

**1890 LAND-GRANT INSTITUTIONS: INVESTING
FOR AGRICULTURAL RESILIENCY, EQUITY,
AND GLOBAL IMPACT**

HEARING

BEFORE THE

**COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES**

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

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WEDNESDAY, JUNE 16, 2021

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Committee met, pursuant to other business, at 10:00 a.m., via Zoom, Hon. David Scott of Georgia [Chairman of the Subcommittee] presiding.

Members present: Representatives David Scott of Georgia, McGovern, Adams, Spanberger, Hayes, Delgado, Rush, Sablan, Kuster, Plaskett, O'Halleran, Lawson, Craig, Harder, Axne, Schrier, Panetta, Bishop, Thompson, Austin Scott of Georgia, DesJarlais, LaMalfa, Davis, Allen, Rouzer, Kelly, Johnson, Baird, Jacobs, Cloud, Mann, Feenstra, Moore, Cammack, Fischbach, and Letlow.

Staff present: Lyron Blum-Evitts, Malikha Daniels, Chu-Yuan Hwang, Ashley Smith, Caleb Crosswhite, Josh Maxwell, Ricki Schroeder, Jennifer Tiller, Erin Wilson, John Konya, and Dana Sandman.

**OPENING STATEMENT OF HON. DAVID SCOTT, A
REPRESENTATIVE IN CONGRESS FROM GEORGIA**

The CHAIRMAN. The hearing will come to order. Thank you, and welcome everyone, for joining us at today's hearing, and it is indeed an historic hearing. *1890s Land-Grant Institutions: Investing for Agricultural Resiliency, Equity, and Global Impact*. After brief opening statements, Members will receive testimony from our witnesses today, and then the hearing will be open for questions. Members will be recognized in order of seniority, alternating between Majority and Minority Members, and in order of arrival for those Members who have joined us after the hearing was called to order. And when you are recognized, you will be asked to unmute your microphones, and will have 5 minutes to ask questions or make comments. And if you are not speaking, I ask that you remain muted in order to minimize any background noise. In order to get to as many questions as possible, the timer will stay consistently visible on your screen. We have so much to do, and this God-blessed opportunity that we have today, and we want to get everybody's participation in on this very important hearing.

And so I just want to welcome everyone, and as Chairman of this House Agriculture Committee, I am so proud, and I am so thank-

ful, for God blessing me with this opportunity to make history as the first African American Congressman to chair this extraordinary Committee. And I am so grateful for having a wonderful Committee operating in a very strong bipartisan way, and nothing, nothing, illustrates the bipartisanship of this Committee like why we are here today. The 1890s African American colleges and universities were first brought up by a Republican Senator, Morrill, who did it as we were ending slavery. The key to the South's survival were 1860 colleges that came in, in each of the 19 border states, as well as states—it was the key that resurrected the South.

And then, in 1890, with the passage of *Plessy v. Ferguson*, the Separate But Equal Doctrine, in every state, in every border state, where they had put the White institutions, they put an African American—which served the same purpose of resurrecting the economy, the education, the quality of life of African Americans. And so, it is with great honor that we welcome back to Congress the African American college presidents who came before us 7 years ago to start us on this journey of being able to get scholarships for the 1890s African American colleges and universities. And I am so thankful for that, for I am a graduate of one of those 1890s, Florida A&M University, my beloved FAMU, home of the Rattlers.

But let me tell you, there are so many of our Members in Congress who are also graduates, and they join me in saying without these 1890 land-grant colleges and universities, it is very doubtful that we, as African American Members of Congress, would be here. We owe so much to them. So that is why this is so important. My wife, Alfredia, is a graduate. My two daughters, Dayna and Marcye, are graduates of Florida A&M as well, so this is like homecoming to all of us.

So, again, it is with great pleasure that we do this. And I just want to close my opening statement by saying we are not stopping here. The fundamental purpose of this hearing is to hear from our African American college presidents on the work that we are doing in Congress, how it is helping to sustain and grow our African American land-grant colleges and universities. And it is with this hearing that we will lay the foundation for making the scholarship program permanent, and we are working as a Committee right now on the legislation to do just that.

[The prepared statement of Mr. David Scott follows:]

PREPARED STATEMENT OF HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM
GEORGIA

Good morning, and welcome to our Members, witnesses, and all of the people watching along at home.

Today's hearing is one that is personal for me. As I sit here before you—the first African American Chairman of this esteemed Committee—I say with great pride that I am the product of an 1890 Land-Grant institution. Florida A&M University in Tallahassee, Florida was seminal in the story of how I went from growing up on a farm in Aynor, South Carolina to now being your Chairman.

But the story of the 1890 Land-Grant institutions is not just mine to share. So many other Members of this Committee, the Congressional Black Caucus, and leaders across our great nation share this experience of taking part in the excellence that is developed at these vital institutions. Today, we will hear parts of that story, along with work that still needs to be done to level the playing field for our 1890s institutions.

As many of you know, I—along with many other great leaders on this Committee—worked very hard to get \$80 million in funding for scholarships so that students pursuing careers related to food science and agriculture can attend our wonderful 1890 institutions.

This funding is already helping but there is more work to be done. I fully intend, and am working on a bill right now, to make these scholarships permanent. This is a much needed investment in the future of our food production. Furthermore, investing in the 1890 Centers of Excellence is essential as they mold talented young minds for our food and agricultural sector, to ensure the success and prosperity of our smaller farmers and ranchers, and fighting hunger across the globe.

The American Rescue Plan included many provisions that will help make our world of agriculture more equitable, but one provision that I want to make everyone aware of is that a portion of the funds are to be used at 1890 Institutions to support agricultural research, education, and Extension. These Extension services at 1890 institutions serve a variety of agricultural needs in rural and socially disadvantaged communities.

The American Rescue Plan funding is also for scholarships and programs that provide internships and pathways to Federal employment.

I have been very clear that I want USDA to better represent Black farmers and farmers of color, and these pathways to Federal employment will be crucial to making lasting positive impacts on our entire agricultural sector.

Today, we have gathered an expert panel of 1890 Land-Grant institution Presidents and one Chancellor-Dean, who I am sure will provide detailed testimony on where the House Agriculture Committee and our partners at USDA can make improvements, and where we have had shortfalls in the past. I welcome that. As I have said time and again, we must find the full scope of a problem before we work to solve it.

