in agriculture, applied sciences, environmental studies, advanced technologies and human sciences. The MRRC’s mission is to advance knowledge in preservation, conservation and improvement of water quality while balancing economic and environmental impacts. The MRRC provides capabilities in sustainable watershed management, soil and water quality laboratory analysis, as well as watershed assessment and modeling. Under the new leadership of Dr. Jairo Diaz, the MRRC has developed short-and-long term visions:

**Short-Term Vision**

- Develop science-based information, analytical tools, and decision support systems to enhance conservation of agricultural ecosystems and the environment along the Mississippi River corridor
- Lead and enhance the Environmental Science program offered through the Department of Agriculture
- Identify and evaluate nutrient management strategies best suited for small scale, low income agricultural production
- Select and develop demonstration sites for nutrient management strategies at both on and off campus sites
• Develop collaborative relationships with other organizations such as Toyota, the Mississippi Department of Environmental Quality (MDEQ), and the United States Department of Agriculture (USDA)

• Establish a network of affiliates focused on large river research

• Identify state and federal funding opportunities

• Develop outreach for students and general public in the field of environmental science and large rivers

• Provide academic and research opportunities for minority groups in agriculture, science, and technology.

**Long-Term Vision**

• Develop international partnerships (China, India, Africa, Latin America) supported by the United States Agency for International Development (USAID), United States Educational, Scientific, and Cultural Organization (UNESCO), and World Bank

• Increase the visibility and importance of the MRRC through effective technology transfer initiatives

• Develop innovative nutrient management strategies for small farms and limited-resource farmers

• Educate students, in particular underrepresented groups, in sustainable development

**Research Activities**

• Hosted a meeting with U.S. Forest Service representatives and Alcorn State faculty to develop an initiative regarding acid deposition impacts on forest and aquatic ecosystems in the Mississippi and Louisiana forest areas
• Developed a Memorandum of Understanding with Mississippi Water Resources Research Institute focused on developing strategies in water-related research opportunities.

Outreach Activities

The Center is actively involved in mentoring and outreach activities which support its mission of reaching out to students and the general community, as well as training the next generation of minority professionals in science and applied technology areas. In 2014, the MRRC planned, participated in, and performed four outreach activities including the Earth Day celebration, AgDiscovery Summer Camp, met with students from both the Martin Luther King Jr. Christian Academy in Baton Rouge, Louisiana, and the Virgin Islands Agricultural Experience in St. Croix and St. Thomas, Virgin Islands. Hands-on activities provided information regarding conservation of our ecosystems, as well as information about college opportunities in the area of Environmental Sciences at Alcorn, for about 70 students, parents, teachers, and the general public. The MRRC trained two undergraduate students:

• Amy Mayedo, from University of Florida, was funded by the National Oceanic and Atmospheric Administration (NOAA) and Northern Gulf Institute (NGI) Diversity Internship Program. She was trained in hydrology studies.

• Obed Brempong from ASU was mentored in educational activities to protect our environment.
ASUEP EXPANDS ITS SIGNATURE "EXTENSION THIS WEEK" TALK SHOW PROGRAM

The Alcorn State University Extension Program (ASUEP) has once again expanded its “Extension this Week” radio talk show program, this time to air on the University’s WPRL 91.7 FM “The Gold” station. The show, which airs weekly, is hosted by Manola Erby, 4-H specialist, in conjunction with Jerome Myles, campus radio personality.

The 15-minute “Extension this Week” talk show premiered on Tuesday, July 15, 2014, at 1:30 p.m. on Alcorn State’s WPRL 91.7 FM “The Gold.” The station also streams live online at www.wprl.org. The show also airs every Thursday at 9:30 a.m. on Natchez’s WMIS 1240 AM, and WTYJ 97.7 FM, hosted by Helen Brooks, marketing coordinator for the ASUEP. Broadcasting began via these media outlets in April of 2011.

The show’s purpose, according to host Manola Erby, “is to bring educational and entertaining information to the University’s campus and the surrounding communities.”

“We will be discussing topics such as physical fitness, nutrition, and other important information that the community needs to know to stay healthy,” said Erby. “We are also going to promote some of the events of the ASUEP and emphasize the programmatic areas which ASUEP covers.”

Dr. Freda M. Lawrence, director of media and communications, School of Agriculture, Research, Extension, and Applied Sciences (AREAS) is the initiator of the program’s expansion. She stated, “It is important that we expand our media efforts to benefit the communities we serve by providing opportunities to reach and teach small farmers in greater numbers. Additionally, broad expansion provides the opportunity for greater input from our clients, ensuring that the information we present remains relevant and accessible. Our audiences are eager to hear first-hand how we can assist them in various ways, to not only improve their farming enterprises, but to improve their lives and their family’s lives on a daily basis.”

Some of the programs and services highlighted by the “Extension this Week” talk show include health and nutrition reports, as well as information to benefit small-and-limited resource farmers, ranchers and families across the state.
Alcorn State University is in the process of constructing a new Product Development Center, aimed at providing support, guidance, and equipment for developing the ideas of Mississippi’s creatively inclined minds. Located near the university’s entrance, at the site of the old biotechnology lab, the Center will be used to cultivate the products of both the university and the surrounding communities, preparing them for mass production and launching them into the public eye.

