1890 Land-Grant Institutions

- Alabama A&M University
- Alcorn State University, MS
- Delaware State University
- Florida A&M University
- Fort Valley State University, GA
- Kentucky State University
- Langston University, OK
- Lincoln University, MO
- North Carolina A&T State University
- Prairie View A&M University, TX
- South Carolina State University
- Southern University and A&M College, LA
- Tennessee State University
- Tuskegee University, AL
- University of Arkansas at Pine Bluff
- University of Maryland - Eastern Shore
- Virginia State University
- West Virginia State University

INSIDE

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WELCOME

The 1890 Land-Grant system is pleased to share this document with you. This is just a small synopsis of the types of research and the variety of Extension programs at our 1890 Land-Grant Institutions. This document also encapsulates some concrete impacts of the 1890 Cooperative Extension and Agricultural Research programs.

From the families who are receiving help securing mortgages so they can move from sub-standard housing, to the farmers who are benefiting from on-campus research so they can increase income and yield, to the thousands of young people participating in 4-H and other youth programs we conduct, we are doing our part to make a difference in the lives of the clients we serve.

If you have further interest in any of our programs or research activities, please contact any of our 18 member-institutions. They will be more than happy to share additional information with you, as well as information on other programs and activities not listed.

It is our mission at the 1890 Land-Grant Institutions to make sure that we are implementing the kind of research and Extension programs that will help create a stronger, more viable future for our communities. We are excited about the impact we are making across the states where we have member institutions, and our research and Extension faculty are partnering to secure the future.

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Young Entrepreneurs in Action

Young people need to learn how to make financial decisions at an early age. According to research findings, students proficient in business and financial management are better prepared for success in the work force. Our 1890 Land-Grant Institutions are using money management programs to help youth start their own businesses and become responsible consumers and citizens.

TEENS TEEM TOGETHER. One hundred seventy-seven Hispanic and African American middle school students learned the value of money using basic business and money management skills. The youth developed a step-by-step business plan to help start their own group businesses through **Prairie View A&M University's** T-TEEM (Texas Teens Exploring Entrepreneurial Minds) project. This in-school project increased the students' proficiency in reading, writing and math skills, and generated an approximate value of $5,000 from the 35 group businesses that the young entrepreneurs established.

ENTERPRISING STUDENTS. **Kentucky State University** is starting the Students in Free Enterprise (SIFE) program to provide middle and high school youth information about business ethics, market economics, entrepreneurship and personal and financial success skills. Fifteen KSU students have already established a SIFE team on campus. The LifeSmarts program at the **University of Maryland - Eastern Shore** teaches teens in grades nine through 12 to be smart, responsible consumers and citizens.

MINI-SOCIETY IS ON THE MOVE. **North Carolina A&T State University's** Mini-Society program uses an experience-based approach to teach youth, ages 8-12, entrepreneurial concepts in a fun and interactive learning environment. Emphasizing experiential learning and lessons in various subjects, the project was started in 17 counties and 2,138 youth participated. Ninety-five percent of the young people increased their knowledge in work force preparation, citizenship and money management. Using the Kauffman Mini-Society and the National Foundation for Teaching High School Students and Young Adults, 4-H staff at **Tuskegee University** trained 2,500 youths in entrepreneurship education.

Prairie View A&M University's T-TEEM (Texas Teens Exploring Entrepreneurial Minds) in-school project increased students' proficiency in reading, writing and math skills, and generated an approximate value of $5,000 from the 35 group businesses that the young entrepreneurs established.

Learning in Your Own Backyard

Urban and rural students need to experience, firsthand, the links among the foods they eat, the water they drink and environmental husbandry and stewardship. Using research-based information, 1890 Land-Grant Institutions give young people opportunities to apply what they have learned inside and outside of the classroom.

YOUTH DISCOVER AGRICULTURE. The **North Carolina A&T State University** farm offers an outdoor classroom where children learn about agriculture and the environment in a hands-on, age-appropriate and inquiry-based environment. This Discover Agriculture program allows students from kindergarten through 12th grade to observe plants and animals, participate in farm demonstrations, and learn about environmentally sound and sensitive solutions to production challenges. Last year, 1,722 elementary and middle school students toured the farm and increased their awareness about the importance of agriculture.