It is my hope that through the work we do here today and throughout this Congress, we can bring the resources to our 1890 Land-Grant institutions that they deserve and greatly need.

With that, I'd now like to welcome the distinguished Ranking Member, the gentleman from Pennsylvania, Mr. Thompson, for any opening remarks he would like to give.

The CHAIRMAN. So God bless all of you for coming, thank you, and with that, I will recognize my distinguished, good friend, the Ranking Member, Ranking Member Thompson, for your opening remarks.

**OPENING STATEMENT OF HON. GLENN THOMPSON, A
REPRESENTATIVE IN CONGRESS FROM PENNSYLVANIA**

Mr. THOMPSON. Well, good morning. Thank you, Chairman Scott, for holding this hearing today. And before I begin, just a point of personal privilege, if I may. I am very much looking forward and appreciate today's hearing, and the topic that we will be working on and exploring. But, again, I want to make clear that I hope that this Committee will then soon turn its attention to the needs of production agriculture, including hearing the testimony from our USDA Secretary Vilsack. The next farm bill will be here before we know it, and it is imperative that we address the 2018 Farm Bill oversight, each of those titles, as well as the challenges and successes associated with both the Congressional and the Departmental response to COVID-19.

Now, I want to thank you for your indulgence, Chairman Scott. Now on to the hearing at hand. First, my thanks to our witnesses for their time and their attention today. I hope we can soon be gathering in person. I have to tell you, it feels good to be sitting next to my good friend, colleague, and Chairman, Chairman Scott here.

The CHAIRMAN. Yes.

Mr. THOMPSON. First time in a while.

The CHAIRMAN. In a while.

Mr. THOMPSON. So at the end of last year the Subcommittee on Biotechnology, Horticulture, and Research met to celebrate an important milestone, the 130th anniversary of the second Morrill Act, and this Act, which was signed into law on August 30, 1890, led to the creation of these great 1890 land-grant universities, a part of that Land-Grant University System. Now, that hearing included a distinguished panel of witnesses, including two of them joining us here today, and as many of you recall, we discussed the current state of the 1890 land-grant universities, how the COVID-19 pandemic impacted their operations, and the status of various 2018 Farm Bill provisions, particularly those intended to enable the entire Land-Grant University System to focus on socially disadvantaged individuals. The programs have focused the entire system, 1862s, 1890s, 1994s, on the issues affecting socially disadvantaged individuals, allow us to implement a national response, and I look forward to continuing our discussion today. Land-grant universities conduct critical agricultural research, they teach our next generation of agriculturalists, and they provide outreach to their communities through the Cooperative Extension Service. Since their creation, 1890 institutions have gone above and beyond to achieve these objectives, and I am eager to hear more about each of these today.

Congress has long supported and taken action since the passage of the second Morrill Act to ensure 1890 institutions have access to the resources they need. I would be especially remiss if I did not mention the work that we did together in the 2018 Farm Bill. First and foremost, I would like to highlight the grant program to award scholarships to students at 1890 universities who are pursuing a career in agriculture. This provision was a priority for several Members of the Committee, and we worked hard to include it in both the House-passed version and the final conference report. Now, I expect COVID-19 may have impacted the implementation of these scholarships, but I invite our guests to discuss how best to move forward. Two other provisions in the 2018 Farm Bill address the disparity in the treatment of carryover funds for 1890 extension, and the establishment of three new Centers of Excellence. As we approach the next farm bill, I look forward to not only hearing more about the implementation of these provisions, but also where we may need additional support for these great institutions.

Today, especially as we look towards a post-pandemic economy, any conversation about education must also include the issue of connectivity. Now, this is an issue I am working on extensively to move the needle and close this gap, especially for our rural communities, and I know Chairman Scott, and all of our Members, share this priority. Many of you educate our next generation of agricultural experts in very rural areas. Your students are more likely to end up on the wrong side of the digital divide, and I am sure you have seen the frustration and the toll that this lack of reliable internet access has on your faculty and students. Lack of broadband also negatively affects the Land-Grant University System itself, given the Cooperative Extension System's need to disseminate the latest research, and provide other services. Now, I am a strong believer in common sense legislation that will bridge this

gap, revitalize rural economies and production agriculture, and make sure our students are not left behind. I know infrastructure needs are top of mind for the entire Land-Grant University System, including all of you, and I look forward to hearing more about your needs, and how we can best go about addressing them. We need the system. We need your institutions. We need all students to thrive.

Mr. Chairman, I think today is an opportunity for us. We have before us the very administrators that are molding the minds of the next generation of farmers, and ranchers, and policymakers. Their expertise, recommendations, and engagement will serve as a necessary guide to make our institutions the most innovative and the most attractive to future generations of students. Now, I thank the outstanding panel of witnesses for taking time to be here with us today, and I am confident that this will be a very productive discussion, and with that I yield back.

The CHAIRMAN. Yes. Thank you very much, Ranking Member. And now it is my deep honor to yield to the gentlewoman from North Carolina, the distinguished Vice Chair of the Agriculture Committee, and she is the co-Chair of the Congressional Bipartisan Historically Black College and Universities, HBCU, Caucus, Representative Alma Adams, who is also a graduate of an 1890 institution, North Carolina A&T, and she will provide an opening statement, as well as introduce a video from the leaders of the 1890s land-grant institutions.

Ms. ADAMS. Thank you, Chairman Scott, and Ranking Member Thompson, for hosting today's hearing, and thank you to our witnesses for their testimony, and let me just greet you all with some good old Aggie pride. As you know, 1890 land-grant universities are some of our largest and most impactful historically Black colleges and universities, and this hearing makes that clear. For more than 125 years, 1890s have provided essential research, education, public outreach, and economic development opportunities across our country, and yet these institutions still face major issues regarding state matching funds and insufficient infrastructure on campus to conduct cutting edge agricultural research. As Vice Chair of this Committee, it is a priority of mine to make sure that these institutions continue to have the resources to unlock the potential of millions of students across the country. And moreover, as founder and co-Chair of the HBCU Caucus, I recently introduced the IGNITE HBCU Excellence Act (H.R. 3294). This bill would invest in our HBCU facilities to give them state of the art learning environments, and enable HBCUs to continue to be a critical source of diversity in the workforce for another century and beyond.

