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**TESTIMONY BEFORE THE US HOUSE OF REPRESENTATIVES
COMMITTEE ON AGRICULTURE
SUBCOMMITTEE ON BIOTECHNOLOGY, HORTICULTURE AND RESEARCH**

**HEARING ON
“1890 LAND GRANT INSTITUTIONS – 130 YEARS OF BUILDING EQUITY IN AGRICULTURE”**

DECEMBER 9, 2020

INTRODUCTION

Chairwoman Plaskett, Ranking Member Dunn, and members of the House Committee on Agriculture thank you for this opportunity to address you today. I am Paul Jones, and I have the privilege of serving as the tenth president of Fort Valley State University (FVSU) in Middle Georgia.

I am honored to speak to you today, along with my distinguished colleagues, to testify in support of the 1890 Land Grant Institutions. As you know, the land-grant system was established as part of the Second Morrill Act of 1890. Celebrating our 125th Anniversary this year, Fort Valley State University was established in 1895.

The FVSU College of Agriculture, Family Sciences and Technology offers undergraduate and graduate programs in Animal Sciences, Agriculture Economics, Agriculture Education, Biotechnology, Engineering Technology, Food and Nutrition, Electronics Technology, Infant and Child Development, Plant Science, Public Health, and Veterinarian Technology.

FVSU'S RESPONSE TO COVID

During the fall 2020 semester, the University System of Georgia, reopened each of its campuses in an in-person modality. Despite the enormous challenges of the pandemic and State budget reductions, the University reopened in the fall and experienced its largest enrollment since fall 2012, which increased nearly 8% over last year. Part of the increase is directly attributed to the new 1890 Agriculture Scholarships from the 2018 Farm Bill. The fall semester saw more than 75 new agriculture scholars join the University.

In addition, thanks to Congressional support of the CARES Act funding and The Coronavirus Aid, Relief, and Economic Security Act and the CARES Act Relief Funds to HBCUs, Minority Serving Institutions, and Colleges and Universities Serving Low-Income Students, we are able to significantly enhance our technology capacity, purchase valuable personal protection equipment and testing capacity, eliminate significant auxiliary deficits due to student refunds, and mitigate large scale employee reductions.

LAND-GRANT FUNCTION

The 1890 land-grant institutions system and the U.S. Department of Agriculture have a monumental responsibility of addressing global food security through rigorous research, extension, and educational programs. Technological advances applicable in agriculture, natural resource utilization and conservation, and food production will enable us to meet this daunting challenge, provided there is an appropriate allocation of resources to enhance infrastructure at agricultural universities. Topics such as precision agriculture, artificial intelligence, big data, and gene editing have become a part of the day-to-day conversation within the agricultural research community.

FVSU has robust research and educational programs in bioinformatics, precision agriculture, renewable energies, genome editing, and other technologies. We are ideally positioned to play a lead role in the conceived 1890 Center of Excellence in Emerging Technologies.

FVSU has recently developed its 2020-2025 Strategic Plan that emphasizes Innovation, Entrepreneurship, and Economic Development. To this end, we have created the Office of Economic Development and Land-Grant Affairs. In addition to critical thinking, communication, teamwork, and leadership capabilities, entrepreneurship is an essential skill for college graduates to compete in today's ever-evolving global economy.

We are in the process of establishing the FVSU Center for Agricultural Innovation and Entrepreneurship to assist clients in starting and sustaining agribusinesses, assist faculty and researchers with innovation, technology transfer, and commercialization efforts, and encourage and facilitate student activities resulting in entrepreneurship ventures. The Center will play the much needed intermediary functions in economically depressed communities to connect people to information and resources that will transform ideas into businesses, resulting in local and regional economic development.

RESEARCH AND INNOVATION

It is critical that research programs pursue “rigor” in order for research findings to be reliable. The hallmark of FVSU's rigorous research programs is collaboration.

For example, a global team of 65 scientists from 30 research institutions, including Fort Valley State University (FVSU), has decoded and sequenced the pearl millet genome, revealing critical heat coping strategies in this grain crop. This discovery, published in the journal *Nature Biotechnology*, will also help researchers better understand climate adaptation in other important cereal crops and develop strategies to enhance crop production despite changes in global temperatures.

FVSU is considered a leader in specialty crop research, and current projects at the institution focus on the medicinal and nutraceutical properties of Scutellaria, stevia, bacopa, and other plants. Through our collaborative work, we demonstrated that Scutellaria has anti-cancer properties; its administration can reduce the tumor size in the rat brain.

FVSU's nanotechnology lab is extracting cellulose nanocrystals and micro fibrillated cellulose, and the derived aerogel and hydrogel have applications in agriculture water conservation, environmental safety, biomedicine, electronics, insulation, packaging, and textiles, to name a few.

FVSU has established research collaborations with several USDA-Agricultural Research Services' (ARS) Labs recently. FVSU, in partnership with the University of Georgia and ARS, is working on a research project to characterize whitefly infestations in fruit and vegetable crops in the southeastern U.S. and provide short- and long-term integrated pest management and molecular tools that can be used to mitigate the infestations.