According to Dr. Barry Bequette, former dean and director of land-grant programs in the School of Agriculture, Research, Extension, and Applied Sciences, the center has a two-fold purpose.

“The first is to produce Alcorn brand products, such as its famous hot sauce, soy-nut cookies, various jams and jellies, etc.” The second—and most important according to Dr. Bequette—is “to assist individuals and small businesses in value-added production.”

Funded by the United States Department of Agriculture, the Center will collaborate with the Natchez Farmers Market, which will serve as the site of a new kitchen incubator facility. The incubator, a prerequisite to the Product Development Center, will serve as a product laboratory, allowing the university to assist a product’s creator in perfecting his/her design and presentation. Once an item has been cultivated in the incubator, it’s ready for stage two, the Product Development Center, which will possess the equipment and machinery to conduct test runs and marketing schemes for large scale production.

There are other 1890 institutions which have Product Development centers, mostly producing University Brand food-related products. These include University of Arkansas-Pine Bluff, Mississippi State University, University of Idaho, and Texas A&M, among others. These institutions create items such as ice cream, cheeses, chocolates, and others that are popular with the alumni and general public.

As previously stated, Alcorn plans to use its Product Development Center to mass-produce and market its signature University brand hot sauce among other products.

The center is open to any individual in the state of MS with a valuable, marketable idea, and will provide assistance and guidance in a variety of manners, including formulating business plans, record keeping, etc. Due to its all-encompassing nature, the Product Development Center is poised to make an exceptional impact on the economic livelihood of Mississippi’s entrepreneurs and small-business owners.

The tentative date for the Center’s opening is January 2015.

For more information, contact the Alcorn State University School of AREAS at 601.877.6137.
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ASSISTANT PROFESSOR IN THE DEPARTMENT OF HUMAN SCIENCES COMPLETES LEADERSHIP MISSISSIPPI CLASS

Dr. Carrie Ford, chair and assistant professor in the Department of Human Sciences, completed the Leadership Mississippi Class. The class is an annual program of the Mississippi Economic Council (MEC) and is conducted by the M.B. Swayze Educational Foundation.

Leadership Mississippi’s goal is to develop and maintain a network of Mississippians committed to strengthening our state’s quality of life.

Dr. Ford was one of 50 leaders chosen out of approximately 400 applications. She remarked that she is not only passionate about the surrounding communities around Alcorn State University and her own community, but about Mississippi and its success.

“This Leadership Mississippi program was just different from any other leadership program I have attended. It offered an opportunity for me to expand my knowledge of how local and state issues impact community development.”

Leadership Mississippi’s objectives are to identify Mississippian who have demonstrated leadership potential through job-related and community activities; to train participants by sharpening their leadership skills; and to motivate participants by increasing awareness of community and state challenges.

The conference included participants in mock problem-solving activities on issues of current interest, and provided a network of leaders across the state that are actively involved in improving Mississippi’s quality of life. Participants selected by a committee of MEC members brainstormed in a training course, which combined individual study group sessions and project experience in using leadership skills.

The graduates of this program include political, educational, business and community leaders who are continuing to make a difference in moving Mississippi forward.

“I am proud to be a graduate of the Leadership Mississippi Program and join over 1,000 alumni active in Mississippi’s business and political forums,” she added.
Mr. Charles Bernard Shepphard, extension specialist, retired from Alcorn State University Extension Program (ASUEP) after 37 years of service.

“From a personal standpoint, I’ve gone from providing technical services to the parents and communities, to a professor educating their children and their grandchildren,” he says.

Other aspects pertaining to his tenure at Alcorn State was that, the late President Clinton Bristow Jr. gave Mr. Shepphard the title and responsibility of the University Legislative Liaison, where he focused on legislative and state officials.

“I was asked to come in and get funding for the cafeteria, because Alcorn did not have a cafeteria on campus at that time,” he remarks.

Later on, Mr. Shepphard received funding in one year, rather than phasing in the cafeteria costs. He was selected the 1890 representative for Community Resource Development (CRD) on regional and national levels.

Mr. Shepphard lists as a major accomplishment the creating, funding and assisting of the ASU Small Farm Development Center Association, which provided families with the ability to obtain cleaner water, fire safety, housing amenities, and technical training in rural farming. He provided professional technical training in Community Research Development, Legal Land Stewardship, Estate Planning, Cooperative Development and Rural Entrepreneurship to tens of thousands of clients, rural farm families, conference attendees, and Extension educators.

In addition, Mr. Shepphard is an attorney at law, who served as a Mississippi State House of Representative from 1980 -1996; and he is the owner/publisher of the Fayette Chronicle.

“An African-American male from unincorporated Russum, Mississippi, is having a global impact through his tenure at ASU and ASUEP. Being blessed with family and associates who enlightened, influenced and molded my thinking was and is being shared in helping others in two continents,” he concludes.
Anthony Reed, interim associate extension administrator, was appointed to serve on the State Technical Committee (STC), according to Kurt Readus, ASTC Programs.

This committee is a conservation partnership for the State of Mississippi in which the Alcorn State University Extension Program (ASUEP) is a member.