MEANINGFUL EXPERIENCES. Extension staff and researchers at **Virginia State University** are committed to restoring and protecting the Chesapeake Bay's resources. The 2000 Chesapeake Bay Agreement recommended that all youth beginning with the high school graduating class of 2005 have a series of "meaningful" watershed-related experiences that help them connect to the processes and issues of the Bay. To fulfill this agreement, 4-H staff conducted training for 2,250 youth, in grades four through 12, on water quality measures, field study activities, water quality testing and personal stewardship. One student said, "I learned more in two days than I have in a week. I knew nothing about aquatics when I entered the room ... when leaving I knew a great deal."

Virginia State University 4-H staff conducted training for 2,250 youth emphasizing watershed-related experiences. One student said, "I learned more in two days than I have in a week. I knew nothing about aquatics when I entered the room ... when leaving I knew a great deal."

VEGETABLES DO COME FROM THE GARDEN. Inner-city Houston's sixth grade students who participate in **Prairie View A&M University's** 4-H garden project are learning that the vegetables they eat don't come from the store, but originate in the garden. The garden project helped 162 students plant greens, cabbage, cauliflower and other vegetables, and to care for them until harvest. Of the participants, 75 percent plan to grow a garden at home and 50 percent learned the nutritional value of vegetables.

Overcoming Hurdles Through Education

Unsettling stories and reports about youth emerge in the newspapers and on television and radio broadcasts on a daily basis. Research findings show that risk factors such as drug, alcohol and tobacco use, unhealthy sexual behaviors, increased school dropout rates, violence and crime threaten to destroy a young generation. The 1890 Land-Grant Institutions are committed to providing educational programs that build self-esteem, curb violence and promote character development among youth.

YES I CAN. To combat an increased school dropout rate and provide life skills for successful entry into high school, Extension agents at **Alabama A&M University** partnered with Junior Achievement to offer eighth-grade students training on The Economics of Staying in School and the Yes I Can curricula. For six weeks, 1,800 students from 10 middle schools, with an average of 30 students per class, participated in the program. After completing the sessions, 80 percent of the students said they would complete high school, and enroll in college or a vocational training program.

LADIES AND GENTLEMEN. Many young people in Delaware with negative attitudes about social and academic issues weren't getting the educational skills required to pass mandatory state tests. The 4-H staff at **Delaware State University** formed the Ladies and Gentlemen Club to educate these students on ways to develop positive behaviors and become responsible members of their schools and communities. Club members attended weekly in-school meetings and discussed team building, self-esteem and mentoring, conflict resolution, and drug, alcohol and smoking prevention issues. More than 10,000 students report being better prepared for mandatory state tests and for life.

MAKE THE RIGHT CHOICES. About 150 youth, ages 13 to 19, attended the annual Choices Retreat hosted by **Prairie View A&M University** to help students make healthy decisions and develop a greater understanding of the importance of abstaining from sexual activity until marriage. Workshops focused on self-respect, sexually transmitted diseases, love versus lust, and healthy dating practices. Thirty percent of the students indicated they were sexually active, but committed themselves to abstention until marriage. **Alcorn State University's** B.A.R.T. (Becoming a Responsible Teen) curriculum is used in various counties in southwest Mississippi. This program helps teens clarify their values about sexual decisions. Of the participants, 46 percent said they would postpone sexual activity until marriage or until they were in a committed relationship.

4-H IS THE CLUB TO JOIN. **West Virginia State University's** Hip-Hop Boot Camp gives youth opportunities to learn and develop in a safe and drug free environment. Seventy young people attended the one-week summer camp and learned about the music industry, including dance, performance and production. Before attending the camp, only 20 percent of the participants had ever heard of 4-H; now many of them are excited about joining 4-H clubs. The 4-H staff at **South Carolina State University** increased participation in 4-H clubs by offering after-school enrichment programs, which promote character development and leadership skills. Teen Leadership Connection (TLC) is another after school enrichment program where 4-H staff and volunteers at **Prairie View A&M University** formed 15 new, inner-city TLC clubs last year in San Antonio. **North Carolina A&T State University** is reaching out to youth early to expose them to 4-H. The K-3rd Grade Program, designed for youth ages 5 to 8, develops life skills in social interaction and cooperative learning, and encourages parents to have more interaction with their children. Last year, 34 counties formed 94 new 4-H clubs for 5 to 8-year-old students, and parents reported increased involvement in their children's activities.

