AN UPDATE ON THE CENTER FOR INNOVATIVE AND SUSTAINABLE SMALL FARMS, RANCHES AND FOREST LANDS

AND

THE CENTER OF EXCELLENCE FOR INTERNATIONAL ENGAGEMENT AND DEVELOPMENT

> **DEVELOPING** PARTNERSHIPS

INCREASING PROFITABILITY

EXPANDING

OPPORTUNITIES









DEVELOPING PARTNERSHIPS INCREASING PROFITABILITY EXPANDING OPPORTUNITIES

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and Enhancing Opportunities

As part of the 125th Anniversary Celebration of the Second Morrill Act, which created the 1890 land-grant university system, the 19 1890 land-grant universities proposed the development of three centers of excellence designed to enhance the relationship between the universities and USDA and its partner agencies and to creatively look for ways to help solve many of the issues plaguing the food and agricultural industry.

As such, two Centers of Excellence were developed and funded – the Center for Innovative and Sustainable Small Farms, Ranches and Forest Lands (CISFRL) and the Center of Excellence for International Engagement and Development. Both Centers have been up and running and aggressively moving forward to accomplish its goals and objectives and desired deliverables.

The CISFRL Center is focused on increasing profitability for small farmers, including socially disadvantaged/underserved farmers, ranchers and forest landowners. The participating 1890 universities have developed and are working with clusters of farmers and ranchers with a focus on enhancing marketing, substantially increasing fruit, vegetable, timber and cattle production, and improving profitability in persistent poverty/strike force counties in the southern region.

The Center of Excellence for International Engagement and Development is designed to supply the country with a globally diverse workforce, support critical global development needs, thereby supporting U.S. national security, address trans-boundary research and education challenges including climate change, conservation, and biodiversity, and development/strengthening of teaching curricula and student recruitment.

After the Centers were approved and initial funding was secured, the universities submitted proposals for how they could support the Centers' work. In less than a year, the universities have made enormous strides. Work is still ongoing and outcomes are being collected.

THE CENTER FOR INNOVATIVE AND SUSTAINABLE SMALL FARMS, RANCHES AND FOREST LANDS (CISFRL)



The CISFRL is a partnership between seven 1890 universities and four USDA agencies – Natural Resources Conservation Service (NRCS), Forest Service (FS), Rural Development (RD), and Farm Service Agency (FSA). The seven participating universities are Alcorn State University in Mississippi, North Carolina A&T State University, South Carolina State University, Southern University and A&M College in Louisiana, Tuskegee University in Alabama, The University of Arkansas at Pine Bluff and West Virginia State University.

The CISFRL was awarded \$1.15 million for programming conducted between Oct. 1, 2015 to Sept. 30, 2016. Each institution submitted an individual proposal designed to address the specific deliverables developed by the partner agencies and received between \$90,000 and \$200,000 to finance their work. All projects were multi-farm, ranch, landowner and involved clustering and collaboration.

Project deliverables fell into the following categories:

- Develop farm/ranch/landowner clusters and cooperatives allowing for increased productivity, profitability, and quality deliverables
- Certify, register or encourage the development of applications for farm registration, farm loan programs, non-insured crop assistance, good agricultural practices or forest/conservation management

- Provide guidance, training, and scientific/technical assistance to farmers, ranchers or landowners to increase the diversity of loan pools, Farm Service County Office Committees, farm management plans, farm stewardship and conservation plans, workforce development and international engagement
- Increase the number of students in agricultural careers
- Increase the number of veterans and new and beginning farmers
- Plan and conduct workshops, conferences and field days designed to improve profitability, highlight USDA agencies and showcase best practices
- Provide technical assistance, appropriate research, and assist minority and underserved landowners with forest management techniques
- Develop impact and outcome reports to support program activities

The majority of the activity from the seven universities has centered on developing clusters of farmers/ranchers/ landowners and conducting a variety of workshops, conferences, and training all designed to increase their



productivity, improve profitability and implement best practices. Many of these activities have been cosponsored by the four participating USDA agencies giving the participants an opportunity to interact with and learn about the many programs and other services available to assist farmers, ranchers, and landowners. Many of these participants have never been exposed to these agencies and others have, over the years, developed negative opinions of USDA, so this is an opportunity to dispel those fears and clearly illustrate how they can partner with USDA to improve their enterprises.

