

**SOUTHERN UNIVERSITY**  
**AGRICULTURAL RESEARCH AND EXTENSION CENTER**

**2005 Science and Education Impact to USDA/CSREES**

**Title: Effects of Grazing Cattle and Goats Together and Separately on Animal Performance**  
(High Priority 1)

**Impact Nugget:** The project contributed to the 2004 funding of a multi-state initiative of creating opportunity for small scale goat producers. Five farmers currently participating in this project serve as peer mentors, model farmers and advisors to other limited resource clients. These farmers may gross about \$2,000 annually as a result of their participation in the project.

**Issue (Who cares and why?):**

In 2002, beef cattle production ranked fourth as a major agricultural enterprise in Louisiana in terms of the value of products sold. The state's cattle producers earned \$157,153,000 (9 % of the total cash receipts from the sale of farm products) from the sale of cattle and calves in 2002. Goat meat production is increasing in popularity in the Southeastern United States. Goat meat production is a good prospect for diversification and enhancement of small farmers' income. The goal of this project is to assist small scale producers in increasing their production and economic base by utilizing available natural farm resources while exploring the complementarity of goat production.

**What has been Done?:**

The multi-species grazing project was initiated in July, 2003. It is a multidisciplinary project involving researchers from animal science, plant science, soil science, and agricultural economics disciplines. Trials were carried in a 2 x 3 factorial arrangement (broken to two 2x2 factorial, each for goat and cattle, to facilitate data analysis). Twenty eight Brangus cows and eighty does were assigned to either continuous or rotational grazing with or without goats/cattle in the pastures. Weights and forage yields were taken every 28 days from July, 2003 (Initiation) to October, 2004. Average daily gain (ADG) were estimated by taking the difference of weights of two consecutive months and dividing the results by 28 days. Data were analyzed using SAS MIXED model where species (cattle/goats alone or mixed with cattle/goats) and grazing systems were included in the model as fixed effects, and animals were included as random effects.

**Impact:**

The multi-species project is already yielding positive economic impacts. The project contributed to the 2004 funding of a multi-state initiative of creating opportunity for small scale goat producers. Five farmers currently participating in this project serve as peer mentors, model farmers and advisors to other limited resource clients. Thus, site of the mixed-species project served as a laboratory for training in production, management, nutrition, and health of goats. Other workshops in processing, value-added product development and marketing are planned. Most of the goats placed under the care of the farmers are kidding. These farmers may gross about \$2,000 (\$80 x 25) annually as a result of their participation in the project. Above all, the participants have reported site visits by several farmers in the surrounding parishes.

**Title: Louisiana Agricultural Mediation Program (LAMP)**

(High Priority 2)

**Impact Nugget:** Some 350 individuals benefited from this program. Fifteen (15) were provided the no cost mediation service to assist with their adverse decision. In the State of Louisiana, legal fees commence at \$150/hour and increase from that point, whereby retainer fees generally require a minimum of 10 hours. The program helped the fifteen individuals save about \$22,000 in legal fees.

**Issue (Who cares and why?):**

LAMP was established to provide mediation services and direct assistance needed to prepare for mediation that assist in resolving disputes between agricultural producers and their creditors, as well as disputes involving “adverse decisions” of various USDA agencies, such as Farm Services Agency (FSA), the Natural Resources Conservation Services (NRCS), and others. The Program also assisted agricultural producers by providing legal assistance and education that would enhance their enterprises.

**What has been Done?:**

For FY 2004, LAMP completed twelve (12) mediations. LAMP also provided technical assistance to thirty (30) clients by way of providing legal assistance and explaining legal principles. The program conducted eleven (11) educational/promotional seminars across the state. Approximately 300 clients received information on various legal issues, including estate planning, financial distress, business entity types, heir property ownership, and other legally related topics.

**Impact:**

Many of the clients who were assisted by LAMP were party to the Black Farmers Lawsuit. These persons lost their faith in the USDA due to the appearance of impropriety that had been perceived to have been exerted by various USDA agencies. LAMP served to reestablish agricultural producers’ faith in the USDA programs. In future, if they receive adverse decisions from those agencies, they have an alternative to resolve their disputes that is no cost to them and does not have the perception of being biased against them.