Natural Resources and Environment

Natural resources and environment programs impact the quality of the planet. Programs strengthen the nation's capacity to address critical environmental priorities and contribute to improved air, soil, water quality, fish and wildlife management and use of forests. The 1890 Land-Grant Institutions are using new and improved ways to manage natural resources and programs that teach best management practices.

CLEANER WATER. Improving the water quality in an acidic, coal-associated watershed increased largemouth bass survival and growth rates in Kentucky. On the recommendations of the **Kentucky State University** fish pathologist, a farmer added eight tons of agricultural limestone per acre, which corrected the pH and fish mortalities. Contamination of ground and surface water from runoff of excess nutrients in Tennessee has been greatly reduced because of optimized growing and propagation regimes for special interest crops, such as poinsettias and ornamental grasses, developed by **Tennessee State University**. The Environmental Cooperative Science Center, of which **Delaware State University** (DSU) is a founding member, received more than $10 million from the National Oceanic and Atmospheric Administration ($1.2 million to DSU), which included earmarked funds for undergraduate and graduate student support for training, and programs for the next generation of resource managers.

RESEARCHERS AT THE **University of Maryland - Eastern Shore** have discovered that the application of a gypsum-based coal combustion byproduct flue gas desulfurization (FGD) to soils with elevated phosphorus levels decreased soil pH, and water-extractable phosphorus but not plant-available phosphorus in soil. FGD has the potential to provide a cheap and effective way to reduce pH in high pH soils and nitrification in the Chesapeake Bay watershed.

SOME 2,100 RURAL FLORIDIANS now regularly have their drinking water supply tested for contaminants as a result of **Florida A&M University's** water quality education programs, which included use of a mobile drinking laboratory. As a result of **Virginia State University's** efforts, pre-ponds have been constructed which reduce nutrient loading in multiple ponds throughout Virginia. Runoff water and sediment containing pesticide residues have been greatly reduced using soil management practices developed by **Kentucky State University**. Grass filter strips between plant rows reduced sediment loss by 6 percent in peppers and 68 percent in peppers intercropped with tomatoes.

TIMBER. **Alcorn State University** specialists helped 100 landowners sell 212,735 acres of timber, generating an average income of $60,000 per family. Urban forestry workshops were conducted by **Tennessee State University** for low-income and underserved landowners, who were then contacted about workshops and practices to reduce attacks of Southern pine beetles. **Delaware State University** used its woodlands classroom to provide forest and stream ecosystem education to 286 students, parents and teachers.

LEVELING THE LAND. Working with **University of Arkansas at Pine Bluff** Extension associates, 16 farmers received $175,386 in cost share funds to apply on land improvement practices that included land leveling and irrigation.

Agricultural and Food Biosecurity

Biosecurity is a major concern in our nation. One plant or animal disease outbreak left unchecked could adversely affect our nation's ability to keep plants and animals healthy. On a limited scale, a mishandled outbreak could undermine consumer confidence in our food supply. Such outbreaks must be monitored and prevented. The 1890 Land-Grant Institutions are conducting research and laboratory testing on many facets of biosecurity, including quick and accurate diagnosis of animal diseases.

INCREASING BIOTERRORISM AWARENESS. Awareness of the potential impact that zoonotic, disease-causing organisms can have on humans and animals and their role and responsibility in response to bioterrorism increased from 0 to 80 percent in a pre-test to 60 to 100 percent in a post-test given to goat producers and Extension professionals after a Bioterrorism Awareness Education workshop at **Florida A&M University**. These small animal producers and agents learned the potential impact that zoonotic, disease-causing organisms can have on humans and animals and their role and responsibility in response to bioterrorism on farms or in the general population.

PROVIDING SURVEILLANCE, SAVING MONEY. Infectious diseases are a major source of loss in commercial aquaculture. The **University of Arkansas at Pine Bluff** maintains four fully equipped fish disease diagnostic laboratories that diagnosed more than 2,300 cases last year and conducted numerous fish health inspections. Biosecurity education programs were presented to the industry, and foreign animal disease surveillance programs were established in the bait and ornamental fish industries. If work done by the diagnostic programs saves only 10 percent of the fish in ponds associated with diagnostic cases submitted, savings to Arkansas farmers amount to more than $7 million per year.