I look forward to hearing the testimony from our esteemed panel of witnesses on these issues and others, and I thank them in advance for taking the time to be with us this morning, and for all that they are doing for students. And so I hope that we get to hear your thoughts on the effectiveness of the implementation of the 2018 Farm Bill provisions, the additional areas for collaboration between Congress and the 1890 System, and how your institutions have been impacted by the COVID-19 pandemic. And before I close, Mr. Chairman, I would like to just take a moment to introduce a short video of our 1890 land-grant university presidents,

who would like to say a few words, and introduce their universities.* Thank you, Mr. Chairman, and I yield back at this time.

The CHAIRMAN. Thank you.

[Video shown.]

The CHAIRMAN. Thank you all for those wonderful statements and testimonies. The Chair would—excuse me. The Chair would request that other Members submit their opening statements for the record so witnesses may begin their testimony, and to ensure that there is ample time for questions. And, if there is no objection, I would like to enter the letters from the President of Kentucky State University, and the Chancellor from the University of Arkansas Pine Bluff into the record.

[The letters referred to are located on p. 61.]

The CHAIRMAN. And now I am pleased to welcome back to the Committee our very first witness, Dr. Makola Abdullah, who is the 14th President of Virginia State University. Dr. Abdullah has served in this role since February 2016, and he is an alumnus of Howard University and Northwestern University. And I am also pleased to also welcome back to the Committee our second witness, Dr. Paul Jones, who is currently serving as the 10th President of Fort Valley State University. Dr. Jones has served in this position since December 2015, and he is a graduate of Utah State University and Colorado State University. Our third witness today is Dr. Heidi Anderson, and she is the President of the University of Maryland Eastern Shore. Dr. Anderson has served in this role since 2018. She has received her doctorate, Master's, and undergraduate degrees all from Purdue University. Our next witness is Dr. Tony Allen, the President of Delaware State University. Dr. Allen has served in this role since January of 2020, and he is an alumnus of Baruch College and University in Delaware.

To introduce our fifth and final witness, I am pleased to yield to our colleague on the Agriculture Committee, the distinguished gentlewoman from Louisiana, Ms. Letlow.

Ms. LETLOW. Good morning, Mr. Chairman, Ranking Member Thompson, and my fellow Members of the House Agriculture Committee. It is an honor and privilege to introduce to you our next witness, from my home State of Louisiana, Dr. Orlando McMeans. Dr. McMeans is both Chancellor of the Southern University Agricultural Research and Extension Center, and the Dean of the College of Agricultural Family and Consumer Sciences at Southern University's main campus in Baton Rouge, Louisiana. The Southern University System plays an important role in furthering the land-grant mission in Louisiana. The Ag Center is critical in conducting important research, along with their outreach and leadership benefitting farmers and ranchers in 34 parishes. Southern University's College of Agricultural, Family, and Consumer Sciences produces outstanding graduates in fields such as ag economics, plant and animal sciences, and urban forestry.

Prior to joining Southern University, Dr. McMeans served in a number of key roles, including Vice President for Research and Public Service at West Virginia State University. His expertise and

***Editor's note:** the video is retained in Committee file and is also available at <https://www.youtube.com/watch?v=ba0MCrg0Uxo>.

leadership in agricultural education and outreach has been recognized by his colleagues across the country, and he provides input to so many institutions outside of Louisiana through his work with the Association of Public and Land-grant Universities. A graduate of an 1890 institution, Dr. McMeans earned his Bachelor of Science in Horticulture from Alabama A&M University. Additionally, he received both his Master's Degree and Ph.D. in Horticulture from the University of Illinois at Urbana-Champaign. After graduation, Dr. McMeans went on to do post-doctoral studies in the area of genetic engineering at Virginia Tech. We are delighted to have him with us today to share his perspective with the Committee. Dr. McMeans, thank you for joining us. I yield back.

The CHAIRMAN. I thank the gentlewoman. And I am indeed so pleased to have such a distinguished panel of witnesses before us today. Each of you will have 5 minutes in order to make your points. The timer should be visible to you on your screen, and will count down to zero, at which point your time will have expired. So let us begin. Dr. Abdullah, you are recognized for 5 minutes. Please begin when you are ready.

STATEMENT OF MAKOLA M. ABDULLAH, Ph.D., PRESIDENT, VIRGINIA STATE UNIVERSITY; CHAIR, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, PETERSBURG, VA

Dr. ABDULLAH. Good morning. Thank you, Chairman David Scott, thank you Vice Chair Alma Adams, and Ranking Member Glenn Thompson for convening today's hearing for the 1890 universities. I also want to thank all the staff on both sides who helped put this together, and also my fellow presidents for the wonderful videos that they showed earlier. I am Dr. Makola Abdullah, President of Virginia State University, and Chair of the APLU Council of 1890 University Presidents. On behalf of the faculty, the students, the alums, and the communities of the universities that we serve, I want to thank all of you for the investments to the 1890s in the 2018 Farm Bill and in the American Recovery Act (Pub. L. 117-2). They have been critical in allowing us to grow our academic programs, conduct important agricultural research, and extend our university-based knowledge beyond our campus walls so that our communities can prosper and grow. I am going to try to share my screen now, see how that works. And maybe it doesn't, so I am going to keep going.

In particular, I would like to recognize and applaud the support of Congress, and especially you, Representative Scott, for your vision and leadership for the new 1890s scholarship program. This program has allowed us to recruit and retain the next generation of agricultural leaders, who will continue to keep our food supply chain safe, affordable, and a positive contributor to our country's GDP growth. The scholarship program has allowed students like Sherod Archie to complete his freshman year at Virginia State University this year as an Ag Business and Econ major. Sherod is a first-generation college student from a single parent family, where his mother worked three jobs to provide for her four sons, her aging parents, and a handicapped brother. According to Sherod, the 1890s scholarship program, and I am quoting him, "Is a chance to

pursue my passions and improve my way of life in ways that I never thought possible.”

