

ARD Updates

ASSOCIATION OF 1890 RESEARCH DIRECTORS

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Message from the Chair Dr. Chandra Reddy

Dear Friends and Colleagues,
On Aug. 30, 2022, the land-grant community celebrates the 132nd Anniversary of the Morrill Act of 1890, an Act that established the 19 1890 historically black land-grant universities. The Second Morrill Act was successfully shepherded through Congress on Aug. 30, 1890, by U.S. Senator Justin Smith Morrill of Vermont.

Under the conditions of legal separation of the races in the South, African Americans were not permitted to attend the original land-grant institutions established by the Morrill Act of 1862.

Although the Morrill Act of 1862 authorized "separate but equal" facilities, only Mississippi and Kentucky established institutions for African Americans under this law, and only Alcorn State University was designated as a land-grant institution.

From 1866 to 1890, several southern states established normal schools to train African American teachers. Although many of these institutions were similar to the land-grant universities, the federal government was unable to gain cooperation from the southern states in the provision of land-grant support to the African American institutions.

This situation was rectified by the passage of the Second Morrill Act by the United States Congress in 1890, expanding the 1862 system of land-grant universities to include historically African American institutions. Senator Morrill had been disappointed that such educational institutions were out of the reach of African Americans and advanced the belief that higher education should "be accessible to all, but especially to the sons of toil." Many African American normal schools were incorporated into this system and became known as "1890 Institutions." Each of those southern states that did not have an African American college by 1890 established one later under the Second Morrill Act.

From these humble beginnings, the 1890 Institutions evolve into a major national educational resource. Today, the 1890 land-grant universities, located in 18 southern and border states, are a thriving network of 19 universities, despite a plethora of challenges, with a proud legacy of educating first-

Appropriations Update: CR expected

*Written for the Board of Agriculture Assembly by
Lenis-Burke Associates*

On July 28, the Senate Appropriations Committee unveiled the Chairman's mark for the fiscal year (FY) 2023 Agriculture, Rural Development, Food and Drug Administration, and Related Agencies appropriations bill and the accompanying explanatory statement. Aligning closely to the House bill, the Senate would provide \$27.072 billion in discretionary funding for the USDA and the FDA.

The draft bill reflects Democratic priorities and, due to timing, is unlikely to receive formal consideration by the full Senate before current funding for FY 2022 expires on Sept.30; thus, a continuing resolution (CR) to continue to fund the government will be needed. However, the funding levels and priorities articulated in this draft bill will be important in negotiating a compromise with the House later this year.

NIFA would be funded at \$1.691 billion, a \$54 million increase over FY 2022, but \$77 million less than the House mark.

Of note:

- AFRI would receive \$455 million, an increase of \$10 million above FY 2022 but below the \$500 million in the House version.
- The McIntire-Stennis program would receive a \$7 million increase over FY 2022 and \$5 million above the House level.
- Evans-Allen and Extension Services at 1890 Institutions would be flat-funded in the Senate, whereas the House proposed significant increases over FY 2022.
- Extension Services at 1994 Institutions would be funded at \$14 million, \$4.5 million above FY 2022 and \$1 million less than in the House.
- Payments to the 1994 Institutions would receive \$7 million, \$1.5 million over FY 2022, but short

Happy Anniversary!

DR. CHANDRA REDDY

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Congress approved the Evans-Allen Act of 1977 to provide capacity funding for food and agricultural research at the 1890 land-grant universities and Tuskegee University (the 1890 Institutions) similar to that provided to the 1862 universities under the Hatch Act of 1887. Research conducted under the Evans-Allen Program has led to hundreds of scientific breakthroughs of benefit to both the unique stakeholders of the 1890 institutions and the nation as a whole. The Evans-Allen Program has been extremely important in allowing the 1890 institutions to attract top-notch scientists to their campuses, conduct high-quality and innovative research and become more fully integrated within the land-grant system.