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**Title: Child Care Program**

(High Priority 3)

**Impact Nugget:** Twenty percent of the 2,215 providers who participated in the program indicated that they would acquire Child Development Credentials. (This is the first year of the program).

**Issue (Who cares and why?):**

Louisiana has the highest child poverty rate in the south (29 percent) and the second highest nationwide, according to the U. S. Census Bureau. It is estimated that there are around 14,000

children who are not receiving services through any other programs. The SUAREC Child Care Training Program provides a comprehensive and consistent child training program in eight parishes statewide. The program thus offered centers and family child care providers an opportunity to maintain their license by taking the required 12 hours of educational training. Some child care providers operate business with limited resources and limited educational training. This lack of knowledge coupled with economic disparity prevents them from rendering quality care and being successful in the business.

**What has been Done?:**

In order to ensure that childcare providers deliver quality care, providers in eight Louisiana parishes have received 12 hours of professional training. Quality childcare exists in homes or facilities when the childcare providers interact with children; maintain safe environments, provide opportunities for children to learn social skills; and help children appreciate diversity in others. These training sessions were offered at convenient times, and held in accessible locations for providers in rural and urban areas of the state. Classes taught to the providers were based on the competency levels of the Child Development Associate (CDA) Credential. As a result of the training, providers have told us about their deficiencies. A total of 2,215 providers attended class sessions and completed surveys during the sessions. The classes were made available to a diverse population participant who included: African-Americans, Caucasians, Hispanics, and 2 of other races.

**Impact:**

Evaluation of the participants also reflected knowledge gained and some behavior changed as a result of attending the training. Results of the evaluation can be summarized as follows:

- 20 percent of the providers indicated that they would acquire Child Development Credentials.
- 89 percent of the providers stated that they learned more because the training was sensitive to all learning styles.
- 91 percent of the providers stated that the structure of the training sessions, and the hands-on activities made it easier to gain more knowledge and increase skills.
- 74 percent of the providers indicated that child care classes gave them more ideas for class interaction with children and other center teachers.
- 87 percent of the providers indicated that they benefited more from the sessions than they had expected.

**Title: Utilizing Multiple Indices to Measure Quality Deterioration in Value-Added Meat Products During Storage**

**Impact Nugget:** Developing value-added products has the potential of helping small scale goat and rabbit producers eliminate high-priced middlemen, increase farm value and profit margin.

**Issue (Who cares and why?):**

Many Americans have increased the demand for more low-fat, high protein meats but are oblivious to the benefits and sources of goat and rabbit meat. Rabbit and goat meats are highly nutritious with fat contents lower than other meats. However, they are not widely consumed in the United States because the marketing of these products are unstructured, therefore resulting in economic limitations for goat and rabbit farmers in the Delta region.

**What has been Done?:**

To increase the productivity and profitability of Louisiana small-scale farmers, (formulated meat products) potential outlets for utilization of goat and rabbit meat were created in the Meat Processing Laboratory at Southern University. There is a great potential for these products to be marketed but before this is done, all safety (quality deterioration with time and temperature) and regulatory measures have to be addressed. Value-added patties, sausage and nuggets have been produced from nontraditional products (goat and rabbit meat). Goat and rabbit meat were combined with oat gum and oatrim (effective binders with hypocholestermic properties) and formulated into traditional meat products– patties, sausage and nuggets. The formulated products were found to be texturally enhanced, nutritionally sound (low fat, low cholesterol, and high protein) and were highly accepted by a consumer panel. They offer a healthier alternative than some popular meat products that are formulated with fat and are common in the marketplace.

**Impact:**

This is a multi-disciplinary project involving collaboration between the Animal Science Department and the Human Nutrition, Health, Family and Consumer Sciences Programs at SUAREC. Developing value-added products has the potential of helping small scale goat and rabbit producers eliminate high-priced middlemen, increase farm value and profit margin.