Biotechnology Looks to the Future

Biotechnology is providing new products and strategies that can benefit agriculture and the environment, and is also increasing plant productivity, quality, disease resistance and health. Researchers and educators at the 1890 Land-Grant Institutions are still examining the positive and negative effects of biotechnology, and assessing the social and economic impacts as well.

BIOTECHNOLOGY INCREASES PRODUCTIVITY. Less weeds, fewer pests and higher yields were the results of genetically modified organisms (GMO) crop demonstrations conducted on farms in the Black Belt counties of Alabama by **Tuskegee University**. Of the 150 participants, 30 producers signed up for spring planting and 50 producers for summer planting of GMO crops.

BRIDGING THE GAP. **Prairie View A&M University** conducted workshops, laboratory training sessions and conferences to inform the underserved population about science-based information and economic development opportunities associated with planting bioengineered vegetable crops. The goal is to reduce information and knowledge gaps that exist in agricultural biotechnology dissemination among clientele.

LEARNING ABOUT AGBIOTECH. Extension agents at **Alabama A&M University** and the Southern Agbiotech Consortium for Underserved Communities partnered to promote the advantages of agbiotech to farmers and consumers. Nontraditional farmers learned the potential benefits of using agbiotech products such as genetically enhanced seeds. Growers observed the natural insect disease resistance of the biotech varieties. One participant saved $312 on insecticide applications.

Pest Management

Americans want safe, pest-free products and a wholesome pesticide-free environment. Pest management programs at 1890 Land-Grant Institutions are implemented through partnerships within the nation's colleges and universities, federal agencies and the private sector.

USE YOUR ENEMIES. Research at **Virginia State University** indicated that the use of effective natural enemies, applied at the proper time, can reduce pest problems and save money. One producer in Virginia reported that she has gained a reputation for the quality of her pesticide-free fruit. Since lower temperatures do not affect natural enemies, some producers have been able to reduce their heating costs during cloudy, winter days.

INSECT TREATMENTS SAVE MONEY. Research conducted at the **Tennessee State University** (TSU) Institute of Agricultural and Environmental Research provided research data to the National Plant Board resulting in the approval of a new, lower-priced formulation of an existing insecticide treatment. TSU scientists were the only researchers in the country performing research on this insecticide formulation. Growers using the new formulation will save an estimated $1,483 per treated hectare in Japanese beetle control costs.

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HELPING BEEKEEPERS FIGHT PARASITES. Research at **Kentucky State University** has shown that screened bottom boards eliminate many live Varroa mites from beehives. Over a 15-month period, Varroa mites were reduced by 57 percent by the use of this equipment.

BIOLOGICAL CONTROL OF IMPORTED FIRE ANTS. Research at **Tennessee State University** has targeted and reduced the effects of hazardous agricultural chemicals on the environment — particularly in fire ant control measures in nursery production. Studies showed that the introduction of parasitic flies can provide self-sustaining and region-wide reductions of imported fire ant populations, which will reduce the cost and environmental impact of chemical management of these pests by both society and the agricultural community.

Aquaculture

Aquaculture is the raising of fish and other aquatic animals for food. In cooperation with the Land-Grant university system and stakeholders, the national aquaculture programs provide leadership for aquaculture research, technology development and educational programs that encourage and support the progressive development of the U.S. aquaculture industry.

OPTIMIZING CASH FLOW. Scientists at the **University of Arkansas at Pine Bluff** investigated new feeding strategies designed to maximize cash flow during critical periods. Research showed that common practices to reduce feed costs were having a devastating effect on cash flow and yield, and researchers suggested new strategies that would be more efficient. These strategies were included in spreadsheets and used by farmers to develop husbandry and financial practices that enabled them to obtain new loans and keep their businesses.

WINTER RAINBOW TROUT OFFER AN ALTERNATIVE. Virginia farmers with idle winter ponds or lakes are seeking new alternative crops to provide a positive return on labor and land. **Virginia State University** has established rainbow trout cage and greenhouse-tank culture demonstration sites, and has also conducted workshops and identified markets for the trout. As a result, rainbow trout winter culture has been adopted by four new farmers, and producers are earning more than $1.50 net profit per pound.

