

# DAVID

FAMU



## ASSOCIATION OF 1890 RESEARCH DIRECTORS

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DR. CHANDRA REDDY

### Message from the Chair

Dr. Chandra Reddy

Dear Friends and Colleagues,  
Happy New Year! I hope that each of you had a joyous, relaxing, safe and healthy holiday. In January of each year, individuals tend to reflect, anticipate and feel thankful. As I reflect on 2020, COVID-19 disrupted our personal and work lives in unprecedented and challenging ways. As we continue to live and adapt to this pandemic, I hope you are finding ways to stay positive, engaged and connected. I am encouraged by the outpouring of generosity, support and “esprit de 1890.”

Like many of you, I hold on to the fact that the pandemic has exposed our fragile food system and presented the land-grant community with new opportunities to advance our work. Food and nutritional insecurity is one of the grand challenges facing our region and our nation. ARD is committed to building local and regional food economies and creating the most equitable system we can envision.

In 2021, ARD will continue to implement its innovation agenda, as detailed in our strategic plan, “**bold** Transformations 2025: Strategic Agenda for 1890 Research and Innovation in the Food, Agricultural and Environmental Sciences.” ARD’s innovation agenda also demands that we continue to contribute to solutions for two of the most pressing national crises: the COVID-19 pandemic and the economic crisis. ARD, together with the 1890 system, stands in support of bringing awareness to these interlocking injustices and crises impacting various underserved communities. As was stated by Vernon Jones, past ARD Chair, in previous editions of *ARD Updates*, these injustices and inequities are mobilizing the 1890 system to push for meaningful and significant change as we are committed to having our land-grant system play a uniting role and being part of the solution

I am grateful to the hard-working and dedicated faculty and staff of ARD, to our 1890 colleagues, and to our partners and to the individuals, farmers, and families that

See Reddy on Page 4

## FY’21 budget includes increases for 1890s

Last month, Congress approved the FY 2021 appropriation bills, inclusive of the 1890 institutions.

The bill includes \$1,570,089,000 for the National Institute of Food and Agriculture (NIFA), with \$992,642,000 for Research and Education Activities, \$538,447,000 for Extension Activities and \$39,000,000 for Integrated Activities. Increases are seen across six of the nine core priority lines (McIntire Stennis, 1890 Extension, Evans-Allen, Hatch Act, Smith-Lever, AF-RI, 1994 Research Grants, 1994 Extension and 1994 payments) totaling \$22,199,000.

As depicted in the table below, the 1890 institutions received increases in all of its priority areas for FY 2021. Specifically, the two 1890 capacity programs received, on the average, an 8.86% increase; the Capacity Building Program received a 13% increase; and the 1890 Facilities Program received a 4.88% increase. In addition, the 1890 Centers of Excellence received \$10 million, a \$4 million increase.

The 1890 Scholarship Program, championed by U.S. Rep. David Scott of Georgia, received an additional \$10 million in discretionary funding to supplement the \$10 million in manda-

See Budget on Page 4

1890 Accounts (in millions)	FY 2020 Final	FY 2021 House	FY 2021 Senate	FY 2021 Final
1890 Research (Evans-Allen Program)	\$67.000	\$73.000	\$67.000	\$73.000
1890 Extension	57.000	62.000	57.000	62.000
1890 Capacity Building	23.009	26.000	23.009	26.000
1890 Facilities Improvements	20.500	23.000	20.500	21.500
1890 Centers of Excellence	6.000	14.000	0	10.000
1890 Scholarships Research Grants*	5.000	10.000	5.000	10.000
* There is mandatory funding of \$10 million per year for the 1890 scholarships. The \$10 million in the FY 2021 bill will be additional discretionary funding.				





## UMES and A&T show impact with EA research funding

*The Evans-Allen Act of 1977 was approved by Congress to provide capacity funding for food and agricultural research at the 1890 land-grant universities and Tuskegee University (the 1890 Institutions) in a manner 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 are examples of impacts of the 1890 research program submitted by scientists at the University of Maryland Eastern Shore and North Carolina A&T State University.*

### UMES RESEARCHERS REDUCE PHOSPHORUS/ NITRATES ON FARMLAND

The Chesapeake Bay extends into the adjoining states of Maryland, Virginia, West Virginia, Delaware, Pennsylvania, New York and Washington D.C. It is the nation's largest estuary, spanning some 200 miles and generating almost \$5 billion in commercial and sport fishing sales alone. It is home to more than 3,700 species of plants, fish, and other animals.