Universities developed proposals based on their strengths and resources and made efforts to work across state lines to continue to build coalitions and capacity. Proposals selected for funding were also those that would accomplish agency goals and objectives. While each university had an individual proposal that sought to address their specific needs, this

report is an effort to aggregate their activities and highlight early outcomes. This is in no way a complete listing of activities, but is instead a snapshot of the breadth and depth of work being done across the system.

Develop Clusters and Cooperatives

All of the seven states have developed clusters arranged around NRCS Conservation Districts, USDA Strike Force designations, regions or commodity/interest groups. Approximately 70 cluster groups or cooperatives, including five or more owners, have been created in the seven states. This includes hundreds of farmers, ranchers, and landowners. Pulling together these farmers, ranchers and landowners have allowed the universities to increase the number of participants, but also allowed the participants to work with



like-minded owners giving them the chance to bolster the strength of their small enterprise so they can seek out those customers looking for larger quantities than individual owners can supply. Most of those involved have been new to Cooperative Extension and many were not complying with basic farm processes like farm

registration, soil testing, pest management or reliable sustainability practices.

The universities have also worked with agencies to help the cluster groups learn facilitation skills, cooperative formation, conducting effective meetings and other skills needed to work together effectively.

The efforts of individual universities include the following examples:

One Mississippi cooperative has committed to providing 400 cases per week of purple hull peas to M. Palazola Produce Co. and Kroger from June 20 to Oct. 15, 2016. They are also exploring supplying butter beans, watermelons, and greens to these buyers. This cluster also purchased a pea sheller and an ice maker to assist in processing and holding produce.

- A cooperative in Mississippi is in preliminary talks with Walmart and Robinson Fresh, a transportation and logistics company, to provide additional fresh fruits and vegetables.
- A cluster group in Louisiana purchased an 110-gallon sprayer used to

enhance pasture land. Two of the group's part-time farmers have saved \$600 per month in feed and are on track to save \$7,200 this year. With the majority of small, minority farmers averaging less than \$10,000 annually, this amount is a tremendous saving.

- A second cluster group in Louisiana purchased a palpation cage, designed to provide the operator with safe and convenient access to the rear of the cow for pregnancy checking or artificial insemination. For a small farmer, individually purchasing the equipment is not cost effective.
- Most of the clusters have conducted dozens of workshops, training and presentations, many focused on the USDA loan process, NRCS conservation practices, RD risk management procedures and other agency-related issues and concerns. A North Carolina cluster group has been expanded to include youth farmers and is using e-learning to teach hydroponics.



A West Virginia State University farmer using a cooler provided to graduates from their cold-storage training program.

 West Virginia has purchased five mobile cold storage units, one Polar King[®] commercial-grade system, three coldstorage stationary and four fabricated units with Coolbot® systems, a controller, and regulator that in conjunction with an air conditioner can create a walk-in cooler, to be used by its six cluster groups. These systems provide the participants with a cooling system to increase the shelf life of fresh produce. Cluster farmers have also been provided with Yeti® coolers, vegetable boxes, clamshells storage units and mesh bags to enhance produce packaging, storage, and transportation.

 A cluster working with Tuskegee has created four full-time jobs and they have met with five new restaurants and one non-profit about providing fresh fruits and vegetables.



- Another Tuskegee cluster group was developed for small ranchers. The group has held sessions on year-round health management and a proper diet for adult cows and calves.
- A Tuskegee cluster group has worked with farmers to increase irrigation capacity and to design or install drip irrigation and fertilization systems.
- The Black Belt Marketing and Innovation Center, a 98,000 square-foot facility in Alabama, which is used as a demonstration, teaching, processing, shipping and marketing site, shipped its first truckload of watermelons to a local Walmart Distribution Center on July 13, 2016.