DEVELOPING ALTERNATIVE AQUACULTURE SPECIES. There is tremendous demand for live fish and shrimp in large urban markets. **Kentucky State University** (KSU) has developed efficient and economical production methods for freshwater shrimp and largemouth bass. One farmer is grossing approximately $25,000 per year based on KSU research and outreach efforts.

CHANGING FISH DIETS. It is imperative from both an environmental and economical perspective that fishmeal levels be reduced in fish diets. Scientists at the **University of Arkansas at Pine Bluff** have conducted studies to find replacements for fish oil in fish feeds, and have completed studies to find non-marine lipid sources that will improve the nutritional profile of freshwater fish.

One farmer is grossing approximately $25,000 per year since implementing Kentucky State University's efficient and economical production methods for freshwater shrimp and largemouth bass.

Swine, Cattle, Goats and Sheep

Livestock touch our lives in many ways — from feeding us to clothing us. Products from animals include meat and meat products, dairy products and non-food products such as fiber. The 1890 Land-Grant Institutions provide leadership and funding to improve animal health and safety, and to understand related issues of livestock production, products and processing. These activities expand our knowledge of the impact of the human/animal interaction on environmental and economic sustainability, and the well-being of animals and humans alike.

HELPING SWINE PRODUCERS. After swine outreach programs were provided by the **University of Maryland - Eastern Shore** Cooperative Extension Program, more producers are using artificial insemination on their small farms and are participating in alternative production and specialty markets such as barbecue pig and freezer pork. One local producer developed her own label and is marketing value-added products at a local farmers market.

PRODUCING HOGS TO MARKET. As a result of efforts that taught producers cost management practices and active marketing approaches at **North Carolina A&T State University**, over 30 hog producers in eight counties increased their gross income by over half a million dollars. One local restaurant has signed an agreement to work with the university to buy hogs raised locally for its specific cooking needs.

BEEF PRODUCERS USE HANDS-ON APPROACH. **Prairie View A&M University** has set up programs to make limited-resource beef producers aware of strategies that may help increase profits for their operations. The programs include a hands-on section that allows producers to practice management techniques with a licensed veterinarian to assure that procedures are performed correctly. As a result of these efforts, 97 limited-resource beef producers in three counties gained confidence to practice management strategies that saved them over $40 per calf.

FARMERS REAP BENEFITS. As a result of participating in the Beef Cattle Improvement Project offered by **South Carolina State University**, 92 small, part-time, limited-resource farmers are enrolled in five small farm associations. Seventy-five percent of the livestock producers improved their production of highly marketable animals; 75 percent realized a profit; 90 percent improved the livestock herd quality, and 50 percent increased pasture production.

IMPROVING ANIMAL PRODUCTION EFFICIENCY. **Alcorn State University** (ASU) provided technical assistance to livestock producers interested in improving pasture soil fertility, planting winter grasses and grains, and acquiring farm loans to purchase equipment. With assistance from the 2501 Project at **Alcorn State University**, one farmer was awarded $60,000 from the Farm Service Agency to purchase land, equipment and cattle to improve his farm. To help evaluate each farm, ASU veterinarians provided expertise in animal production to land owners. As a result, producers cut 35 percent of their input costs for production by planting improved varieties of ryegrass and winter grains.

Agricultural Systems

Agricultural enterprises — crop or livestock — at the 1890 Land-Grant Institutions deal with concepts such as labor supply, marketing, finances, natural resources, genetic stock, nutrition, equipment and hazards. Many times the interactions among the components are more important than how each functions individually.

Forty-two former tobacco farmers in the specialty pork project at North Carolina A&T State University produced pasture-raised, chemical-free pork for upscale consumers. With an average of 14 sows per farm, these farmers generated between $14,784 and $20,977 net profit.

SMALL FARMERS EXPAND PRACTICES.

Five Louisiana farmers in the multi-species grazing project of **Southern University and A&M College** may gross about $2,000 annually as a result of their participation. They serve as peer mentors, model farmers and advisors to other limited-resource farmers. Producers adopting ruminant nutrition and pasture management practices covered in a **Virginia State University** program had a 25 percent to 50 percent increase in pasture-based animal performance as they adopt managed intensive grazing practices. The number of mushroom farmers working with **North Carolina A&T State University** increased from 20 to 222, with an average sales of $894 per farmer.