Below is an example of impacts from the 1890 research program submitted by scientists at Virginia State University

VSU examines stinging nettle to reduce animal parasites

Parasite challenges in small ruminants remain the number one hindrance to profitability for most producers in the U.S. While chemical anthelmintics continue to be the main tool used to address the parasite issue, the high rate of resistance to most of the drugs in use calls for alternative strategies to control parasites or complement the existing protocols.

Parasites cause damage to the guts of animals as they feed, and their presence creates an opportunity for bacteria to grow and cause diseases, especially in young, stressed small ruminants.

Our recent studies with goats and other studies did worldwide also indicate small ruminants as potential carriers of important food safety pathogens like *Escherichia coli*, *Campylobacter* and *Salmonella*. Therefore integrated research studies with a one-health approach addressing production and sustainability challenges remain our current focus.

Due to the ease of inclusion with feed, forages with bioactive compounds are an attractive and highly adaptable strategy for small ruminant producers to address gut health on-farm challenges. Thus, researchers at Virginia State University (VSU) have focused on evaluating forages whose traditional use, chemical analysis and recent research indicate the potential to reduce parasites and bacteria.

Stinging nettle (*Urtica dioica*), a plant widespread in the U.S. but considered a noxious weed, is one such plant. The

potential as forage has been known for over 40 years, with the nutritional value comparable to or better than alfalfa hay.

In other parts of the world, it is a superfood with widespread use as an anti-parasitic, antimicrobial and anti-inflammatory for both humans and animals. Stinging nettle is rich in iron and



protein and has tannins that are yet to be characterized. The underlying research question is- can we harness these nutrients and compounds to benefit small ruminants, especially to circumvent parasite challenges and harmful gut bacteria?

In collaboration with VSU agronomy and forage specialists, we evaluated the health benefits of supplementing stinging nettle pellets to yearling goats on pasture. We studied the blood parameters and evaluated the gut health benefit, including total parasite and *E. coli* loads, using molecular methods.

Our results indicate that stinging nettle has high potential and multiple benefits in goats are possible with further research. The findings were presented to the scientific community during the Conference of Research Workers in Animal Diseases (CRWAD)-2020, printed in one peer-reviewed paper and submitted for publication in several others.

Further work to evaluate the benefits in the highly parasite-susceptible age groups of between two-and six-month-old goats is the next focus of our studies. The optimum supplementation level will also need to be determined in future studies.

For more information, contact Dr. Eunice Ndegwa at enedegwa@vsu.edu. This project is supported by the Evans-Allen program of the USDA's National Institute of Food and Agriculture (NIFA).



Edamame and soybeans spell profits for small farmers

Small-scale farming agribusinesses in southern Virginia are experiencing a loss of income and croplands due to the end of the federal tobacco price support program. Growing alternative niche crops helps solve this challenge. Edamame and other food-grade specialty soybeans (*Glycine max*) are regarded as profitable substitutes for tobacco.

Edamame can be grown similarly to general-purpose soybean but can have much higher market values. Demand is also steadily rising alongside an awareness of the health benefits of soy food, which brings a promising opportunity for farmers. Specialty soybeans also help to diversify agriculture and food supply.

The breeding program at Virginia State University's Agricultural Research Station has been dedicated to developing new varieties of edamame and food-grade specialty soybeans suitable for production in Virginia and beyond. The project will benefit crop growers, small and part-time farmers, urban gardeners, soy-food processors, suppliers and consumers.

Virginia State University has established an edamame research program and released three varieties. In addition to edamame, conventional food-grade specialty soybeans also have been integrated into the program. Re-selection of individual plants, plant rows and breeding lines has been performed since 2015. About 400 breeding lines have been evaluated yearly for yield traits and nutritional quality (protein, oil, sugars, etc.) in fresh edamame and mature soy-

beans.