Register, Certify and Develop Applications and Provide Guidance and Technical Assistance

The seven universities, working in partnership with USDA agencies, community groups and organizations and non-profit agriculture-related groups have hosted approximately 80 workshops, conferences, agricultural field days and in-depth training. The universities have also registered more than 50 farms, submitted applications for dozens of farmers to participate in the FSA Small Farm Loan Program, assisted dozens of farmers with applying for FSA's Non-insured Crop Disaster Assistance Program and helped two dozen farmers to sign up for NRCS's Environmental Quality Incentives Program.

Examples of specific efforts include the following:

- A cold storage workshop was held in West Virginia teaching farmers from statewide clusters about post-harvest management and on-farm safety measures.
- Workshops on risk management education, land tenure, heir-property resolution, landowner responsibility, land improvement, and management have been held for cluster farmers throughout the seven states.

- Soil sample workshops in Arkansas showed 10 farmers how to take samples and the value of doing soil sampling. The samples help improve the soil and increase yield.
- More than 35 Arkansas farmers developed a Glyphosate Resistant Pigweed Control Plan. This plan includes 10,000 acres of crops, primarily soybeans, with the potential to generate approximately \$5 million for the owners.
- An Arkansas workshop on plant disease identification helped save an entire crop for one cluster group member. After heavy rains, he was able to identify that his watermelon and cantaloupe farm was infected with Bacterial Fruit Blotch. The early identification and application of copper hydroxide allowed him to save his entire crop.

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 Arkansas worked with a group of 42 producers in developing

USDA loan application. After the session, producers received \$7.7 million in USDA funds. Another 50 producers improved their record keeping systems helping them to get a more accurate financial picture of their farm enterprise and better preparing them for future loan and grant opportunities.

- More than 45 farmers in Arkansas developed land improvement and farm management practices after three outreach sessions hosted by the NRCS, which also focused on participation in the Environmental Quality Incentive Program (EQIP). Another 20 farmers registered for the Conservation Stewardship Program (CSP) and received \$90,000 in CSP funds for adopting conservation methods for their operations.
- Five South Carolina farmers completed a Small Farm Loan application, two applied for the NRCS EQIP program, three followed up with the South Carolina Forestry Commission and are in the process of developing land management plans, two completed Rural Development housing applications and three completed RD applications for housing rehabilitation.
- At Tuskegee, 42 farmers participated in workshops on postharvest loss, design and cost/benefit determination, and post-harvest food production. An additional 14 farmers, including seven from the University of California at Davis,



A University of Arkansas at Pine Bluff cluster farm participant working with a staff member on developing a farm loan application.

graduated with certificates in Post-Harvest Technology and Training.

- All of the universities held annual and seasonal field days, including the 124th annual Farmers Conference in Tuskegee. This conference, attracting more than 150 small farmers, featured sessions on pasture improvement, herd health, catch-pen design and forest management.
- All universities have recruited local farmers to attend and become involved in national farm-related conferences and workshops including attending the National AgrAbility Conference and the National Risk Management Conference.

Increase the Number of Students and Recruit New and Veteran Farmers

Because of their tripartite mission of teaching, research and Cooperative Extension, the universities had the opportunity to involve students in the education and training activities. This not only gives the students hands-on work experiences, but continues to prepare them for positions in the agricultural and food industry. The seven universities also worked to increase the number of new and beginning farmers and developed specific programs for this group.

Additionally, Tuskegee held a series of sessions where more than 125 veterans were taught basic concepts in food safety, gardening, horticulture, goat husbandry, integrated pest management and participated in a food systems tour. These sessions were held throughout the state and hosted in collaboration with the FSA and the Farm Foundation for Veterans. The desire is that this group of approximately 6.1 million veterans living in rural communities across the country might consider becoming a farmer.