**Title: Preventing Foodborne Illness in a Vulnerable Lower Mississippi Delta Population**

**Impact Nugget:** The State of Louisiana spent \$1.4 billion in health care related costs between 1998 and 2000. This program is saving both the participants and the government millions of dollars in health care costs and has the potential of increasing life expectancy.

**Issue (Who cares and why?):**

In the 1960s, the terrible plight of hunger of the Lower Mississippi Delta's (LMD) impoverished people was identified. Although anti-hunger efforts including food stamp outreach, nutrition education, WIC, support for local food pantries and increasing School Breakfast, School Lunch and summer feeding program are in place, low-income people in the Delta still suffer inadequate access to good nutrition. Poor nutrition and health hinder both physical and mental development. The inability to perform mentally and physically may be major contributors to the perpetuation of poverty in these individuals. In 1999, 10.1 percent of United States' households, 31 million Americans including 12 million children, were food insecure. Of these, about 3 million households were food insecure to the extent that one or more household members were hungry because of inadequate resources at least some time during the year. The situation is particularly serious in the LMD.

An estimated 684,000 people in Louisiana face hunger each year. (Second Harvesters, 1998) Conditions of poverty are significant in Louisiana. In 1998, 19.1 percent of Louisiana's population lived in poverty, and the rate is highest among young families and female-headed households. Children younger than 18 are Louisiana's poorest age group – 34 percent of children younger than 5 years of age live in poverty. Poverty makes it difficult for families to meet basic human needs for food and good health. Many of the at-risk, food-insecure individuals in the LMD depend on reclaimed or rescued food, either from institutions that donate prepared and perishable foods, commodities, soup kitchens, shelters or even field gleaning.

**What has been Done?:**

Existing Louisiana, Mississippi and Arkansas universities' research, extension and teaching faculty and appropriate government agencies were marshaled to standardize procedures and training protocols throughout the LMD regions and to extend their availability to LMD food handling personnel through direct-contact and distance learning outreach channels. The "Serving Food Safely" Curriculum was taught statewide in three states, Louisiana, Mississippi and Arkansas. Persons attending the sessions have increased their knowledge of food safety and food borne risk and illnesses. Results from the behavior survey administered immediately after the food safety curricular instruction, indicated that the majority of food recovery personnel are already using or plan to use proper food safety practices in their agency or at home.

**Impact:**

Evaluations indicate that the curriculum was used successfully to improve food safety knowledge for the subjects overall, and for subjects in each of the participating states.

This program is saving both the participants and the government millions of dollars in health care costs and has the potential of increasing life expectancy.

**Title: Families First – Nutrition Education & Wellness System**

(High Priority 4)

**Impact Nugget:** All participants reported that they are now shopping from grocery lists as opposed to impulse shopping; 100 percent of the participants reported that they now pay attention to food safety guidelines when preparing their meals. This program is saving both the participants and the government millions of dollars in health care costs and has the potential of increasing life expectancy.

**Issue (Who cares and why?):**

The report by the former U.S. Secretary of Health and Human Services, Tommy G. Thompson, cited that 300,000 people die each year from diseases and health conditions related to a sedentary lifestyle and poor eating habits, nearly as many who die from smoking. Millions of Americans suffer from chronic illnesses that can be prevented through dietary changes and physical activities. Research has shown that there is a direct correlation between chronic disease prevention, dietary intake and behavior. Louisiana risk behavior survey (2000) indicates that less than 30 percent of all adults eat fewer than five servings of fruits and vegetables a day and 35 percent of women and 29 percent of men report no leisure-time physical activity. The Centers for Disease Control and Prevention and the National Center for Health Statistics, reported limited resource families (income less than \$10,000), have a higher percentage of poor health status.

**What has been Done?:**

Since 2000, the Southern University Ag Center and ten other 1890 universities formed a consortium to help limited-resource families improve dietary and health behaviors through intensive nutrition education. Nutrition Program Educators in ten targeted parishes will provide nutrition information to persons receiving or eligible to receive food stamps. Nutrition Program Assistants in ten parishes made over 62,685 contacts through recipe/fact sheets during FY 2003 - 2004. Of this number 44,476 were Food for Families/Seniors Participants, 10,855 were Commodity Foods Participants, 2,527 were Food Stamp Eligible participants and 4,827 were non-enrolled group participants.