MANURE AND NUTRIENT MANAGEMENT.

Researchers at **Virginia State University** have documented that phosphorus in poultry manure can be immobilized using alum, lime or ferrous sulfate, “agriculturally-friendly” chemicals. **West Virginia State University’s** (WVSU) digester research information is being used by three engineers to refine digester process control and design. The digester pilot plant at WVSU is one of few in the world that uses poultry litter from broiler houses as the sole feed source. Scientists at the **University of Maryland - Eastern Shore** have discovered that P-based manure management reduced runoff phosphorus without decreasing crop yields.

FARMERS USE ORGANIC AGRICULTURE.

Forty-two former tobacco farmers in the specialty pork project at **North Carolina A&T State University**, which produces pasture-raised, chemical-free pork for upscale consumers, reported an average return on each hog ranging from $1,056 to $1,496. With an average of 14 sows per farm, these farmers generated between $14,784 and $20,977 net profit.

Horticulture

Horticultural crops provide variety to human diets and enhance living environments and personal well-being. Horticulture crops include vegetables, fruits, flowers, nuts, berries, and nursery and greenhouse plants. Vegetable production is very much a part of the 1890 Land-Grant Institutions, and personnel continue to target small and limited-resource farmers and gardeners.

PLASTIC HAS A NEW CULTURE. Yields from vegetables grown using black plastic mulch increased by 90 percent at **The University of Arkansas at Pine Bluff.** Yield increases were highest for bush beans, cucumbers and straight neck squash, with increases of more than 100 percent. As a result of demonstrations in plasticulture by **Tuskegee University** scientists, farmers were able to provide a fresh supply of vegetables to local consumers at farmers markets and roadside stands at prices that were slightly higher than producer break-even levels. Taught by **North Carolina A&T State University** horticulturalists, former tobacco farmers are using a similar plasticulture/drip irrigation system to produce specialty vegetables in lieu of tobacco.

INCREASING YIELDS. A new, improved sweet potato Beauregard variety (B-14) yielded 441.5 bu/A at **Tennessee State University**. At $15 per bushel, sweet potato growers can look forward to increasing their incomes by $675 per acre. Beauregard represents 90 percent of the sweet potato fresh market. Some 400 limited-resource farmers, using best management production practices advocated by **Alcorn State University**, optimized their incomes. Approximately $115,000 was generated from the sale of greens, $80,000 from peas and $150,000 from sweet potatoes.

DIVERSIFICATION. The Center for Viticulture and Small Fruit Research at **Florida A&M University** has encouraged increased vineyard acreage by about 35 acres annually through new vineyard establishment and expansion. The development of new and improved grapes for Florida and Southeastern states has enhanced the viability of grape growing in Florida.

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Economics & Commerce

Specialists and scientists at 1890 Land-Grant Institutions help individuals, families, growers and ranchers increase their prosperity and economic security. They do this through helping people incorporate sound financial management strategies, discover new economic opportunities, develop successful agricultural and nonagricultural enterprises, and take advantage of new and consumer-driven markets.

NEW ECONOMIC OPPORTUNITIES. The number of growers raising log-grown shiitake mushrooms in North Carolina has increased from 20 to 221. Some 45 reported an average production of 89.4 pounds in 2004, for which they received an average of $20 per pound. Growers are continuing to expand their operations with the help of **North Carolina A&T State University** specialists. They also helped more than 100 North Carolina growers of exotic fruits add $100,000 to their family incomes. A Kentucky ice cream company is planning to sell pawpaw ice cream, made from a recipe developed and copyrighted by **Kentucky State University** and pawpaws grown by Kentucky small farmers. This could add more than $12 million to the Kentucky economy. Using technical assistance from **Florida A&M University**, one hot pepper farmer using containerized production realized gross returns in excess of $15,000 for 3,600 plants.

FORMER VIRGINIA TOBACCO FARMERS have established new enterprises with help from **Virginia State University** — 40 earned an average net income of $6,000 marketing fresh cut flowers, and 80 realized $4,000 each from pastured poultry, organic eggs and "natural meats." **Florida A&M University** has been collaborating with rural and urban school districts in Florida, Georgia, Alabama, Mississippi and Arkansas. As a result, small and limited-resource farmers have provided more than 60,000 pounds of fresh produce to 20 school districts, serving more than 550,000 children in these states.