Provide Technical Assistance, Appropriate Research, and Assist Minority and Underserved Landowners with Forest Management Techniques

Although six of the seven universities included forestry deliverables in their proposal, Tuskegee and North Carolina

A&T have made forest management a major component. In Tuskegee, two of its seven cluster groups focused on forest management and participated in sessions on forest management practices and developed forest management plans. Additional sessions have reached 422 landowners where they got information on forest health, pest, invasive species, fire and disease control. Tuskegee has partnered with the Limited **Resource Landowners Education Assistance** Network, The Federation of Southern Cooperatives, FSA, RD and state forestry organizations in South Carolina and Alabama to support these farmers.

Selected CISFRL Numbers 70 CLUSTERS DEVELOPED 1005 FARMERS INVOLVED IN CLUSTERS 50+ FARMS REGISTERED WITH USDA 80 WORKSHOPS HELD

Tuskegee also hosted the Tuskegee Longleaf 101 Academy

for forest landowners, managers, and Cooperative Extension staff. The meeting focused on natural and artificial regeneration, managing forest health in Long-leaf ecosystems, fire in Longleaf ecosystems, biodiversity and wildlife habitat and old-growth management.

North Carolina has developed 15 clusters of four farmers each and is generating a needs assessment list to offer services,

training, and workshops to those participating farmers. They are also working with the state forestry service to assist landowners in developing forest management plans.

Record Keeping and Impact

As identified in their sub-grant applications, all of the universities have developed evaluation systems and accurate record keeping systems designed to ensure that the programs and services offered are focused on meeting the Center's and the agencies' goals and objectives. They are following up with participants to ensure that longterm impact is being made and that their agricultural enterprises are profitable and helping to supply community needs.

Additionally, universities have provided quarterly reports to the participating

USDA agencies that specifically illustrate which deliverables are being met. This has allowed each agency to routinely see the progress being made.



THE CENTER OF EXCELLENCE FOR INTERNATIONAL ENGAGEMENT AND DEVELOPMENT

The participating USDA agencies for this Center are Animal and Plant Health Inspection Service (APHIS) and the Foreign Agricultural Service (FAS).

The APHIS funding was provided to recruit the next generation of a more diverse international agriculture workforce, specifically those graduating with technical degrees in one or more of



Alcorn State University students, representing the country of Jordan, participating United Nations Conference.

To meet these goals, sub-grants were provided to the following universities: Alcorn State University in Mississippi, Langston University in Oklahoma, Tennessee State University, North Carolina A&T State University, Virginia State University and to a collaborative partnership involving Florida A&M University, Tuskegee University in Alabama, Delaware State University, and the University of Maryland Eastern Shore.

In less than a year, the participating

the following fields: biological sciences, agriculture, natural resource management, chemistry, animal and plant health sciences, or other related disciplines. The funding was provided to assist in preparing these students to be competitive because of strong comprehensive international education and training offered by the campuses.

Similarly, the FAS funding was provided to support teaching, curricula, and recruitment activities within the 1890 universities in order to expand the number of students who are educated in international agricultural trade, affairs, and development.

universities have already been successful. There has been an increased number of faculty at the participating universities who have worked to develop and expand curricula with a global focus and obtained campus-level approvals to offer certificate programs in international agriculture. They have also introduced a growing number of students to global and international careers in the food and agricultural sector. In concert with university schedules, the summer months are being used to provide study abroad or experiential training for a number of students.