**Impact:**

Evaluations of the program participants indicate that about 93 percent felt that information presented in our program is useful. Another 93 percent of the participants felt that they had learned at least one nutrition fact that would help them make healthy changes in their eating habits. Additionally, 100 percent of quarterly contacts reported that they are now shopping from grocery lists as opposed to impulse shopping; and 100 percent of the participants reported that they now pay attention to food safety guidelines when preparing their meals. This program is saving both the participants and the government millions of dollars in health care costs and has the potential of increasing life expectancy.

**Title: Nutrition Label Use, Nutritional Knowledge, and Food Security in Louisiana**

**Impact Nugget:** Given that the state spent \$1.4 billion between 1998 and 2000 on medical expenses related to adult obesity, any cost savings in this area could go to fund other worthy projects, particularly education.

**Issue (Who cares and why?):**

The project's goal is to examine the effectiveness of the Nutritional Labeling and Education Act and the Personal Responsibility and Work Reconciliation Act (Welfare Reform) on label use, nutritional knowledge and awareness, and food security in Louisiana. Based on available statistics, two-thirds of Americans are overweight or obese. Louisiana's obesity rate was estimated to be 22.3 percent in 2001, ranking the state 7th in the country.

**What has been Done?:**

A stratified random telephone survey of primary grocery shoppers and meal preparers was conducted in Louisiana in Fall 2002. The survey contained 1,300 respondents. Seventy-five percent of the respondents indicated that they used food labels when making purchasing decisions. Seventy-three percent of the respondents reported that they got nutritional information from newspapers, magazines, or books, while 69 percent got nutritional information from doctors, nurses, and health professionals. Households with incomes above \$50,000 were more likely to use labels; those with household incomes below \$15,000 were less likely to use labels, and more likely to get nutritional information from healthcare professionals. Despite the high label usage, 56 percent of the respondents indicated that they wanted to learn more about how to interpret the information on food labels. Of this total, 72 percent were non-Caucasians, 71 percent had household incomes between \$15,000 and \$24,999, and 70 percent lived in single-parent households. The state of Louisiana spent \$1.4 billion between 1998 and 2000 on medical expenses related to adult obesity.

**Impact:**

Based on available statistics, two-thirds of Americans are overweight or obese. Louisiana's obesity rate was estimated to be 22.3 percent in 2001, ranking the state 7th in the country. Given that 56 percent of surveyed respondents wanted to learn more about how to use food labels, steps must be taken to educate them how to do so. One of the benefits of a healthier population is lower healthcare cost. Given that the state spent \$1.4 billion between 1998 and 2000 on medical expenses related to adult obesity, any cost savings in this area could go to fund other worthy projects, particularly education.

**Title: Southern University Master Gardener Volunteer Program**

**Impact Nugget:** In 2004, Master Gardeners volunteered 500 hours, a value of \$7,000 to the Extension Service. Volunteers dedicated their time and talents to enhance the quality of life for citizens of their community, provided unbiased, university research-based information to the general public through distributions of newsletters to parish businesses and libraries, telephone calls, presentations to garden clubs, high school science classes, environmental clubs, maintain community gardens and implemented numerous beautification projects.

**Issue (Who cares and why?):**

In Acadiana (Louisiana), gardening is one of the most popular outdoor activities enjoyed by all age groups. There is a large population of retired people with garden experience and have an interest in enhancing their communities. Enthusiastic gardeners could be utilized in the Master Gardener Volunteer program to help meet the educational needs of home gardeners. Request for consumer horticulture information continues to increase every year.

**What has been Done?:**

Garden volunteers were recruited through newspaper, radio, magazine and advertised at local garden centers. A ten week training program was designed to provide 40 hours of instruction to Master Gardener Trainees. The educational program discussed the following: botany, soil science, pomology, plant pathology, entomology, gardening, weed science and integrated pest management. Volunteers assist Extension agents with numerous horticultural educational programs at the parish level.