Many promising lines have been selected, and seed purification and multiplication are in progress. Several new lines have also been introduced to another public breeding



program and used by an edamame processing company and urban gardeners for evaluation. More than 400 soybean germplasm lines have been introduced and preliminarily screened for further use. New segregating/breeding materials have been developed for selection. The rapid evaluation of edamame nutritional quality has been explored.

Research results have been published in many well-known journals and presented at professional meetings. It is expected that a few new superior lines will be released in the coming years.

To meet the requirements of superior varieties, the research will focus on the evaluation and selection of breeding lines for yield and quality of edamame and grain seeds, further comprehensive evaluation, purification and increase of superior lines/varieties for release and development of breeding populations integrated with high-yield and high-quality traits with dual purposes. Post-harvest processing, storage and marketing are also needed.

For more information, contact Dr. Guo-Liang Jiang at gjiang@vsu.edu. This project is supported by the Evans-Allen program of the USDA's National Institute of Food and Agriculture (NIFA).

UAPB seeks candidates for aquaculture Ph.D. program



Graduate students with a master's degree in biology, animal science or aquaculture are encouraged to apply for Ph.D. scholarships in Fish Health/Pathology at the University of Arkansas at Pine Bluff. This research-based program prepares graduates for careers in aquaculture resource management, natural fisheries and allied

industries. The comprehensive program provides students with a broad base of skills, expertise and practical experience to be competitive for a wide range of opportunities.

Members of underrepresented groups are particularly encouraged to apply. Three years of funding are available.

For further details on the Ph.D. program and application instructions, please contact Dr. Grace Ramena, associate professor of fish pathology and director of Fish Health and Disease Diagnostics, ramenag@uapb.edu, or (870) 575-8137.

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of the \$10 million provided in the House.

- Aligned with the House, Hatch would be funded \$5 million over FY 2022.
- Smith-Lever 3(b) and (c) would see a \$5 million increase, where the House mark is \$10 million above FY 2022.
- The Women and Minorities in STEM program would receive \$2 million, double the FY 2022 allocation but slightly less than the \$2.31 million proposed in the House version.
- There is no funding for the Research Facilities Act; \$2 million is included in the final House bill via an amendment from Rep. Kim Schrier (D-WA) with the intent for USDA to use the funding for planning purposes.

Click for [complete funding tables of APLU BAA's priorities and NIFA's funding lines](#).

Other funding highlights of interest to the Land-Grant community include:

- The Secretary of Agriculture may waive the matching requirement for the Specialty Crop Research Initiative.
- \$7 million for Capacity Building for Non-Land-Grant Colleges of Agriculture, \$2 million above FY 2022 and the House level.
- \$15 million for Education Grants to Hispanic Serving Institutions, \$1 million over FY 2022, but less than the \$20 million provided by the House.
- \$3 million for NIFA's Genome to Phenome program.
- As in the House, no funding is included for Farm of the Future, which was supported in FY 2021 and FY 2022 and was included in the FY 2023 budget request.

Within the explanatory statement accompanying the bill, there are several items and/or language of interest:

- “The Committee recognizes the essential function that Extension plays in ensuring that farmers, ranchers and communities of all sizes are empowered to meet the challenges they face, adapt to changing technology and a changing climate, improve nutrition and food safety, prepare for and respond to emergencies and protect our environment. The Committee is concerned that the Federal investment in this critical federal, state and local partner-

ship has lagged in recent years, just as extraordinary stresses have been placed on farmers, ranchers, rural businesses and communities. As such, the Committee provides an additional \$5,000,000 for the Smith-Lever Act, Section 3(b) and (c) programs and Cooperative Extension, an additional \$4,500,000 for the Extension Services at 1994 Institutions, and an additional \$500,000 for the federally Recognized Tribes Extension Program.”