The purpose of the committee is to advise the state conservationist and other USDA officials on technical considerations related to implementation of Farm Bill conservation programs, including the Environment Quality Incentives, Conservation Stewardship, Wetlands Reserve, Wildlife Habitat Incentives, Conservation Reserve, Grasslands Reserve, and Farm and Ranch Lands Protection.

“My role as a part of the committee along with USDA-NRCS and other governmental officials is to insure that conservation issues of the underserved small farmers, ranchers and landowners are included when programs and services are on the table for the state of Mississippi,” Reed said.

The STC members include agricultural producers and other federal, state, tribal and non-profit organization professionals that represent various disciplines including soil, water, wetland, and plants. The STC can also advise the state conservationist on strategies to reach underserved customers.

“I hope that I will be able to bring a different perspective on how to address the concerns of clientele served by ASUEP on effective low cost conversation practices,” he added.
Mattie R. Rasco, Ph.D., RD, LD, assistant professor and nutrition specialist/Expanded Food and Nutrition Education Program (EFNEP) coordinator, at Alcorn State University Extension Program (ASUEP), was selected for a three-year term on the United States Department of Agriculture (USDA) Nutrition and Health Committee for Planning and Guidance.

This committee was established in 2008 to assist the National Institute of Food and Agriculture (NIFA) in providing expert opinions to program leaders.

Dr. Rasco will be assisting, recommending, and providing her wealth of knowledge and experiences with nutrition in future national health, nutrition policies and programs in order to strategically position the Cooperative Extension System for the future.

“I feel honored to have been chosen to serve on the Nutrition and Health Committee for Planning and Guidance. I am looking forward to working with national program leaders in targeting the committee’s objectives, which is to focus and ensure an abundant and safe food supply for everyone. It’s an honor, as well as a worthwhile challenge, to assist families, youth, and individuals to become physically, mentally, and emotionally healthy,” says Dr. Rasco.

The School of Agriculture Research Extension and Applied Sciences (AREAS) expresses “kudos” to Dr. Rasco on her achievement and wishes her well in her assignment.

For additional information, please contact Dr. Rasco at (601) 877-6281 or mrasco@alcorn.edu.
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Dr. Daniel James Collins

School of AREAS Announces New Department of Agriculture Chair

Dr. Daniel James Collins, a native of Jackson, Mississippi, is chair of the Department of Agriculture, School of Agriculture, Research, Extension and Applied Sciences (AREAS), at Alcorn State University, Lorman Campus. Prior to his appointment, from 1999-2012, Dr. Collins was professor of Plant Pathology in the Urban Forestry Program, College of Agriculture Family and Consumer Sciences, at Southern University and A & M College, Baton Rouge, Louisiana.

Professional Accomplishments

Some of Dr. Collins’ most notable accomplishments while at Southern University included leading the Urban Forestry faculty in writing, development and submission of the Ph.D. degree proposal to the Louisiana Board of Regents. The Ph.D. program in Urban Forestry was approved. Dr. Collins is a collaborator with the USDA Animal and Plant Health Inspection Service (APHIS)’s Plant Protections and Quarantine (PPQ); Plant Bio-security Curriculum. He also developed the first graduate course in Agricultural Bio-security at Southern, organized and hosted the annual Global Food Security and Plant Bio-Security Symposium, in partnership with the USDA, APHIS, PPQ. He offered a video teleconferencing course entitled Challenges in Plant Resource Protection. He established a short course in Plant Bio-security in partnership with the USDA Agricultural Research Service (ARS), USDA, APHIS, PPQ; Department of Homeland Security, and other University partners.

After receiving his Ph.D. in Plant Pathology in 1988 from the University of Missouri, Columbia, Missouri, Dr. Collins joined the USDA, Agricultural Research Service, at the Beltsville Agricultural Research Center Beltsville, Maryland as a Research Plant Pathologist (Postdoctoral Fellow) in the Biological Control of Soilborne Diseases Laboratory working on formula-tions, delivery systems, and mechanism of action of the beneficial fungus Gliocladium virens, as a biological control agent for the soilborne fungal pathogen Sclerotium rolfsii.

In 1990, he accepted a position as assistant professor and Extension Plant Pathologist at Auburn University, Auburn, Alabama where he worked on diseases of small grains, forage crops, and white lupins. He also worked as an assistant professor of Biology at Oakwood College in Huntsville, Alabama, teaching ecology and special problems biology courses. While at Oakwood he conducted research on the electro-chemistry of soybeans. In 1999, he joined the Urban Forestry Program as associate professor and director of Graduate Studies and later Program Leader for Urban Forestry where he conducted research and extension projects on urban forestry health management. In 2005, Dr. Collins was promoted to the rank of professor.

Dr. Collins has been successful in securing grants to fund his teaching, research, and outreach activities in plant pathology. Additionally, he has established partnerships with various USDA agencies, state agencies and national and international university partners in plant pathology and bio-security. He has worked with limited-resource farmers, agribusiness, community greening groups, faith-based organizations, and developed relationships and partnerships with Pre-K through 12 school administrators, teachers, students, and parents.