FARMERS MARKETS. **Alcorn State University** joined the city of Natchez to establish the Main Street Marketplace, an outlet for small farmers. Six farmers have supplemented their farm income by $4,300. **South Carolina State University** helped clients open two farmers markets which earned 23 farmers an estimated $70,000 in sales. Two farmers markets organized and promoted by **North Carolina A&T State University** added $15,000 to producers' income. **Alabama A&M University** Extension agents trained growers to participate in the WIC Farmers Market Nutrition Program. More than $100,000 in coupons from WIC recipients and seniors were processed, providing limited-resource families with fresh fruits and vegetables.

LOAN ME THE MONEY. Forty-three small and limited-resource producers in the Rio Grande Valley were helped by **Prairie View A&M University** to apply for $3,945,455 in farm loans. **The University of Arkansas at Pine Bluff** helped 100 farmers with loan applications; 40 of whom received loans totaling $4.3 million. Twenty-seven small and limited-resource farmers in Mississippi received $2 million in loans after receiving help with their applications from **Alcorn State University**. **Virginia State University** helped 10 beginning farmers secure USDA loans.

Using a new horticultural model developed by the University of Maryland - Eastern Shore — a growers' network — farm families in the network are looking forward to projected sales of $30 million in 2005, up from $24 million in 2004.

LEARNING PAYS OFF. Using a new horticultural model developed by the **University of Maryland - Eastern Shore** that leverages the expertise of existing companies to establish market share through the development and support of a growers' network, farm families in the network are looking forward to projected sales of $30 million in 2005, up from $24 million in 2004. By adopting risk management strategies advocated by **North Carolina A&T State University**, limited-resource farmers and ranchers enhanced their incomes by $5 million, and 4,276 reduced expenses by 41 percent. The 96 participants who attended the Alternative Agriculture Conference, hosted by **Tennessee State University** in cooperation with the Agricultural Extension Service and USDA, reported that the workshop helped them save or earn a total of $59,500. Taking advantage of the Louisiana Agricultural Mediation Program (LAMP) conducted by **Southern University and A&M College**, 15 farmers saved $22,000 in legal fees. More than 300 farmers acquired knowledge on various legal issues such as estate planning, business types, inheritance laws and financial distress. Upon advice from **Florida A&M University**, Tri-County Cooperative members developed a new organizational structure and changed their name to reflect the diversity of the group to eliminate any pecuniary damages that could occur to the personal assets of the members of the organization.

Creating Strong Families and Communities

Strong families are important to a prosperous and productive American society. Unfortunately, many individuals and families are experiencing financial crises because of inadequate savings, too much debt and poor planning for potential major life events. In addition, many of our families face multiple relationship challenges — conflict management, parent/child relationships, care giving, safety, and balancing work and family life. Add to this condition, the disproportionate incidence of disease and obesity that affect limited-resource families and a view of the challenges faced by 1890 Land-Grant Institutions become clearer.

LIFE TRANSFORMATIONS. Recovering drug and alcohol abusers from the Transformation Life Center in Anderson, S.C., have gained new job skills and are growing vegetables that they sell at a local farmers' market, thanks to their work with an Extension agent from **South Carolina State University**. The group, operating with limited funds, has constructed a greenhouse using scrap lumber, PVC pipe and clear plastic. Seed for the vegetables was donated by the local parks and recreation department. The plan is to expand the garden from one to five acres, which would create enough revenue to partially support the facility's operations.

FAMILY FINANCES FIRST. Fifty residents of Gadsden County, Fla., completed the First Time Homebuyer's Program at **Florida A&M University**, edging them closer to getting a mortgage for a new home or to repair an existing home.

As well, these residents have begun creating budgets and working on establishing or repairing credit — both of these actions will make it more likely the banks will provide them mortgage loans.

SENIORS IN THE KNOW. More than 500 limited-resource Texans got firsthand information from **Prairie View A&M University** Cooperative Extension, making it possible for them to apply for the Medicare Discount Drug Card Program. They experienced a savings of over $300,000. Extension agents from **North Carolina A&T State University** worked with senior citizens in one North Carolina county and planted 15 gardens, producing more than $12,000 in fresh fruits and vegetables. Senior citizens participating in a program in the Sociology and Health and Human Performance departments at **West Virginia State University** have become more actively involved in their health care after working with students in the program. The students developed a curriculum and personal health journals that were given to program participants to record their own medical information. All senior citizen participants reported using the personal health journal at their most recent doctor's appointment.