Of course, launching this program during a pandemic was not easy. Sherod was one of 17 students last year to receive a full scholarship at Virginia State University through the program, and we hope to significantly increase that number in future years, when students can enjoy coming back to campus. We also hope that the next farm bill will include language to continue this scholarship opportunity for students like Sherod. I also want to thank and applaud Vice Chair Alma Adams for her efforts to invest in our HBCU facilities and capital infrastructure through the introduction of the IGNITE HBCU Excellence Act. These investments will allow our institutions to provide students with state-of-the-art learning environments, and enable HBCUs to be a critical source of diversity for the workforce. And I would be remiss if I didn't applaud the Congresswoman, other Members of the Education and Labor Committee, and really all Members of Congress, for the work that you did on the loan forgiveness for the Capital Financing Program last session. Thank you very much.

1890 land-grant universities like my own, Virginia State University, serve as our state's leader in supporting socially disadvantaged farmers and ranchers. Earlier this month we were honored to host Congresswoman Spanberger, and our very own former College of Agriculture Dean, Jewel Bronaugh, in her new role as USDA Deputy Secretary. She addressed the details of the \$4 billion program for redressing the decades of USDA loan discrimination against Black and other socially disadvantaged farmers. This listening session and town hall represents the partnerships that the 1890s have with the USDA, and is just one of the many ways we work together to assist Black and socially disadvantaged farmers and ranchers, and we are at a critical moment to do more, with your help.

I encourage Congress to support robust funding increases for the 1890 Land-Grant Program so that we can make even more positive impacts for our country's citizens through our academic, research, and cooperative extension programs. For example, by increasing the number of 1890s Centers of Excellence from our current six, we will better be able to increase rural prosperity for underserved farming communities, address critical needs for enhanced international training and development, and increase the diversity of students in STEM fields. Additionally, we encourage your support to address the healthcare infrastructure that COVID-19 has demonstrated that we don't have in place for our students on our campus, as well as the digital infrastructure we need to deliver systems to individuals, families, and communities during and after the pandemic.

In closing, I ask that you continue to invest in America's future by investing in 1890 land-grant universities. We have a 131 year track record of providing a strong return on investment for every Federal dollar that has supported our programs, and I can assure you that trend will only continue. I look forward to covering many other areas in our question-and-answer session today, like our ongoing challenges with state matching grants, and what Congress can do to help. Thank you all so much.

[The prepared statement of Dr. Abdullah follows:]

PREPARED STATEMENT OF MAKOLA M. ABDULLAH, PH.D., PRESIDENT, VIRGINIA STATE UNIVERSITY; CHAIR, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, PETERSBURG, VA

Good morning. Thank you, Chairman David Scott, Vice Chair Alma Adams, and Ranking Member Glenn Thompson, for convening today's hearing with the 1890 Universities. I am Dr. Makola M. Abdullah, 14th President of Virginia State University and current Chair of the APLU Council of 1890 Universities. On behalf of the faculty, students, alumni and communities our universities serve, I want to thank you for the investments to the 1890s in the 2018 Farm Bill and in the American Recovery Plan. They have been critical in allowing us to grow our academic programs, conduct important agricultural research, and extend our university-based knowledge beyond our campus walls so communities can prosper and grow.

In particular, I would like to recognize and applaud the support of Congress, and especially you, Representative Scott, for your vision and leadership for the new 1890 Scholarship Program. This program has allowed us to recruit and retain the next generation of agriculture leaders, who will continue to keep our food supply chain safe, affordable and a positive contributor to our country's GDP growth. The scholarship program has allowed students like Sherod Archie to complete his Freshman year at Virginia State University this year as an agriculture business and economics major. Sherod is a first-generation college student from a single parent family, where his mother worked three jobs to provide for her four sons, her aging parents and a handicapped brother. According to Sherod, the 1890 Scholarship Program—and I'm quoting him here—". . . is a chance to pursue my passions and improve my way of life in ways I never thought possible."

Of course, launching this program during a pandemic was not easy. Sherod was one of 17 students last year to receive a full scholarship at VSU through the program. And we hope to significantly increase that number in future years, when students can enjoy coming back to campus. We also hope the next Farm Bill will include language to continue this scholarship opportunity for future students like Sherod.

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Additionally, we encourage your support to address the healthcare infrastructure COVID-19 has demonstrated we don't have in place to care for our students on campus, as well as the digital infrastructure we need to deliver assistance to individuals, families and communities during and after the pandemic.

In closing, I ask you to invest in America's future ≥by investing in the 1890s land-grant universities. We have a 131 year track record of providing a strong return on investment for every Federal dollar that has supported our programs, and I can assure you that trend will only continue. I look forward to covering many other areas

in our question-and-answer session today like our ongoing challenges with state matching grants and what Congress can do to help. Thank you.

[ATTACHMENT]

The screenshot shows a news article on the Virginia Cooperative Extension website. The article is dated January 3, 2021, and is titled "New Food And Agri-Sciences Scholarship Opens Opportunities". It features a photo of Sherod Archie and text describing his background and the scholarship. The website header includes "Virginia Cooperative Extension" and navigation links for Home, Agriculture & Natural Resources, Family & Consumer Sciences, 4-H & Youth, Events, and Emergency. A newsletter sign-up box is also visible on the right side of the article.

Mr. Sherod Archie
Virginia State University
Agriculture Business and Economics Major

This screenshot is identical to the one above, showing the same news article. Overlaid on the right side of the article is a quote from Sherod Archie: "... a chance to pursue my passions and improve my way of life in ways I never thought possible." Below the quote is the name "Sherod Archie".

"... a chance to pursue my passions and improve my way of life in ways I never thought possible."
Sherod Archie



IGNITE HBCU Excellence Act
Invest in our HBCU facilities and capital infrastructure



Socially Disadvantaged Producer American Rescue Plan
Roundtable and Town Hall
Hosted by Virginia State University
May 26, 2021





Socially Disadvantaged Producer American Rescue Plan
Roundtable and Town Hall
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May 26, 2021



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Hosted by Virginia State University
May 26, 2021





The CHAIRMAN. And thank you, Dr. Abdullah, for your excellent presentation. Dr. Jones, you are now recognized. Please begin when you are ready.