Dr. Collins has been actively involved throughout his career in science outreach to Pre-K through 12 schools in activities such as mentoring, career day speaker, school gardening, science fair judge, conducting hands-on demonstrations, in his lab, greenhouse, and field research plots. He has mentored over 10 undergraduate research students in his lab, and directed M.S. and Ph.D. students’ thesis and dissertation research.

In addition to the above accomplishments, Dr. Collins has considerable experience in Integrated Pest Management (IPM), and plant bio-security. He worked on biological, cultural and chemical control of small grains, forage, and vegetable crops. Some studies have included evaluating wheat/lupin crop rotation and
tillage for plant disease suppression, integrating soil solarization with organic amendments for management of soilborne plant disease of white lupin, and vegetable crops, and ecology of soilborne pathogens. His research in urban forestry have included screening Gulf Coast forest species for susceptibility to Phytophthora ramorum (the plant pathogen which causes sudden Oak Death), the effects of salinity on P. ramorum infectivity, evaluation of compost as mulch for trees and control of soilborne pathogens. Dr. Collins has written over 60 research and extension publications, served on a variety of University, and professional scientific committees. He has presented papers on his research at national, regional and international meetings in the United States, Canada, Europe, and Australia.

Dr. Collins earned his bachelor of science degree in Biology in 1981 from Jackson State University, Jackson, Mississippi, and his master of science degree in Soil and Plant Science (Plant Pathology emphasis) in 1983 from Alabama A&M University, Huntsville, Alabama. He later received his Ph.D. in Plant Pathology from the University of Missouri-Columbia, in 1988.

I am committed to academic excellence and preparing students in agricultural sciences to be nationally and globally competitive, and I look forward to working with the faculty, staff, students, alumni, and partners in making Alcorn State University the school of choice for food and agricultural sciences,” he states.

Dr. Cortney R. Harris

Dr. Cortney R. Harris serves the AREAS family as an Extension associate. In her capacity, Harris provides leadership for coordinating and managing the fitness studio, serves as liaison for Extension’s Health and Wellness Program, and assists in grant writing as well as training and development. She is instrumental in planning, implementing and evaluating programs, events and activities, and works closely with Extension administrators on special projects.

A native of Meadville, Mississippi, Harris graduated from Alcorn in 2003 with a bachelor’s degree in criminal justice, and furthered her studies at Mississippi State University (MSU), where she attained a master’s degree in political science in 2005. She came back to Alcorn in 2006 to work in the Office of Registrar while pursuing a second master’s degree in workforce education leadership. Upon receiving her degree in 2008, Harris transitioned again to MSU to pursue a doctorate degree in community college leadership.

“I am elated to have the opportunity to engage with rural communities of Mississippi, particularly its southwestern part, as this is the area in which I was reared,” Harris shared. “I feel strongly that people are to give back to their communities, because those same communities have made very strong investments in who we develop into. I’m grateful to be a part of Alcorn Extension as I have always had a desire to be able to live, work and give back to this area.”
Candrese Jones

Ms. Candrese Jones is a support staff member for the Alcorn State University Extension Research/Demonstration Farm and Technology Center in Mound Bayou, Mississippi. She is a graduate from the University of Southern Mississippi in Hattiesburg, Mississippi, where she received a degree in Journalism with a minor in Spanish.

Before joining the ASUEP staff, Miss Jones was employed as a journalist. She is currently taking additional coursework at Delta State University in Cleveland, Mississippi. Ms. Jones is a native of Boyle, Mississippi.

Dr. Frank A. Mrema

Dr. Frank Mrema is a Forestry and Mycology Specialist with the Mississippi Small Farm and Agribusiness Center (MSFAC). Dr. Mrema is working with research on the effects of silvopasture systems on tree grown and sequestration of carbon dioxide from the atmosphere. He also works with farmers on how to manage their woodlots for carbon offset. His research interests include forest management and microbial ecology with an emphasis on the role of microbes in agroforestry health ecosystems.

Dr. Mrema earned his PhD. in Forestry Ecology and Environmental Research from the Swedish University of Agricultural Sciences (SLU) – Uppsala Sweden, a Master’s degree in Forestry: (Ecophysiology) from SLU – Uppsala, Sweden and a B.S. in Forestry from Sokoine University of Agriculture in Tanzania.

Dr. Mrema has served as postdoctoral, research associate and forestry extension specialist in the Department of Agriculture at Tennessee State University, where he worked on potential micro-organisms for biological control of ornamental plant diseases and fire ants. He also worked with farmers and woodland owners on how to manage their forests for timber and carbon credits.

Dr. Cedric A. Sims

Dr. Cedric A. Sims is an Agronomy Specialist for Alcorn State University Extension Program. He provides services to over 32 counties in Southwest Mississippi in need of agronomic or horticultural expertise. He is currently working to revive the syrup industry in Mississippi through sugarcane and sweet sorghum production. He has over 10 years experience in agronomic and horticultural crop production working on the C-factor project (Conservation factor project) where the enormous data collected and hands-on experience made him appreciate the importance of Agriculture.