- The Committee directs NIFA to evaluate the distribution of Extension resources to minority, socially disadvantaged and Tribal communities and report to the Committee no later than 90 days after enactment. The explanatory statement expresses that all institutions receiving Extension funding should seek to ensure an equitable percentage of Extension work reaches these three populations.
- Language regarding the Extension Design Initiative, authorized in the 2018 Farm Bill, is included and directs NIFA to meet with producers, stakeholders and policy-makers to begin the development of a framework for next-generation farm Extension programs.
- Within AFRI, the bill “encourages NIFA to prioritize the Sustainable Agricultural Systems program area, particularly proposals that focus on digital agriculture and the digitally augmented food supply chain.”
- The Committee directs the Agricultural Research Service to submit a report on the current use of ARS facilities by universities and cooperators and the extent to which ARS is housed in cooperator facilities.
- The Committee encourages land-grant universities “to take steps to foster the next generation of public plant and animal breeders by placing a higher priority on the development of publicly available, regionally adapted cultivars and breeds.”

The Senate's [FY 2023 Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Bill](#).

The [accompanying explanatory statement](#).
[Bill summary](#).

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generation and economically disadvantaged college students; enhancing the resilience of limited-resource farmers, families, individuals and underserved communities and pioneering the most advanced research, which has immediate applications to formulating solutions for local, regional and global challenges. The land-grant philosophy is even more relevant today, given the dynamic complexity of the socioeconomic environment where an integrated, iterative systems approach provides the best likelihood of generating solutions that are responsive to the complex dynamism of our environment.

During this month, the ARD membership reflects on the brilliance of the land-grant vision and mission and celebrates the 1890 land-grant universities' seminal role in continuing the de-

velopment of that vision and mission, particularly for persons who are low-income, underserved or marginalized. At the same time, the 1890s must continue to look forward to determining how the land-grant mission must keep evolving and expanding to anticipate and meet future challenges, i.e., the challenges and national crises caused or uncovered by the COVID-19 pandemic. The 1890s are developing a number of multi-state, integrated initiatives to contribute to solutions to three disparities (health, educational and economic) that are adversely affecting the people and communities we serve.

“We are 19 strong!” “Happy birthday, 1890 Land-Grant Universities.

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1890 Land Grant Universities

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ARD Updates is published monthly by the Association of Research Directors. To suggest articles, contact Dr. Alton Thompson at athompson1@ncat.edu



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[ASSOCIATE DEAN FOR RESEARCH](#), NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

NEW APPOINTMENTS

DR. BROU KOUAKOU, associate dean for research, Fort Valley State University, effective July 1.

DR. MOHAMMED IBRAHIM, associate dean for academics, Fort Valley State University, effective July 1.

DR. AMI SMITH, vice president and dean and director for agricultural research and Extension, West Virginia State University, effective July 1.

CALENDAR

JOINT ESS/CES-NEDA MEETING | Sept. 25-28 | The Marriott Baltimore Waterfront in Baltimore, MD. [Click for details.](#)

NATIONAL CONFERENCE ON NEXT-GENERATION SUSTAINABLE TECHNOLOGIES FOR SMALL-SCALE PRODUCERS | Sept. 7-9. North Carolina A&T State University. A collaboration be-



80TH PROFESSIONAL AGRICULTURAL WORKERS CONFERENCE | Tuskegee University | Nov. 13-15

LOUISIANA SMALL FARMERS CONFERENCE | Sept. 21-23 | Dr. [Brian Keith Phillips](#) for infor-

APLU ANNUAL MEETING, Nov. 6 – 8; Denver, CO, Hyatt Regency Denver at Colorado Convention Center.

[FALCON 2022 Conference](#) - Registration for the First Americans Land-Grant Consortium (FALCON) is open for its 18th Annual Conference, scheduled for Oct. 21-24, 2022. This in-person conference will be held at the Hotel Albuquerque in Old Town, Albuquerque, New Mexico. The conference will include sessions on 1994 land-grant teaching, Extension programs and research that benefit Native American students, communities, governments and lands. There will be a strong student focus and tribal college students are especially invited to participate and present their work. The conference will also include a USDA NIFA update, training workshops, information-sharing and networking opportunities.