STATEMENT OF PAUL A. JONES, Ph.D., PRESIDENT, FORT VALLEY STATE UNIVERSITY; VICE CHAIR, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, FORT VALLEY, GA

Dr. JONES. Thank you, Chairman Scott, Ranking Member Thompson, and Members of the House Committee on Agriculture. My name is Paul Jones, and I have the privilege of serving as the 10th President of Fort Valley State University. First, I want to thank you for your leadership during these unprecedented times. The support that Congress has provided for higher education, including 1890 land-grant institutions, minority serving institutions, and historically Black colleges and universities, which has been in-

strumental in undergirding our students financially, and ensuring our faculty and staff, and our students, have remained safe.

We all know that COVID-19 has presented many challenges over these past 15 months, but we also have discovered several opportunities for investment and innovation that will enhance the experience of our students, and change our approach to higher education for what we believe is the better. It is an honor to be here along with my colleagues to testify in continued support for funding of the scholarship program for men and women who aspire to serve our country by pursuing careers in the agricultural field. Along with USDA, the 1890 Land-Grant System has monumental responsibilities of addressing global food security through rigorous research, extension, and educational programs. Technological advances applicable in agricultural, natural resource utilization, and conservation, and food production, will enable us to meet this daunting challenge, provided there is an appropriate workforce.

This new 1890s Scholarship Program created in the 2018 Farm Bill helps us to develop a highly skilled workforce, and I am pleased to report that we have seen significant enrollment increases during this past year. Fort Valley State University awarded 76 scholarships this past year, which resulted in a 22 percent increase in our undergraduate enrollment in the College of Agriculture. We firmly believe that had it not been for the COVID-19 pandemic, and perhaps our students' reluctance to being on campus, we would have seen even larger enrollment in these agricultural fields. Given our success, and the report released by NIFA and Purdue, I believe the future is bright.

I also believe that this scholarship program will continue to bear fruit by consistently producing 1890 graduates who are well prepared to tackle some of the pressing challenges in agriculture and food production facing our world today. Furthermore, this program will allow students not to be saddled with student loan debt, which is a major crisis today, particularly among students of color. I have no doubt that the number of graduates that 1890 institutions produce in agricultural related disciplines will tremendously increase with an increasing number of scholarships awarded.

A major 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. We are so thankful, in the President's budget, to see the funding for infrastructure, as well as the IGNITE HBCU Excellence Act, which was introduced by Congresswoman Alma Adams, Senator Tim Scott, Senator Chris Coons (S. 1945), and Representative French Hill. This bipartisan piece of legislation would be transformational in modernizing our campus and state of the art learning environments.

I am so grateful for this opportunity to address you today, and on behalf of all of our faculty, our staff, our students, our alumni, and throughout our 1890 system, I thank you for your continuous support for our institution and your advocacy. Thank you so much.

[The prepared statement of Dr. Jones follows:]

PREPARED STATEMENT OF PAUL A. JONES, PH.D., PRESIDENT, FORT VALLEY STATE UNIVERSITY; VICE CHAIR, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, FORT VALLEY, GA

Summary of testimony to the U.S. House Committee on Agriculture regarding H.R. 6020, *Funding for Student Scholarships for the 1890s Land-Grant African American Colleges and Universities Act* before the Committee on June 16, 2021.

Chairman Scott, Ranking Member Thompson, and Members of the House Committee on Agriculture, I am Paul Jones, and I have the privilege of serving as the tenth President of Fort Valley State University located in the heart of Middle Georgia.

First, I would like to thank you for your leadership during these unprecedented times. The support the U.S. Congress has provided for higher education, including 1890 Land-Grant Institutions, Minority Serving Institutions, and Historically Black Colleges and Universities, has been instrumental in undergirding our students financially, keeping our doors open, and ensuring our faculty, staff, and students remain safe. Although COVID-19 has presented many challenges over these last 15 months since March 2020, we have also discovered several opportunities for investment and innovation that will enhance the experience of our students and change our approach to higher education for the better. We have seen our enrollment increase despite budget challenges; we have developed partnerships with Georgia Power/Southern Company, Central State Hospital Local Redevelopment Authority, and Ford Motor Company, as well as expanded our use of technology in our operations, teaching, and outreach.

It is an honor to be here along with my colleagues to testify in continued support of funding for scholarships for young men and women who aspire to serve our country by pursuing careers in the food and agricultural sciences, including agribusiness, food production, and food distribution. Along with the U.S. Department of Agriculture, the land-grant system has 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 workforce. The new 1890 scholarship program created in the 2018 Farm Bill helps us develop a highly skilled workforce, and I am happy to report we have seen significant success. Fort Valley State University awarded 76 scholarships last year, resulting in a 22% increase in undergraduate student enrollment within the College of Agriculture, Family Sciences, and Technology. All eight majors offered in the College recorded an increase in student enrollment, with the largest increase in the Animal Science Program. We believe that had it not been for the COVID-19 Pandemic and students' reluctance to being on campus, we would have seen larger enrollments in these agricultural fields.

Given our success and the report released by the National Institute of Food and Agriculture and Purdue University, I believe the future is bright. I also believe that this scholarship program will continue to bear fruit by consistently producing 1890 graduates who are well prepared to tackle some of the pressing challenges in agriculture and food production facing the world today. Furthermore, this program will allow students not to be saddled with student loan debt, which is a major crisis today, particularly for students of color. I have no doubt that the number of graduates that 1890 institutions produce in agriculture-related disciplines will tremendously increase with an increasing number of scholarships awarded.

A major 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 more than \$11.5 billion. For example, the cost for updating Fort Valley State University's agriculture facilities, including classrooms, farm buildings, greenhouses, research laboratories, and support facilities, is estimated to be \$40 million. While the USDA 1890 Facilities Grant Program helps us address this issue to some extent, allocating funds for a project over a period of 5 years considerably slows down the progress. A timely and appropriate level of funding for improving infrastructure suitable for 21st-century science that addresses emerging issues in agriculture and food production is absolutely essential.

Emerging technologies warrant institutions to establish suitable research infrastructure and adjust their outreach and educational programming to enable them to effectively train the present and future generation of agriculture workforce and the farming community. There is an imperative and urgent need for institutions to build the capacity to handle huge 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 and 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. To this end, Fort Valley State University recently signed a Memorandum of Understanding with the Georgia College and State University's Rural Studies Institute to collaboratively work toward three distinct objectives: to enhance broadband access to rural agriculture communities, to enhance economic development in underrepresented communities, and train future leaders to bring economic transformation in rural Georgia.