Activities of individual universities include:

- Experiential Training of Students in International Diplomacy and Policy Making: Alcorn State University students participated in the Southern Region Model United Nations Conference where they represented Jordan and participated in various conference committees where they learned the fundamentals of global diplomacy through formulating resolutions while working with their counterparts.
- *Exposure of Students to Critical Federal Career Pathways:* Students toured the USDA-APHIS-Plant Protection and Quarantine (PPQ) Homeland Security facility in Gulf-port, MS where they heard presentations, and learned about the unit's efforts to safeguard the nation's food supply.
- Participation in Global Experiential Training/Study Abroad Programs: Students from Florida A&M University, the University of Maryland Eastern Shore, Delaware State, Tuskegee, Langston and Virginia State universities participated in short-term training programs in China,

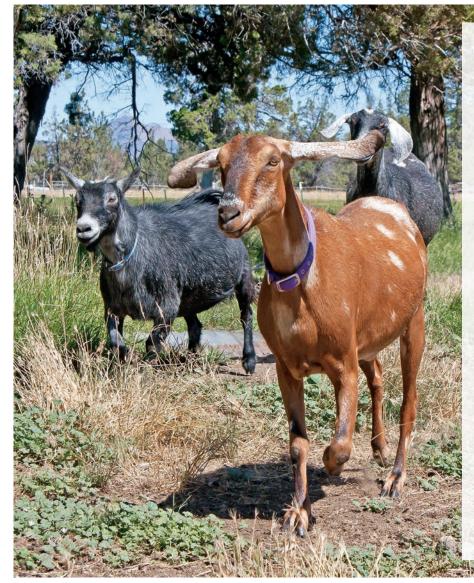
Costa Rica, Guatemala, and/or Guyana.

- Hosting the Animal Biotechnology Research Summer Institute at Virginia State University. Topics covered included world agriculture and globalization, the role of the World Trade Organization (WTO), the impact of domestic and international trade on plant health, an introduction to biosecurity, regulatory tools for safeguarding and protecting plant health, international and domestic regulatory framework in plant protection, and regulatory enforcement and specialty areas. Selected students from this program were also registered for an online Global Studies Abroad course and had to complete this course before taking the trip to Guatemala and Guyana. Grant funds were used to pay program fees. The students will receive credit on their transcripts for completion of the summer institute and the study abroad.
- Developing a Cooperative Certificate Program for Students at FAMU, DSU, Tuskegee, and UMES. Fourteen students were recruited into the certificate program and scheduled to participate in the International Service Learning initiative in Costa Rica and eight faculty members have been trained at the institutions to teach global issue areas such as international development, foreign agriculture, and trade.

 Developing an International Student and Faculty Exchange Program with Izmir, Turkey. Faculty from N.C. A&T traveled to Ege University and Adnan Menderes Universities' Department of Agricultural Economics to hammer out program specifics. A&T will provide students with hands-on international project-based learning experiences and equip faculty with the working knowledge and real-life experience they need to adequately deliver quality instruction. During this trip, meetings were held with representatives from Kareks, an exporter of sundried tomatoes; Sebat, Ltd., a manufacturer of rose oil and other cosmetic derivatives from the roses; Sultan Sera, a geothermal greenhouse that produces tomatoes for high-end European markets; Kutas, a leading supplier of spices to McCormick, and Rapunzel, a leading organic food processor. All representatives were interested in hosting U.S. students for internships.

• *Curriculum Enhancement.* Enhancing the N.C. A&T curriculum to develop a multidisciplinary double major degree graduate program in international development and engagement. Thus far the description and online syllabus have been developed for courses in international trade theory, international agricultural trade policy, government policy analysis and agriculture, problemsolving field techniques and project management, design and evaluation.

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MAKING IMPACT

The impetus for the Centers was that they would provide opportunities for the participating universities, expand relationships with USDA agencies, assist farmers, ranchers, and landowners with opportunities to increase profitability and expand their knowledge base, increase the number and quality of students involved in global studies, and agricultural outreach to limited-resource farmers.

While the Centers have only been in operation for a short time, substantial progress has been made. But greater than that, seeds of opportunity have been planted that will be harvested for years to come. Farmers will continue to use best management practices and be open to working with local, state and federal governmental agencies designed to assist them. Students will expand their world view and see opportunities to work, learn and engage globally, and citizens will have access to safe, affordable, more nutritious food and see the world as a place where all can succeed.

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