For the past few years Dr. Sims has been working with scientists from Alabama A&M University and Rutgers University in the developing of production systems of basil (a medicinal herb). Basil has been validated for a wide spectrum of medicinal properties ranging from common colds to complex diseases such as cancer and diabetes. Dr. Sims conducted research on planting dates, spacing, mulch color, nutrient requirements and organic production systems of three accessions of basil.

Dr. Sims has collaborated on a number of publications with scientists from Alcorn State University, Alabama A&M University and Rutgers University just to name a few, and he also presented oral presentations at a number of conferences on “Basil Production and Chemical Profile”. He is currently working on a syrup curriculum to provide educational information on marketing of syrup crops for producers to enhance their farm income. He also works closely with county educators and regional coordinators to provide services for problems limited resource farmers face.

A native of Fayette, Mississippi, Dr. Sims received his Bachelor of Science degree in Agriculture Economics in 1995, and he later received his Master of Science degree in 2001 in Plant and Soil Science, both from Alcorn State University. He received his Doctorate in Plant and Soil Science from Alabama A&M University in 2010.
Patrick Morgan

Patrick Morgan serves as the Research Associate at the Swine Research and Development Farm, Church Hill, Mississippi.

Patrick resides in Hazelhurst, Mississippi where he is involved in community organizations and activities. He is a member of the Copiah County Cattleman’s Board of Directors, Mississippi Cattleman’s Association and the International Charolais Association.

He is also the secretary of the Golden Square Lodge #88 F & A.M. P.H.A.; Patron Myrtle Reef Chapter 276-C.O.E.S. P.H.A., Secretary Jackson Consistory #117 Ancient & accepted Scottish Rite Masons, recorder of Rissah temple #130 Ancient Egyptian Arabic Order of Noble Mystic Shrine P.H.A.

Danuell Lucas

Danuell Lucas is a native of Port Gibson, Mississippi. He serves as the Agricultural Technician at the Swine Research and Development Farm, Church Hill, Mississippi. Prior to being employed with the center; Mr. Lucas was hired as a research student employee where he received hands-on experience and training.

He was previously employed at Sanderson Farms, Inc. in Hazlehurst, Mississippi. Mr. Lucas is currently pursuing his BS degree in Animal Science and plans to pursue his Master of Science degree in Agriculture Economics upon completion in May 2013. He is a member of the Animal Science Club.

Libby St. Amant

Libby St. Amant serves as the Farm Manager at the Swine Research and Development Farm located in Church Hill, Mississippi.

She is originally from St. Amant, Louisiana, and currently lives in Union Church, Mississippi. She grew up in south Louisiana where she was involved in FFA by showing registered Hereford and Brahman cattle. Her parents owned a herd of about 100 heads of registered Brahman cattle. She has a love and passion for anything involving the agriculture industry. She especially enjoys working with animals.

She worked at Louisiana State University for seven years as a lab animal technologist. She worked for Oaklane Dairy for 12 years, where she did everything from milking cows to bailing hay. She has managed her family’s hay business for over five years.

She and her husband Terry own a herd of registered Angus cattle as well as a herd of commercial cattle.

Ira Martin

Ira Martin, a native of Bassfield, Mississippi, is the Expanded Food and Nutrition Education Program (EFNEP) Educator for the Alcorn State University Extension Program (ASUEP). Martin will oversee Adams and Jefferson counties.

In the summer of 2013, he conducted nutrition education programs to assist limited-resource families in improving nutrition in Adams and Jefferson counties. He also, taught lessons at Alcorn State University Children’s Defense Fund (CDF) Freedom School Program where he promoted physical activity, the importance of adopting healthy lifestyles, and proper nutrition.

A 2007 Bassfield High School honor graduate, He is a 2013 Alcorn State University graduate where he received a Bachelor of Science degree in Nutrition & Dietetics. Currently, he is a graduate student in the Department of Education and Psychology at ASU.

He is a member of the American Dietetic Association; he also possesses the Hazard Analysis and Critical Control Point (HAACP)/ServSafe Certification which allows him to promote food safety in food establishments.
Dr. Ananda Nanjundaswamy leads the bioenergy research initiative at Alcorn State University.

Dr. Nanjundaswamy, a native of Bangalore, India, obtained his Doctor of Philosophy from the Department of Grain Sciences and Industry at Kansas State University (KSU), Manhattan, Kansas, with specializations in Bioprocessing and Bioenergy. He also holds a graduate certificate in Bioenergy and Biobased Product Development from KSU. Before arriving at Alcorn, Dr. Nanjundaswamy was a Post-doctoral Researcher at Auburn University at Montgomery (AUM), Montgomery, Alabama, working on a million dollar research project on cellulosic biofuel funded by U.S. Department of Energy (DOE).

Dr. Nanjundaswamy earned his Bachelor of Science in Agriculture and Master of Science in Agricultural Biochemistry from University of Agricultural Sciences, Bangalore, India. He has 15 years of bioprocessing research experience which includes eight years of industry research and manufacturing experience in bioprocess scale-up.

Dr. Nanjundaswamy's scholastic accomplishments are evidenced by at least 10 published original research articles, and research presentations in over 10 international conferences and workshops. He has served as a reviewer of at least six international journals, an external reviewer for National Research Council, Government of Romania, and has chaired sessions at an international biofuel conference. He is a member of several international societies including Sigma Xi, Gamma Sigma Delta, American Chemical Society, American Association of Cereal Chemists, American Feed Industry Association and Society of Research Administrators International (SRA Intl).