This is why I was thrilled to see the President's budget include additional funding for HBCUs for infrastructure as well as the *Institutional Grants for New Infrastructure, Technology, and Education at HBCUs Act (IGNITE HBCU Excellence Act)* be introduced by **Congresswoman Alma Adams (D-NC), Senator Tim Scott (R-SC), Senator Chris Coons (D-DE), and Representative French Hill (R-AR)**. This bipartisan piece of legislation would be transformational in modernizing our campuses with state-of-the-art learning environments. Furthermore, this will support our unique mission of conducting applied and basic research and outreach to empower small, limited-resource, and underrepresented farmers with the knowledge and skills needed to sustain successful agricultural enterprises.

As you may be aware, FVSU had the honor of hosting Secretary Tom Vilsack, Members of the Georgia delegation, including Congressman Sanford Bishop, a Member of this Committee to meet with African American farmers from across the state of Georgia. The U.S. Department of Agriculture's new farmer relief program announced by Secretary Vilsack will make a significant difference in keeping Black-owned farms operational and eventually fiscally strong. As the USDA, with your support and leadership, strives to make it a level playing field for all American farmers by implementing amended lending and subsidy policies to address food insecurity and rural inequality, 1890 Institutions can be valuable partners to help achieve these goals.

When examining ways to promote economic growth and lessen the wealth gap in rural and minority communities, access to technology and workforce development become our top priorities. It is essential that policymakers provide resources for programs that will directly flow into our communities. Increased funding will allow 1890 institutions to deploy resources and programs focused on the needs we see on the ground in our communities. The new initiatives created in the 2018 Farm Bill and the subsequent funding that this Congress has given for our new Centers of Excellence and the 1890 scholarships to increase the number of graduates in agriculture disciplines and the USDA initiative to improve the lives of minority farmers are significant steps that our nation can build upon.

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 1890 System, I thank you for your continuous support of our institutions and agriculture.

The CHAIRMAN. And thank you, Dr. Jones. And now we will hear from Dr. Anderson. Please begin when you are ready, Doctor.

STATEMENT OF HEIDI M. ANDERSON, PH.D., PRESIDENT, UNIVERSITY OF MARYLAND EASTERN SHORE; MEMBER AT-LARGE, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, PRINCESS ANNE, MD

Dr. ANDERSON. Thank you. Good morning, Chairman Scott, Vice Chair Adams, and Ranking Member Thompson. Again, I am Heidi Anderson, the 16th President of the University of Maryland Eastern Shore, UMES, and I am proud and honored to bring you greetings, but also to bring you thanks—many thanks from our faculty, staff, students, alumni, and individuals at our university. We want to thank you for your unwavering support for higher education. We appreciate all of the Federal funding that we have received throughout the years through the stimulus plans and the stimulus bills, but also the 2018 Farm Bill, the 1890 scholarships, and the 1890 Centers of Excellence. And, of course, Representative Alma

Adams, we appreciate the IGNITE Act that you have proposed. This proposed infrastructure legislative bill is a game changer for all of our HBCUs and for the students who are coming to our schools in the future.

Our university relentlessly continues to embrace and advance our land-grant mission as a Carnegie two Doctoral Research University. In addition to providing programs and academic programs in science and STEM, we also have extension education to our community, and it cannot be overemphasized that the 1890 universities, like UMES, have a pivotal role that we have to uphold. Chairman Scott, and Members of the Committee, I extend gratitude for all of the support you gave us for the 1890 scholarships, and we are also grateful for the—excuse me, for the 2018 Farm Bill.

In the spring of 2020, like everyone else in the country, we had to pivot, as you know, because of the pandemic. But our university, we were fortunate in August of 2020 to bring students back to the campus early, and we were able to complete a full academic year very safely, under safe conditions. And at the same time we adapted our research and our extension programming to continue serving our clientele, the farmers in our state and in our region. Our extension team continued to work, and they also worked with our local community to build trust in COVID vaccines. As part of our community outreach, we worked with our Somerset County Public Health Department, also—excuse me, getting vaccinations to the community. We have eight health profession programs here on the campus that work with our School of Agriculture, and our students in those programs gave vaccines to the community. In many rural settings, and especially in minority settings, as you know, there is also health provider—a shortage of healthcare providers. UMES is currently working hand in hand with our School of Agriculture, and our students in all of these health profession programs, to extend the healthcare in these critical areas.

In closing, UMES, and indeed all of the 1890 universities, are highly committed to finding more innovative ways to continue serving the promise of the land-grant mission. And we also are looking for ways to serve the needs of our disadvantaged citizens who are in all of our states and all of our rural areas. I strongly believe that the continued strategic investment that you have given so far in the 1890s, and if—and, of course, increasing that, it will ensure that our universities can make meaningful impacts across the nation. I urge you to continue giving us the support for our students, but also for our infrastructure, and I appreciate the opportunity to provide this testimony to you today, and also to be here to answer any questions. Thank you again for all of your support.

[The prepared statement of Dr. Anderson follows:]

PREPARED STATEMENT OF HEIDI M. ANDERSON, PH.D., PRESIDENT, UNIVERSITY OF MARYLAND EASTERN SHORE; MEMBER AT-LARGE, COUNCIL OF 1890 UNIVERSITIES, ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES, PRINCESS ANNE, MD

Introduction

Good morning, Chairman Scott, Vice Chair Adams, and Ranking Member Thompson. I am Dr. Heidi M. Anderson, and I am honored to bring you greetings . . . not only as President of the University of Maryland Eastern Shore but also as an Exec-

utive Committee member of the Council of 1890 Universities of the Association of Public and Land-Grant Universities (APLU).

About the 1890s

UMES, like the other 1890 land-grant institutions, maintains a steady focus on teaching agriculture, science, and other disciplines that are highly relevant to the nation's workforce needs. In addition, we conduct critical research and provide non-traditional extension education programs to the community.

Today, more than 130 years since the signing of the second Morrill Act of 1890, these universities continue to deliver on the important mission of providing access and opportunities to improve and uplift the lives of those who otherwise would not have received an education.

These universities are highly innovative and generate new knowledge through research and provide solutions to everyday problems through outreach to our communities at a time when the nation is facing serious societal challenges that are affecting the lives of many—especially minorities.