The University of Maryland Eastern Shore (UMES) researchers, Drs. Arthur Allen and Amy Collick, in tandem with Dr. Ray Bryant, a scientist from the USDA's Agricultural Research Service, have conducted research on a portion of the University's land previously used for poultry farming. With soil that is full of phosphorus and nitrogen from countless applications of poultry litter, the land has proved to be the perfect laboratory of sorts for two decades worth of study and experimentation.

The team is testing various methods for reducing phosphorus and nitrogen that is already in the soil, which is the case for most farms on the lower Eastern Shore, to reduce the possibility of runoff in the Chesapeake Bay waters. The following methods have been and continue to be tested: forested buffers, bioreactors and gypsum curtains. Selected impacts of this project include:

- Reductions of 30 to 50% for phosphorus, and about 50% for nitrates on the UMES Research Site. It is noted that land slope at the research site may also contribute to

See UMES on Page 4



DR. GUOCHEN YANG

### NC A&T EXCELS IN GINGER RESEARCH

This research has the potential to revolutionize ginger production in the U.S. by providing a plentiful supply of disease-free, high quality ginger seedlings to North Carolina farmers seeking a specialty crop and to consumers who are interested in healthy foods.

Since the demise of tobacco as North Carolina's major cash crop, farmers have been searching for a high-revenue, high-demand crop to replace it. Ginger, which enjoys consumer demand, high price per pound

and increasingly well-known health benefits, has the potential to be a profitable niche crop for N.C. growers. Ginger is a tropical crop, and in the U.S., it is currently exclusively grown in Hawaii; however, Hawaii can only meet 20% of the demand, with the remaining 80% imported from overseas. This creates an opportunity for other U.S. growers, including those in North Carolina.

This project aims to study the feasibility of growing ginger in North Carolina using ginger plants grown from tissue-cultures. This method removes many of the variables inherent in obtaining seed ginger from Hawaii, including weather and supply-chain issues. Ginger plants grown from tissue cultures also have higher levels of phytochemicals, or plant-based chemicals with health benefits, making them desirable to consumers.

Researchers at N.C. A&T have grown seven varieties of ginger under varying conditions, including high-tunnel and greenhouses and evaluated them for such variables as shade tolerance, yield, resistance to disease and cold-hardiness.

In the lab, the researchers are perfecting the protocols for growing micropropagated ginger, which shows great promise, demonstrating better resistance to disease, significantly more vigorous and healthier growth, higher yield per cultivar and an overall better consistency than seed-sprouted ginger. Researchers have also determined that amounts of the beneficial phytonutrients 6-gingerol and 6-shogaol are significantly higher than the amounts found in seed-sprouted ginger, so tissue-cultured ginger may be healthier for consumers as well.



Dr. Arthur Allen (second from the right) shares research results with colleagues.

See NCA&T on Page 6

## Castille named NIFA director; first woman in position

On Jan. 4, Dr. Carrie Castille began her new role as the new, permanent director of the National Institute of Food and Agriculture. She is the first female NIFA director in a non-acting role.

Castille has a wide range of experience with the agency as a NIFA stakeholder, a faculty member at a partner land-grant university, as a USDA colleague and as a leader in both the Vilsack and Perdue USDA administrations. Having worked with NIFA in so many different aspects gives her a unique view of the NIFA, and the partners and the customers NIFA serve.

Castille served as assistant professor and agriculture and natural resource leader at Louisiana State University (LSU) prior to serving as associate commissioner and senior Advisor to the commissioner for the Louisiana Department of Agriculture and Forestry. In 2017, she joined USDA as state director for Louisiana Rural Development and in 2019 was named as the mid-south (Louisiana, Mississippi, Arkansas, Tennessee, Missouri) coordinator for USDA's Farm Production and Conservation (FPAC) mission area.

Castille was appointed by USDA Secretary Vilsack to the National Agriculture Research, Extension, Education,

and Economics (NAREEE) advisory board from 2010-2017. During this period, she served as chair of the NAREEE board, and also contributed to many organizations, including the American Public and Land Grant University (APLU) Council on Agriculture Research, Extension and Teaching.