We are in the process of establishing similar partnerships with the USDA-ARS Peanut Lab in Dawson, Georgia, on a project to address the aflatoxin problem in peanut kernels, and with the ARS Lab in Byron, Georgia to work on a pecan project. FVSU has recently established the Center for Ultrastructure Research that is expected to expand these collaborations further.

The Georgia Small Ruminant Research and Extension Center at FVSU is the largest facility of its kind east of the Mississippi River and is recognized as a national leader in goat research. FVSU continues to be the lead institution for the American Consortium for Small Ruminant Parasite Control, a global organization with numerous collaborators from 1862 and 1890 universities, USDA-ARS stations, international institutions, and industry groups dedicated to finding non-chemical methods of controlling gastrointestinal parasites in sheep and goats. Because of this group's work, farmers have greatly improved the sustainability of their sheep and goat production systems by reducing synthetic drug usage by up to 90 percent, which saves approximately \$150-\$200 per 100 animals per year.

FVSU researchers, in collaboration with USDA-ARS scientists, are using genome-editing techniques to improve reproductive efficiency in sheep and goats. Gene editing allows researchers, for instance, to eliminate an undesirable trait by precisely knocking out the gene without introducing a foreign gene into the native genome.

FVSU researchers have demonstrated the effectiveness of non-thermal technology for the destruction of E. coli on meat and continue to evaluate cost-effective pathogen reduction strategies and conduct food safety training for small and very small meat processors in Georgia. FVSU has also expanded its custom meat processing services beyond its traditional service area and clientele to help the state meet the red meat processing demand that has been negatively impacted by the pandemic.

COOPERATIVE EXTENSION

To provide support to beginning farmers and ranchers in agriculture and to improve outreach and communication to military veterans about farming and ranching opportunities, FVSU's Cooperative Extension Program has been conducting quarterly workshops impacting Georgia's Strike force counties that have engaged hundreds of participants in USDA programs, GAP/GHP certification, organic and sustainable food production, conservation and assistance available from USDA and local farm support agencies.

FVSU has an 18-acre organic farming system where farmers are exposed to an organic tree, shrub, vine fruit growing, organic barrel gardening, organic small plot gardening, organic hoop house gardening, and organic animal production.

FVSU is collaborating with the University of Georgia, USDA Rural Development, USDA Forest Service, and other agencies to address minority forest landowners' not receiving any technical assistance or information that will assist them in their operation of maintaining and managing their forestlands to maximize their operation's income. This program's impact is an increase in the overall knowledge of 350 landowners in the following topic areas: wills and estate planning, timber management and marketing, USDA cost-sharing programs, wildlife management, and land management, including surveying.

Our Mobile Information Technology Center educates communities on recordkeeping and accessing USDA information on the web. It is also used to assist in providing services to veterans and others who need to utilize technology to access government services via the web. Additionally, working with the State Health Insurance Assistance Program and the Senior Medicare Patrol, we have saved Georgians more than five and a half million dollars.

Life on the Farm is a live animal mobile exhibition providing firsthand knowledge of farm life and how it affects each person daily. The Life on the Farm educational program is presented throughout the state at schools, daycare centers, public libraries, churches, town festivals, fairgrounds, and other public meeting places.

The FVSU 4-H program has engaged thousands of youth in healthy living activities resulting in improvement of dietary choices, improvement of attitudes toward healthful foods, increased willingness to try new nutritional foods, increased understanding of the elements of sound nutrition, and daily caloric need versus physical exercise, and increased participation by the family in eating together.

Fort Valley State University has been able to educate numerous low to moderate-income families on Energy Audits and distribute energy-related publications to hundreds of Georgians through its Project GREEN, which stands for Georgia Residential Energy Efficiency Network.

FUTURE CONGRESSIONAL SUPPORT

A significant issue of concern to all public institutions receiving support for food, agriculture, and natural resource research is aging infrastructure and the lack of funding for maintaining facilities. A recent APLU-sponsored Gordian study revealed some alarming data indicating a severe backlog of deferred maintenance, and the report estimated the cost to be in excess of \$11.5 billion. Funding for improving infrastructure suitable for 21st Century science that addresses emerging issues in agriculture and food production is essential.

Emerging technologies warrant institutions to establish suitable research infrastructure and make adjustments to their outreach and educational programming to effectively train the present and future generations of agriculture and the farming community. There is an imperative and urgent need for institutions to build the capacity to handle massive volumes of data and at the speed and frequency with which they are being collected.

This is particularly critical for smaller land-grant institutions charged with a unique mission of addressing the needs of underrepresented communities, as well as of producers and landowners with limited access to technology and resources. In this context, rural broadband access will have to be our top priority to revitalize rural and economically depressed communities throughout the nation.

I am grateful for this opportunity to address the House Agriculture Committee today. On behalf of the dedicated faculty, staff, and students at FVSU and throughout the 1890s System, I thank you for your continuous support of our institutions and agriculture.