The educational background of Kostyleva includes bachelor’s and master’s degrees in biology from Voronezh State University, Voronezh, Russia, as well as a master of business administration (MBA) from Alcorn State University. Her most recent accomplishment is receiving a Ph.D. in agriculture with a concentration in biological resources. Dr. Kostyleva's scientific interests include ecology, environmental science and, in particular, conservation of natural plant resources.

Dr. Elena N. Kostyleva serves as staff writer for the Office of AREAS Communications. She works with the Media and Communications Unit to develop and manage all communications designed to support the School’s marketing initiatives, including press releases, brochures and media advisories, Fertile Ground magazine and other marketing materials.
Dr. Wesley Whittaker

Dr. Wesley Lloyd Whittaker, is the interim associate dean for research for the School of Agriculture, Research, Extension and Applied Sciences (AREAS).

Dr. Whittaker provides primary oversight for the Evans-Allen and Capacity Building Grant Programs, as well as all other research-based programs. He is also instrumental in providing leadership for expanding the AREAS research portfolio in both dollar value and diversity of funding sources.

A nearly 20-year employee of Alcorn State, Dr. Whittaker is a professor and serves as program leader for the Agricultural Economics/International Agriculture Program within the Department of Agriculture. He is highly regarded by his students and colleagues who applaud his ability to create a dynamic, engaging learning and work environment. Dr. Whittaker has established an outstanding reputation for connecting students to the resources needed for their academic and professional careers.

An accomplished scholar, advisor, and researcher, Dr. Whittaker has earned numerous awards and grants during his distinguished career, and continues to pursue new avenues for making a positive difference in the lives of all people. Much of his research in recent years has revolved around seeking to better understand the nature and implications of rural labor market activities, how to better invest in human capital, as well as income inequality and the concentration of poverty in various regions of Mississippi. His passion for educating, motivating, and promoting the well-being of people to achieve excellence is a central focus of his life’s work.

Dr. Whittaker’s educational background includes a Doctor of Philosophy degree in Agricultural and Consumption Economics and Human Resource Development, and a Master of Science degree in Agricultural Economics, both from the University of Illinois, Urbana-Champaign, Illinois. He received his Bachelor of Science degree in Agricultural Economics with a minor in Economics, from North Carolina Agricultural and Technical State University, Greensboro, North Carolina where he graduated summa cum laude. He holds certificates and licenses with honors in Teacher Education, University of the West Indies, Jamaica, and Technical Agriculture, Jamaica College of Agriculture, Jamaica, West Indies.

Prior to his employment at ASU, Dr. Whittaker worked as an assistant professor of Economics, Department of Economics, University of the West Indies (UWI), and assistant dean to faculty of the Department of Social Sciences, UWI, both in Mona, Kingston, Jamaica.

Honors and Awards

He has earned numerous honors and awards including Alcorn President’s Award for Distinguished Teaching, 2013; Honored Faculty Member, Alcorn State University, 2010; the Mississippi Higher Education Appreciation, Working for Academic Excellence (HEADWAE), Alcorn State University, 2009; Who’s Who Among America’s Teachers, Alcorn State University, 1998-2007; Certificate of Appreciation for Outstanding Participation in Sponsored Program activities (over one million dollars in externally funded grants, in research and teaching between 2000 and 2006); and Outstanding Faculty/Teaching Award for distinguished service to Department of Agriculture, Alcorn State, 2000.

Professional Accomplishments

Dr. Whittaker has served on numerous institutional leadership and service activities. He has coordinated and supervised internship programs with the USDA-
STAFF SPOTLIGHT

continued... Dr. Wesley Whittaker

Rural Development Agency for several students, 2001-present; Program Leader, Agricultural Economics, 2007-present; Faculty Senator, Department of Agriculture, 2010-present; SACS Review, Institutional Assessment committee, 2009-2011; Search Committee, Chair, Department of Agriculture, 2011, an Editor, “Ag Economics Informer” which has received numerous accolades. In addition, he has co-directed international educational trips to Jamaica, Guyana, Russia, and Nicaragua for students, staff and faculty, 2002-2011. Funded by USDA-National Institute of Food and Agriculture (NIFA) grants, Dr. Whittaker has also coordinated numerous educational excursions, at least one per year, for students to diverse areas of the United States.

His professional and scholarly affiliations include memberships in the American Agricultural Economics Association (AAEA); American Council for Consumer Interest (ACCI); Caribbean Agro-Economic Association; Southern Association of Agricultural Economists, and Food Distribution Association.

Edited Books

Dr. Whittaker has edited and reviewed four books and several papers. He has also co-authored one book chapter, and as well as numerous papers, articles, and reports. In addition, he has been awarded over four million dollars from various funding sources in which he has served in the capacity of both principal investigator and co-principal investigator.