During her tenure at USDA, Castille received the Secretary's Award of Excellence (2003) and the Secretary's Award for Excellence in Rural Development (2018). In 2017, she was the first female inducted into the University of Louisiana Lafayette College of Engineering Hall of Distinction.

She holds a Ph.D. in renewable natural resources (with emphasis on environmental and public policy) from Louisiana State University, an master's degree in environmental studies from Louisiana State University, and a bachelor's degree in industrial engineering from the University of Louisiana at Lafayette.



DR. CARRIE CASTILLE

## Thompson wins Carver Public Service Award

On Dec. 7, 2020, Dr. Alton Thompson, executive director-Association of 1890 Research Director, was inducted into the George Washington Carver Public Service Hall of Fame at Tuskegee University. The George Washington Carver Public Service Hall of Fame is given annually to individuals affiliated with 1890 land-grant universities over a career and who exemplify the public service philosophy and leadership qualities of Dr. Carver.

Since 1982, Thompson has been very active in resource and program development in the 1890 system. Thompson's academic specialty is in the interface of statistics, research methods, demography and rural sociology. His research has resulted in the publication of 26 articles in refereed journals, seven book chapters and a book entitled "Quality of Life among Rural Residents in North Carolina: Community and Life Satisfaction." His research focus includes rural poverty/development, labor economics, and the structure of agriculture.

Thompson has been the principal investigator or co-principal investigator of 21 research projects, totaling more than \$15 million in extra-mural research funds. These research projects were primarily in the areas of rural poverty/poverty differentials, including the working poor in the rural South; income inequality; education and labor force disparities in rural areas; labor force experiences of persons graduating from colleges of agriculture; social risks of agriculture;

social structure of agriculture; minority perspectives of farming, food and agriculture; and obstacles and challenges to obtaining competitive funding at the 1890 land grant universities.

Thompson was a tenured professor and dean and executive director for agricultural programs in the College of Agriculture and Environmental Sciences at North Carolina A&T State University for eight years and then served as interim provost and vice chancellor for academic affairs for two years, served as provost and vice president of academic affairs at Delaware State University and the University of Maryland Eastern Shore.

Thompson was inducted into the USDA/National Institute of Food and Agriculture Hall of Fame in 2008 and he has also served in leadership roles on the Board of Agriculture Assembly for the Association of Public and State Universities, the Council of 1890 Deans of Agriculture, the Ford Foundation's Rural Economic Policy Program, and the Census of Agriculture Advisory Panel of the National Council on Food, Agricultural and Resource Economics. Currently, he serves on the Board of Directors of Food Systems Leadership Institute, the Foundation for Food and Agriculture Research, LEAD-21 Leadership for 21st Century, the 1890 Universities Foundation, Socially Disadvantaged Farmers and Ranchers Policy Research Center, Carolina Farm Credit, and the North Carolina Foundation for Soil & Water Conservation.

Thompson earned his bachelor's degree at North Carolina Central University and his master's and doctorate from The Ohio State University.



DR. ALTON THOMPSON

## Reddy ... from page 1

we work with very day. By working together, we will successfully face whatever challenges come our way on behalf of the communities we serve.

Another significant challenge faced by the land-grant university system, particularly in the 1890s, is the need for substantial investment in a degrading agricultural research infrastructure. A recent comprehensive evaluation performed by Gordian ([A National Study of Capital Infrastructure at Schools of Agriculture: A 2020 Update](#)), inclusive of the 1890s, identified \$11.5 billion in deferred maintenance – a 36.9% increase from an estimate made five years ago. We need to act now. If we do not address the problems now, the solutions will become more intractable, the costs greater and the human, social, economic and environmental damage irreparable. Our land-grant university system serves the nation by fostering excellence in research innovation while providing avenues to train future global leaders in agriculture and food systems. The public extramural research enterprise accelerates technology adoption, growth of the agricultural and food marketplace, entrepreneurship and public-private partnerships. However, the land-grant university system faces unprecedented infrastructure challenges. More than 50% of research and education facilities at LGU colleges of agriculture are at the end of their life cycles. U.S. researchers and educators are being asked to perform 21st century science in facilities constructed in the 1950s and 1960s.