DISEASE PREVENTION AND HEALTH TAKE CENTER STAGE. Nearly 60 people were enrolled in a four-week diabetes control program at **Alabama A&M University**. All of the participants improved their eating habits, are using recipes from the class and 90 percent of them have started an exercise program. One couple, participating in a **Kentucky State University** weight-loss program, lost 106 pounds in less than a year. Both report that they feel better and are showing improvement in their sleep apnea.

PARENTING IS JOB ONE. **The University of Arkansas at Pine Bluff** developed a parenting curriculum that is used across the state. The curriculum uses a three-prong approach — promoting child development, enhancing parenting skills and providing adult economic and self sufficiency services. Participating parents report an increase in parent/child interactions, greater in-home learning opportunities and more opportunities to talk and read with young children.

ASSURING A SAFE AND HEALTHY FOOD SUPPLY. Researchers at **Tennessee State University** found that washing fruits and vegetables with cold tap water is as effective at removing residual pesticide and microbial contaminants as other, more stringent decontamination methods. The researchers are now working with the Extension staff to distribute materials on the proper cleaning methods to state residents. **North Carolina A&T State University** received a patent for its technology to improve the viability, survival and health promoting properties of probiotic bacteria. Thus far, a national industry has used this technology and improved the quality and stability of its dietary supplements production.

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Nearly 60 people were enrolled in a four-week diabetes control program at Alabama A&M University.

Recharging Rural and Urban Communities

Based on research findings, economic growth is at a standstill in some U.S. communities as jobs decline, resources shrink and business development decreases. To help stimulate and revitalize rural and urban communities, 1890 Land-Grant Institutions are establishing programs to improve community appearance, employment, leadership skills, business development and financial management techniques.

PUTTING IDEAS ON PAPER. Individuals in the Black Belt region of Alabama had an entrepreneurial spirit that could have contributed to economic growth, but needed guidance in writing business plans and securing financial resources. The economic development staff at **Tuskegee University** conducted two, eight-week sessions for these residents in five counties on how to start micro-enterprises and small businesses.

As a result, six business plans were developed and finalized, and two businesses secured loans totaling $245,000 with the potential of employing 11 people in beauty salon and day care enterprises. **Florida A&M University's** Entrepreneurial Rural Business Development Project provided workshops and training for 450 rural residents on developing marketing and financial plans.

A COMMUNITY'S REBIRTH. Faced with growing numbers of middle school dropouts, teen pregnancy, drug use and abuse, and older homeowners moving away, residents in a Wilmington, Del., community became afraid to leave their homes. To address these deteriorating conditions, family life and youth development specialists at **Delaware State University** worked with the McRae Foundation whose mission is to re-birth the community. Five thousand pounds of fresh vegetables were distributed to residents, 250 flowers were planted to beautify the area, tutoring and homework assistance programs were established and summer day camps were developed to help this community regain its sense of pride and return to wholesome living. With the help of **Prairie View A&M University's** business and economic development staff, a retired couple established the Centerline Community Concerned Citizens Association, which secured a $33,000 grant and an additional $75,000 to build a community center.

VOICING CONCERNS. Lack of adequate fire protection was a major challenge facing citizens in southwest Mississippi. **Alcorn State University** used the Community Voices curriculum, designed to promote and strengthen leadership skills for grassroots community leaders, to help residents take the lead in organizing community meetings and securing grants. As a result, two fire grants were funded and ongoing activities are being held to promote and provide better fire protection in small communities.

1890 LAND-GRANT INSTITUTIONS

Alabama A&M University
Alcorn State University, MS
Delaware State University
Florida A&M University
Fort Valley State University, GA
Kentucky State University
Langston University, OK
Lincoln University, MO
North Carolina A&T State University
Prairie View A&M University, TX
South Carolina State University
Southern University and A&M College, LA
Tennessee State University
Tuskegee University, AL
University of Arkansas at Pine Bluff
University of Maryland - Eastern Shore
Virginia State University
West Virginia State University

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