Dr. Whittaker is located in the Extension and Research Building, Room 201U, 2nd Floor. He may be contacted at 601.877.6528, 601.877.3975 or w wesley@alcorn.edu.
Dr. Chunquan (Chris) Zhang

Dr. Zhang is an assistant professor of Agriculture, for the Department of Agriculture. His primary interest is molecular plant-pathogen interactions, using model and crop plants patho-systems. Currently, he is developing and applying new high throughput plant viral vector functional genomic systems for many important crops.

Dr. Jairo Diaz

Dr. Jairo Diaz serves as director of the Mississippi River Research Center (MRRC)’s – Center for Ecology and Natural Resources.

Dr. Diaz earned a Bachelor of Science degree in Agricultural Engineering from Universidad Nacional de Colombia (UNAL) in Palmira, Colombia, South America. He received his Master of Science and Doctor of Philosophy degrees in Water Resources Engineering from the University of Puerto Rico (UPR), Mayaguez, Puerto Rico, and Mississippi State University (MSU), Starkville, Mississippi, respectively.

Dr. Diaz has more than a decade of experience conducting research in the areas of applied surface hydrology and watershed studies including field monitoring and modeling to address water resource problems across Puerto Rico and the Southeastern United States region. He has authored 44 and co-authored 50 publications in the areas of hydrologic modeling, software development, soil erosion, water quality, evaluation of best management practices, and engagement of underrepresented groups in science and engineering.

In addition to having taught courses on water resources since 1998, Dr. Diaz has taught courses and laboratories related to open channel hydraulics, data analysis in civil engineering, soil and water conservation, agricultural machinery, environmental hydrology, and watershed modeling at Servicio Nacional de Aprendizaje (SENA-Colombia), UPR, UNAL, and MSU.

Dr. Diaz worked at MSU Department of Civil and Environmental Engineering from 2009 to 2012. During his tenure at MSU, he helped secure more than $800,000 in research funding and $200,000 for enhancing diversity. In addition, in 2008 he spearheaded the group that created the student chapter of the Society of Hispanic Professional Engineers (SHPE) at MSU in which he later served as advisor. Finally, in 2010 and 2011, Dr. Diaz was awarded the MSU State Pride Faculty Award.
Alcorn State University Extension Program joins in the celebration of the 100th anniversary of the Smith-Lever Act, which established the Cooperative Extension Service, state-by-state national network of educators who extend university-based research and knowledge to people.

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Ms. Melinda Hollins, manager, Manda Packing Company, in Baton Rouge, Louisiana, is our graduate profile for this edition of the Fertile Ground.

“The Agriculture Economics Program at Alcorn State University prepared me for this position through the coursework in the curriculum. A lot of the classes were Management courses, and one in particular on Farm Management really prepared me. We were given an assignment to manage a business and I used some of the practices now in being a manager. The program gave me patience and the ability to deal with people from all walks of life,” Hollins says.

Ms. Hollins encourages upcoming undergraduates and graduates to pursue their dreams, even through this rough economy and to strive for the best.

“You cannot always start at the top of the ladder,” she says. “Sometimes success happens in increments. Never give up, always keep God first and you will succeed.”

Ms. Hollins is a 1993 graduate of Wilkinson County High School, in Woodville, Mississippi. She received her bachelor of science degree in Agricultural Economics in May of 1996 from ASU. She has also taken some graduate courses at ASU.

Ms. Hollins supervises over 100 employees and is responsible for controlling the budget and daily operations. She ensures plant safety and the production of unadulterated quality meat products under sanitary conditions. She has developed and enforces sanitation standard operating procedures and good manufacturing practices. She maintains the plants’ records and verifies compliances with all federal meat and poultry regulations. Ms. Hollins has organized and taught employees training and safety classes.

Her hobbies include training, assisting others, and spending time with her family. She loves to attend church. She is the youngest of 10 children and a member of the Delta Sigma Theta Sorority, Inc.
On May 7, 2014, graduating seniors, current students, employees, alumni and guests filled the Ray Johnson Assembly Center of the School of Agriculture, Research, Extension and Applied Sciences (AREAS) Extension and Research Complex to celebrate the academic achievements of the class of 2014 during the School’s second annual Graduate Recognition Program.

The program featured keynote speaker Dr. Samuel L. Donald. Dr. Donald is a delegate for the Council for Agriculture, Research, Extension and Teaching (CARET), at Florida Agricultural and Mechanical University, and a retired professional agriculturalist.

The graduating class listened as Donald opened his address, “Motivation: it’s up to you. Don’t stand around waiting for someone to motivate you. It’s all up to you.” He urged the graduates to remember that they did not achieve their success on their own and urged the students to return the favor to those who supported them and their local communities.

After the inspiring keynote address, Dr. Collins and the department chairs recognized the top graduates from each department – Advanced Technologies, Agriculture, and Human Sciences—and presented them with memorable plaques.

The program continued with Dr. Barry L. Bequette, former dean and director of land-grant programs, School of AREAS, congratulating the graduating class.
The Alcorn State University Extension Program (ASUEP) continues to recognize the 100-year anniversary of the Cooperative Extension System.

On October 14, Manola Erby, youth specialist, ASUEP, held a presentation for the students in Dr. Stephen Hall’s history class about the many accomplishments of Cooperative Extension System and recognized its 100th anniversary as an important milestone for the organization. Erby also focused on the history of the Extension Program at Alcorn.