ARD is committed to being fully engaged in this advocacy effort for an \$11.5 billion infusion of funds to upgrade our research infrastructure. As we prepare for this advocacy effort, termed the Agricultural Research Infrastructure Advocacy (ARIA), I encourage all of you to register and participate in an

ESS webinar, hosted by APLU, on Jan. 11 at 4 p.m. EST. As led by ESCOP Chair, Moses Kairo, the webinar will provide APLU members and advocates within the APLU Council on Governmental Affairs the opportunity to learn about materials to support advocacy that advances the \$11.5 billion request for research infrastructure support in any future infrastructure bill or economic stimulus package. These materials will be distributed to those attending the webinar as well as any who register for it. During the webinar, you will learn of the APLU research, teaching and Extension infrastructure advocacy plan and how you can take part in supporting the plan. Please be sure to [register ASAP](#).

ARIA will be a major agenda item at ARD's upcoming joint meeting with AEA and the Council of 1890 Deans of Agriculture on Jan. 27-29. Additional agenda items include COVID-19 initiatives; collaboration/integrated programs; appropriations goals, priorities and advocacy strategies; communication and marketing; the Centers of Excellence, 1890 scholarships; NIFA Project CAFÉ; strategic realignment of NIFA funding lines; and Agriculture Future of America. This meeting will be virtual; the full agenda is forthcoming.

Finally, as I reflect on the challenges in 2020 that will follow us in 2021, I am grateful for your dedication to ARD and to the 1890 community to find solutions to these challenges facing us.



## Budget ... from page 1

tory funding. Thus, for FY 2021, each 1890 institution will receive approximately \$1 million in new scholarship funding.

“We especially want to thank U.S. Representatives Alma Adams (D-NC), Sanford Bishop (D-GA), David Scott (D-GA), Jeff Fortenberry (R-NE) and Senators Sherrod Brown (D-OH), Doug Jones (D-AL), Richard Shelby (R-AL), and Jeff Merkley (D-OR) for their unwavering support and for leading the way to enable these increases in all of our 1890 land-grant programs. In addition, we thank the members of Congress who continue to recognize the significant impact of COVID-19 on our students, our research, our facilities and our Cooperative Extension programs, said Dr. Mort Neufville, president and CEO of the 1890 Foundation.

Finally, it would be remiss not to mention the important role that these members' staff played in obtaining these 1890 budget increases.

## UMES ... from page 2

nutrient reduction, beyond what plants remove, accounting for higher reductions than seen elsewhere in Maryland.

- An expert panel convened by the Chesapeake Bay Program conservatively estimated that bioreactors remove 20% of total nitrogen in the water from the area they treat; UMES research is achieving closer to 35%. The forested buffer and bioreactor together make a powerful combination for pollution reductions.
- UMES work and USDA research have shown that the gypsum reduces soluble phosphorus by 75 to 90%. However, animals, such as muskrats, can disrupt the curtains when they burrow into the ditches, creating openings that diminish effectiveness.
- The team's methods have been tested on three stakeholder farms in the community.
- The establishment of the Chesapeake Water Quality Center to develop and transfer economically sustainable agricultural strategies and technologies that enhance water quality in the Chesapeake Bay and train the workforce of tomorrow for continued future innovations.

**For more information contact:** Dr. Arthur Allen [alallen@umes.edu](mailto:alallen@umes.edu); (410-621-2876).

*This project was supported by the U.S. Department of Agriculture 1890 Institution Teaching, Research and Extension Capacity Building Grants; U.S. Department of Agriculture Evans-Allen Program; Natural Resource Conservation Service; U.S. Department of Agriculture, Agricultural Research Service – Penn State University.*

# ESCOPE announces leadership and multistate research awards

## ESS AWARDS FOR EXCELLENCE IN LEADERSHIP

Up to five awards, one from each ESS region, will be presented each year at the Association of Public and Land Grant Universities (APLU) Annual Meeting to recognize those who have served the regional associations, the experiment station section (ESS) and/or the national land-grant system with exemplary distinction. Through this person's leadership, he/she shall have personified the highest level of excellence by enhancing the cause and performance of the regional associations and ESS in achieving their missions and the land-grant ideal.