About UMES

Let me tell you a little about UMES. It was founded on September 13, 1886, as the Delaware Conference Academy. With a mission focused on providing educational opportunities for former slaves and freedmen, the fledgling academy housed two educators and nine students.

It's been 135 years since its founding, and UMES relentlessly continues to embrace and advance the land-grant mission as a Carnegie II Doctoral research university offering strong programs in agriculture, health care, and STEM areas. Some of our undergraduate majors include: Agriculture, Agribusiness, Environmental Science and Human Ecology; and graduate programs at the masters and doctorate level in Food and Agricultural Sciences, Food Science and Technology, Marine and Estuarine Sciences, and Natural Resource Sciences.

In addition, the COVID pandemic has brought into sharp focus the critical need to ensure that we tackle the health care disparities and social inequities that impact rural communities. UMES is primed to resolve these challenges operating eight health profession programs in the areas of pharmacy, physician assistant, physical therapy, kinesiology, rehabilitative counseling, rehabilitative services, rehabilitative psychology, and dietetics. Graduates from these health programs have entered the local, state and regional workforce and are meeting the critical health care needs of citizens. In fact, 62% of our graduates remain in the Delmarva region, or in the State of Maryland.

It cannot be over emphasized that 1890 universities play a pivotal role in conducting research and delivering solutions, which are relevant to many societal problems; and UMES is poised as a leader in this regard.

Funding Support

Chairman Scott and Members of the Committee . . .

None of what we do would be possible without the Federal and state funding that we receive. In FY 2021, UMES received just over \$4.7 million in Federal capacity funds for research, extension, facilities, and forestry.

The support is indispensable, and it ensures that the university can implement effective educational programs in core areas of science and agriculture. The support also allows UMES to deliver innovative research and extension programs that address vexing problems in the agriculture, food, and natural resource areas. Even more, it is critical to the ability of our faculty and students to innovate and help solve major issues such as food security and climate change.

About 2018 Farm Bill and Especially Chairman Scott's Advocacy for Scholarships

Chairman Scott, to date we have received just over \$1.7 million to support scholarships for our students. I cannot emphasize enough our deep gratitude to you and the Committee for supporting the 1890 Scholarship Program. I am also extremely grateful that UMES is the coordinating university for the 1890 Center of Excellence for Global Food Security and Defense, which is one of the Centers of Excellence established in the 2018 Farm Bill. These initiatives are making a tremendous difference to our students and to our ability to exponentially change lives. We implore you to continue supporting these important initiatives.

Allow me to say, that because we launched this program during the COVID pandemic, our efforts were not as robust or as smooth as it otherwise might have been. However, we are undeterred and hopeful for the incoming class of students.

Examples of UMES Meeting its Mission

Please allow me to give a few examples of how UMES is fulfilling its mission as an 1890 land-grant university and to highlight how critical the support provided by Congress is to help us in doing all that we do.

Workforce Development

The nation's social and economic well-being is heavily dependent on the availability of a diverse and highly skilled workforce. UMES strives to educate and train the next generation of educators, researchers, and scientists within the areas of food, agriculture, and related sciences.

As you are aware, UMES and the other 1890 institutions play a major role in providing access and opportunities for many who would otherwise not be able to take advantage of a college education. I am happy to report that UMES is one of the most diverse campuses in the University System of Maryland, as we continue to focus on our core mission, while ensuring access to all. *The Chronicle of Higher Education* also recognized UMES as having the second most diverse faculty (2019) which allows us to lead by example.

Chairman Scott, the investment of resources to provide scholarships to students is a game-changer. Not only do the resources allow us to recruit and retain highly competitive students, but also they ensure that recipients can graduate with minimal or non-existent loan burden.

Under this program, we accepted our first cohort of 15 freshmen in the fall 2020 semester and have since accepted an additional ten sophomore and junior students who will be funded beginning in the fall semester of 2021. With these groups of students, we have encumbered \$697,805 of the funds allocated in the first year. During the 2021 recruitment season, we increased our outreach efforts and expect to accept a much larger second cohort of students into the program for 2022.

The students accepted into the program join a special community of land-grant scholars who receive intrusive advising, support, and professional development to ensure their success inside the university and beyond. At the end of the first year, only one student was dismissed from the program for non-performance.

Recruitment for the first cohort was a little challenging because it was a new program, and the COVID pandemic was so very disruptive. In response, UMES developed effective strategies, communications, and procedures to ensure greater effectiveness and efficiency in our efforts to reach as many students as feasible. Those efforts included strengthening existing linkages with high schools and community colleges.

I know that the 1890 Scholarship Program will have a tremendous impact on enrollment in relevant majors (Agriculture, Agribusiness Management, Environmental Science, and Human Ecology). For us, the rate of recruitment for students in the agriculture major has been on the rise when with some other programs, that has not been the case.

We thank you for the foresight in establishing the 1890 Scholarship Program. As you are aware, we attract a lot of students with financial need; and therefore, the ability to provide this support is helpful in ensuring we retain, as well as graduate our students, on time and in a way that they leave college with minimal or no debt.

Given the uniqueness and value of the program, we kindly implore you to consider making the program permanent when you develop the next farm bill.

Research and Extension

While UMES' research and extension programs address the needs of all Marylanders, the university places a special emphasis on serving diverse and historically underserved populations. To ensure that we remain focused on our work, we deliver programs around four integrated strategic themes:

- agriculture and food, with a focus on food security;
- natural resources and environmental sustainability;
- human health and development; and
- products to market.

I'd like to provide a summary of our research and extension emphasis under each of the four strategic areas:

Agriculture and food with a focus on food security: Agriculture plays an important role in Maryland's economy and will continue to do so for the foreseeable future. We conduct targeted research and extension that includes work in the following areas: food safety and food quality; agribusiness and economic development; alternative agriculture; small-scale production; family farms and urban agriculture;

specialty crops; honey bees; poultry; small ruminants; and elements of large-scale agriculture, especially in the area of precision agriculture.

Natural resources and environmental sustainability: Maryland's natural resources underpin a range of economic activities such as forestry-based industries, tourism, fisheries, *etc.*, and provide the basis for supporting quality living for citizens. UMES' work in this area focuses on the establishment of a strong and sustainable foundation to guide the use and protection of these resources. Specifically, we conduct research and education activities focusing on water resources and watershed management, with an emphasis on both the Chesapeake Bay and the Maryland Coastal Bays.