Erby said, “The students were very interested and asked many questions. They wanted to know about the funding of the Extension program and the delivery of its projects in communities.”

Another presentation that informed Alcorn students, employees and community members on the exceptional legacy of this organization, which plays an influential role in improving the quality of life for socially disadvantaged and limited-resource populations in the United States, was held by Anthony Reed, interim associate Extension administrator at Alcorn, who served as a keynote speaker for the J. D. Boyd Library’s annual Archives Week Program, held on October 29, 2014, in the Medgar Evers Auditorium. Reed’s presentation entitled, “The Gateway to Serving America’s People,” focused on the historical perspective of the land-grant system, as well as the development of the Cooperative Extension System and Alcorn’s Extension Program.

Reed said, “The events depicted within this presentation have become a gateway to serve America’s most marginalized citizens. Through this effort, those citizens were able to enhance their quality of life which helps to build that sector of the population as well as build this country.”
The Alcorn State University Extension Program (ASUEP) sponsored its first summer internship program in 2014. The goal of the internship program was to provide the School of Agriculture, Research, Extension and Applied Sciences (AREAS) students and others, an opportunity to support Extension programs and to help find the best talents to renew its workforce.

“Our goal is to support the students’ professional development and offer them the best opportunity to practice new knowledge and skills under the support of Extension professionals,” said Dr. Mattie Rasco, Expanded Food and Nutrition Education (EFNEP)/nutrition specialist/assistant.

This year, 11 students completed the program being assigned Extension areas: Donald Smith Jr. and Jazmin White – 4-H Program; Jarian Redmond - Mississippi River Research Center; Joe Turner – agriculture; Andrewan Owen, Torri Hampton and Avian Brummell – Farmers Market; Kashield Shaw – Fitness First Studio; and Aquierra Anderson, Trena D. Billips and Tameria L. Rule – nutrition.

The summer internship program had a selected group of supervisors that includes Extension specialists and educators Dr. Mattie Rasco, Jarita Frazier-King, EFNEP educator/nutrition, Ira Martin, EFNEP educator/nutrition, Valerie Wright, family and consumer science educator, Dr. Jairo Diaz, former director of Mississippi River Research Center, Dr. Cortney Harris, extension associate/Community Resource Development (CRD), Shirley Middleton, AREAS 4-H youth educator, Ralph Arrington, agricultural educator, and Helen Brooks, marketing coordinator.
MEMBERS

Mr. Alexander Anderson, Chairman  
Dr. Worth Haynes, Vice Chairman  
Dr. Mildred Holland, Secretary  
Mr. Harold Arrington  
Dr. Jessie Harness  
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Mr. Daniel Teaque  
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Dr. Willie F. Jackson  
Mr. Wesley Kerr  
Mr. Richard Williams

COMMITTEE OBJECTIVES

1. To assist with restoration of state funding and/or identification of new external funding for the Department of Agriculture to recover from budget cuts.

2. To increase and assist with student recruitment to the Department of Agriculture.

Written by: Dr. LaShunda L. Anderson-Hodges  
Information provided by: Dr. Mildred Hollins, Committee Secretary
CONFERENCES AND EVENTS
Through vibrant teaching, research and outreach activities, the School of AREAS empowers students and citizens educationally and socio-economically to enrich the quality of life for themselves and their communities.

125 Years of Providing Access and Enhancing Opportunities

Alcorn State University School of Agriculture, Research, Extension and Applied Sciences joins in celebrating the 125th anniversary of the signing of the Second Morrill Act, establishing the 1890 Land-Grant University System. Alcorn State University is the oldest of the public land-grant Historically Black Colleges and Universities.

www.alcorn.edu/AREAS

Alcorn State University complies with all laws regarding affirmative action, sexual harassment, and equal opportunity and does not discriminate on the basis of race, color, religion, national origin, sex, age, disability or veteran status.
Calendar of Events

April 12-18, 2015
Week of the Young Child Celebration
Alcorn State University
601.877.6255

April 23, 2015
125th Anniversary of the Signing of the
2nd Morrill Act Walk
Time and Location – TBA
601.877.4307

June 11, 2015
Clonal Propagation of Muscadine Grapes
Alcorn State University
601.877.6598

June 13, 2015
5K Run/Walk & Health Fair
Natchez, MS
601.786.3131

June 16 and 18, 2015
Farm Recordkeeping, Marks, MS
601.877.6260

July 18, 2015
Fruit & Vegetable Festival/
Extension Awareness Day
Natchez, MS
601.442.4648

August 27, 2015
Ag Field Day - Alcorn State University
601.877.2204

September 1 and 3, 2015
School to Farm Program
Alcorn State University
601.877.6598

September 24, 2015
Sweet Potato Jamboree
Mound Bayou, MS 601.877.2312

October 31, 2015
Pumpkin Carving Contest
Natchez, MS 601.442.4648

November 18, 2015
Alcorn Extension Holiday Affair Expo
Port Gibson, Mississippi
601.437.5011

November 20, 2015
Organic Production Practices of Persimmon
Goodman, MS 601.988.4999

December 12, 2015
Youth Art Competition
Natchez, MS 601.442.4648