Eligible for this award are former or current directors or associate directors, who have provided service in a state agricultural experiment station (SAES) as assistant director, associate director, director, or as chief operating officers with equivalent but variant titles (e.g. vice chancellor, associate vice chancellor, associate vice president, dean for research) and/or as a regional executive director. This award is distinctive in its expectations and not necessarily coincident with retirement, election to specific office or any other specific professional benchmark.

The regional associations will review the nominations and will select their winner. The regional association chair or regional executive director (ED) shall notify: 1) the ESS chair and the executive vice-chair and 2) the executive vice-chair of STC. Each regional association should also send their names and titles, bio (paragraph) for script (200-250 words), and a B&W photograph (at least 3" wide x 4" tall and 300 dpi, jpg or tiff) as a head shot from the chest up with some space on all sides of the head to the ESCOP Science and Technology Committee executive vice-chair (lead regional ED to STC) no later than June 1. The bio paragraph and the picture

should be in separate files. This ED will secure the inscribed awards, transmit the recognition materials to APLU and will create the ESS resolution. The winners will be announced at the fall ESS meeting and the awards will be presented at the APLU Annual Meeting. Regional associations may also choose to recognize the awardee in addition to the above venues.

[Click here for a full description](#) of the award and the nomination process.

## MULTISTATE RESEARCH AWARD

The Experiment Station Section Excellence in Multistate Research Award program is given annually to recognize those scientists who are conducting exemplary multistate activities and in doing so enhance the visibility of the multistate program. A recipient multistate project will be selected from the pool of nominees submitted by the five regional research associations (NCRA, NERA, SAAESD, WAAESD and ARD), and deemed by the review panel to exhibit sustained, meritorious and exceptional multistate activities.

[Click here for a full description](#) of the award and submission information.



## Ag Outlook Forum scheduled for February

**WASHINGTON, D.C.** – Registration is now open for the 97th annual Agricultural Outlook Forum (AOF), the largest annual

meeting and premiere event of the U.S. Department of Agriculture (USDA). The two-day Forum will take place **on Feb. 18-19, 2021**. Due to COVID-19 and current restrictions on large gatherings in the Washington, D.C. area, USDA will hold the 2021 Forum virtually for the first time and registration will be free for the event.

The 2021 Forum, themed “Building on

Innovation: A Pathway to Resilience,” builds on USDA’s [Agriculture Innovation Agenda](#), launched earlier this year to align USDA’s resources, programs, and research toward the goal of increasing U.S. agricultural production by 40% while cutting the environmental footprint of U.S. agriculture in half by 2050. The Forum will feature a panel of distinguished guest speakers and 30 breakout sessions developed by agencies across USDA. Topics covered include the food price outlook, innovations in agriculture, U.S. and global agricultural trade developments, and frontiers in sustainability and conservation. In addition, the USDA Chief Economist will unveil the Department’s latest outlook for U.S. commodity markets and trade, and discuss the U.S. farm income situation.

### About USDA’s Outlook Forum

USDA’s Agricultural Outlook Forum began in 1923 to distribute and interpret national forecasts to farmers in the field. The goal was to provide the information developed through economic forecasting to farmers so they had the tools to read market signals and avoid producing beyond demand. Since then, the event has developed into a unique platform where key stakeholders from the agricultural sector in the United States and around the world come together every year to discuss current and emerging topics and trends in the sector. More than 1,800 people attended the 2020 Forum.

**Register for the 2021 Agricultural Outlook Forum:** Visit the Agricultural [Outlook Forum website to register](#). Follow the conversation at #AgOutlook USDA’s [Twitter](#), [Instagram](#) and [Facebook](#).



**USDA**  
United States Department of Agriculture

**USDA's 97th Annual Agricultural Outlook Forum**

**Building on Innovation:**

**A Pathway to Resilience**

February 18-19, 2021  
<https://www.usda.gov/oce/ag-outlook-forum>

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## ARD OFFICERS

**Chandra Reddy**  
(Chair)

Tennessee State University  
Email: [creddy@tnstate.edu](mailto:creddy@tnstate.edu)

**Louis Whitesides**  
(Chair-Elect)

South Carolina State University  
Email: [lwhitesides@scsu.edu](mailto:lwhitesides@scsu.edu)

**Majed El-Dweik**  
(Secretary)

Lincoln University  
Email: [dweikm@lincolnu.edu](mailto:dweikm@lincolnu.edu)