**Impact:**

Sixty nine adult participants have completed the Iberia/St. Martin Parish Master Gardener Program training since 1999. In 2004, Master Gardeners have volunteered 500 hours, a value of \$7,000 to the Extension Service. Volunteers dedicated their time and talents to enhance the quality of life for citizens of their community, provided unbiased, university research-based information to the general public through distributions of newsletters to parish businesses and libraries, telephone calls, presentations to garden clubs, high school science classes, environmental clubs, maintain community gardens and implemented numerous beautification projects.

**Title: Academy for Academic Enhancement for High School Student in the Food and Agricultural Sciences**

(High Priority 5)

**Impact Nugget:** For Phase I of the program, 13 students (50 percent of participants) of the students made the minimum score to qualify for TOPS. The result is a savings of over \$50,000 per student – the estimated tuition cost for four years of college. Additionally, six students (23 percent of participants) were within two points of achieving the minimum score.

**Issue (Who cares and why?):**

High schools students in Louisiana who score a minimum of 20 points on the ACT and earn at least a 2.5 on a 4.00 GPA scale are eligible for free college tuition - Tuition Opportunities Program for Students (TOPS) as long as they maintain good GPA (at least 2.5 on a 4.00 scale).

Many economically and socially disadvantaged minority high school students cannot qualify for this free tuition opportunity due to their background. They often turn to student loans for tuition support and most drop out of college due to lack of financial support. A great proportion of the students who drop out end up in jails thus increasing the tax burden on society.

**What has been Done?:**

Twenty six students were in the five residential program at Southern University for about five weeks. Students received academic instructions in mathematics, sciences, English, and humanities. Princeton Review provided 20 hours of group and individualized instruction on test taking skills and strategies in an attempt to better prepare the students for the ACT tests.

**Impact:**

During Phase I of the program, 13 students (50 percent of participants) of the students made the minimum score to qualify for TOPS. The result is a savings of over \$50,000 per student – the estimated tuition cost for four years of college. Additionally, six students (23 percent of participants) were within two points of achieving the minimum score.

**Title: Enhancing Teaching and Recruitment in Food and Fiber Sciences Through Computer Technology**

**Impact Nugget:** A significant contribution is a \$1.8 million software donation from Lectra Systems. This donation places Apparel Merchandising program at Southern University among a few select institutions worldwide that are using industry standard software. The project was also used to leverage two competitive grants from the Louisiana Board of Regents Support Fund for \$49,752 and \$128,771.

**Issue (Who cares and why?):**

Many colleges of agriculture, family and consumer sciences have been experiencing declining student enrollment in their programs. Southern University's division of Family and Consumer Sciences has been facing the same predicament. This problem is attributed in part to the poor perception by students of the agriculture, family and consumer sciences related disciplines. The objectives of the project were to integrate state of the art computer equipment and software to enhance teaching in Food and Fiber Sciences. The second objective of the project was to enhance recruitment and retention of minority students in Food and Fiber Sciences using the Internet.

**What has been Done?:**

Computer hardware and software was purchased to integrate Computer-Aided-Design and Manufacturing for textiles (CAD/CAM), Computer-Aided Diet Analysis and menu planning, and use of the Internet in the curriculum. Several classes were taught in the new CAD lab using the new software (Spring 2001 to present). The Software and hardware were used for projects in interior design class. At the end of these courses, the students showcase their work in a well-publicized event – The Computer-Aided-Design Extravaganza. The event attracts over 200 people each year including high school students, community members, faculty, staff and administration. Improved instructional delivery and utilizing computer usage has greatly

enhanced instructional quality, thus impacting recruitment and retention and ultimately economic development through training of qualified manpower that will contribute to the workforce.

**Impact:**

A very significant accomplishment of this project was a \$1.8 million software donation from Lectra Systems. This donation places Apparel Merchandising program at Southern University among a few select institutions worldwide that are using industry standard software. The project was also used to leverage two competitive grants from the Louisiana Board of Regents Support Fund for \$49,752 and \$128,771.