**Conrad K. Bongi (Treasurer)**

Tuskegee University  
Email: [cbongi@tuskegee.edu](mailto:cbongi@tuskegee.edu)

**Shirley Hymon-Parker**  
(Member-at-Large)

N.C. A&T State University  
Email: [sjhymonp@ncat.edu](mailto:sjhymonp@ncat.edu)

**Vernon Jones**  
(Immediate Past Chair)

Langston University  
Email: [vjones@langston.edu](mailto:vjones@langston.edu)

**Non-Elected**  
**Alton Thompson**  
(Exec. Director)

Email: [athompson1@ncat.edu](mailto:athompson1@ncat.edu)

### 1890 Land Grant Universities

[Alabama A&M University](#)  
[Alcorn State University](#)  
[Central State University](#)  
[Delaware State University](#)  
[Florida A&M University](#)  
[Fort Valley State University](#)  
[Kentucky State University](#)  
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[University of Maryland Eastern Shore](#)  
[Virginia State University](#)  
[West Virginia State University](#)

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

## FFAR Fellows seeks applicants

The FFAR Fellows program is now accepting applications. The [FFAR Fellows program](#) trains cohorts of 20 Ph.D. students in agriculture, life sciences and related programs from across the United States and Canada over a three-year period. The [application portal](#) for the 2021-2024 cohort is now

open. Complete applications must be received by **Feb. 22, 2021 for the Stipend + Professional**

**Development category**, and by **April 15, 2021 for the Professional Development category**. Fellows will be notified by March 1, 2021 for the Stipend + Professional Development category, and by May 1, 2021 for the Professional Development category.

To be considered for the fellowship, students must submit all application materials by the due dates, including the confirmation of financial commitment from a university, industry, or analogous sponsor.

**NEW THIS YEAR:** Students from any university in the United States and Canada are eligible to apply for the Stipend Option.

**NEW THIS YEAR:** Match sponsorship can derive from any non-federal funding source--from industry, commodity organizations, foundations, or university programs.



## NC A&T ... from page 2

Future questions for research include identifying the optimal growing conditions for each variety of ginger, identifying the most temperature-resilient varieties of ginger and identifying the reasons for the increase in phytonutrients – the beneficial gingerols and shogaols - in tissue-cultured ginger from seed-generated ginger.

**For more information contact:** Dr. Guochen Yang, [yangg@ncat.edu](mailto:yangg@ncat.edu), (336) 285-4853 and Dr. Sanjun Gu, [sgu@ncat.edu](mailto:sgu@ncat.edu), (336) 285-4954

*This project was supported by the Evans-Allen Program of the USDA's National Institute of Food and Agriculture (NIFA).*

## JOB OPPORTUNITY

### CENTRAL STATE UNIVERSITY | Dean, College of Engineering, Science, Technology and Agriculture and Director of Land-Grant Programs

Central State University (CSU) is a public land-grant institution located in Wilberforce, Ohio, seeks a dynamic, innovative and transformative leader to serve as dean of the College of Engineering, Science, Technology and Agriculture (CESTA) and director of 1890 Land-Grant Programs. The dean/director is the chief academic and administrative officer of CESTA. The dean/director reports to the provost and vice president for Academic Affairs and will work closely with the Deans' Council and administrative and fiscal units of CSU. CESTA offers degree programs in 10 critical areas of science, technology, engineering and mathematics (STEM). CESTA offers minors in many of these same programs as well as in interdisciplinary fields such as environmental, forensic and computational sciences and nuclear engineering. CESTA is the critical hub for computer literacy, mathematics and science requirements in the general education component of all CSU programs. Unique to Ohio, and the nation, CESTA offers an interdisciplinary degree program in water resources management. Click here for a [complete position description](#) and the application process.

## ARD CALENDAR

**JOINT AEA/ARD WINTER MEETING**—Virtual | Jan. 27-29, 2021

**ONEUSDA INTERNSHIP SUMMER PROGRAM** Paid internship at various USDA agencies.

**USDA NATIONAL SCHOLARS PROGRAM**—Deadline Jan. 31, 2021. [Apply today.](#)

**AHS/CARET 2021 VIRTUAL WEBINARS**

“Effective Advocacy Strategies for CARET Representatives and Administrative Heads,” Jan. 14, 2021, 3-4:30 p.m., Registration TBA