Human health and development: The health, social, and economic well-being and the resilience of its communities are important concerns for Maryland. The youth are our future as a nation, and support for the robust development of young people is essential. With this said, UMES' youth development efforts are conducted under the banner of 4-H programming with a special emphasis on the science, technology, engineering, agriculture/arts, and mathematics (STEAM) disciplines.

At the same time, the nation is facing a growing health challenge with a large proportion of the population suffering from obesity or a body mass index (BMI) of 30 or higher. Therefore, UMES' extension programs are focused on developing resilient communities and families in Maryland through educational efforts in nutrition and health, especially for diverse families with limited resources. The goal of these efforts is to empower the communities and families with knowledge and skills in nutrition, meal planning, physical fitness, and food buying to ensure adequate nutrition for healthy living.

Products to market: We strongly believe in harnessing the intellectual property and knowledge of our faculty, students, and staff; and to this end, we place a strong emphasis on creating linkages with industry. Thus, we conduct food processing projects in collaboration with local entrepreneurs and food companies and develop materials such as polymers and nanomaterials for food and non-food use.

I would now like to speak on several important cross-cutting issues that we are addressing at the research and extension level that have direct relevance to agriculture and minority farmers.

COVID Response and Recovery

The challenges we have faced over the past year have been unprecedented. We were required to adapt quickly to be able to continue delivering our programs and services seamlessly. In that regard, UMES has been at the forefront. In the spring of 2020, we had to pivot like everyone else. In the fall of 2020, however, we brought back our students earlier than other state schools in Maryland all while implementing rigorous safety measures. Because of this, we were able to complete the semester safely. We concluded the spring semester with a modified face-to-face commencement. Kudos to our students, faculty, and staff.

At the same time, we adapted our research and extension programming to continue serving our clientele. Our Extension team is linking with national partners to advance community health, education, and economic outcomes. In addition, the team has been active in implementing specific educational efforts to build trust and confidence in the COVID-19 vaccination project. UMES Extension is also an active participant in an 1890-wide project focused on reducing the impact of SARS-CoV-2 and related disruptions on the local food supply chain in minority communities as part of the 1890 Land-Grant Regional Network.

Furthermore, we are proud that as part of our community outreach, our campus serves as a vaccination station for the local Somerset County Health Department. And our health professions students are acting as part of the team, giving these vaccinations to the community at large.

Climate Change

One of the important issues we face as a nation and world are the challenges brought about by climate change. In response, we are implementing several initiatives focused on understanding and mitigating or adapting to the impacts of climate change. We have specific projects focused on the drought response of soil; understanding forest resilience, carbon sequestration, and climate change on Delmarva's upland forests; carbon dioxide sequestration; and understanding the impact of climate change on microbial dynamics, food safety and security, and on farming in the Delmarva region.

For instance, in terrestrial environments, we plan to conduct climate change impact studies to understand critical soil processes and the effects on carbon sequestration and coastal forests. In aquatic environments, we plan to conduct impact studies to understand the effects on food web dynamics, phenology, life history, and

predator-prey relationships, and to model and forecast changes in mean sea level, soil salinity, and coastal vegetation.

Agriculture Infrastructure

The UMES School of Agricultural and Natural Sciences provides a pivotal linkage between research, teaching, and extension. We use research and extension to provide experiential training leading to highly skilled graduates. We also address some of the most pressing challenges in the food and agriculture system. Please know that UMES is a leader in conducting innovative agricultural research and in educating students for the workforce of the future.

The school, however, has an urgent need for funds to support the renovation or replacement of its most outdated research facilities dating back to the 1950s. We are also contemplating the establishment of the second School of Veterinary Medicine at an 1890 university. We remain grateful for the appropriations that are specified to support facilities development at 1890 schools. We support the \$11.5 billion request made by APLU to improve agricultural research infrastructure across the U.S. We see this as an avenue for us to make transformational improvements in our research infrastructure to conduct 21st-century science and to produce the highly trained, diverse workforce that this nation deserves. We also fully support the HBCU IGNITE efforts led by Representatives Alma Adams and French Hill here in the House, and Senators Coons and Scott in the Senate.

Serving Farmers

According to the 2017 Agricultural Census, there are a little over 200 Black or African American farmers in Maryland. Southern Maryland and the Lower Eastern Shore of Maryland contain the highest concentration (about 85%) of minority farmers. The UMES Small Farm Program has provided outreach and educational programs targeting these audiences. Over the past 2 years, approximately seventy-five (75) minority farmers have participated in the UMES Small Farm Program.

The Program is committed to helping minority farmers diversify their crop offerings to capitalize on regional economic opportunities such as the increasing demand in the metro region for locally grown ethnic crops. Consequently, farmers are provided educational support; on-farm training and demonstrations; ethnic crop production best practices; and harvesting, and marketing as well as planting materials. This year, the UMES Small Farm Program is working with 15 minority farmers who will be working together and diversifying their crop offerings and increasing their production.

The Program is collaborating with Future Harvest (a nonprofit organization) to identify farm entrepreneurs and/or agricultural experts 'of color' who are willing to provide consultations to farmers looking for advice on how to strengthen their farm businesses. Future Harvest has received limited grant funds to pay for in-depth, one-on-one consultations for farmers with a consultant of their choosing. The goal, then, is to attract as many participants as possible.

In a related initiative, the UMES Small Farm Program is facilitating an exchange of knowledge between farmers by creating safe spaces where farmers can meet monthly to share their ideas, express their concerns, and get solutions to their problems. Major topics include plans for upcoming growing seasons; establishing new markets; tool and equipment sharing; and crop diversification. So far, 20 minority farmers are participating in this program.

More recently, there has also been a noticeable and increasing interest by first-time minority farmers. The increase has resulted from either younger urban audiences or new retirees who desire to use their land for some form of agricultural production to secure supplementary income. UMES appeals to both audiences throughout the year.

The UMES Small Farm Program is also spearheading a community outreach project focused on "Increasing Awareness and Participation in USDA's NRCS programs among African American Landowners and Underserved Farmer Populations." Special emphasis is being placed on targeting inherited property and absentee rural land owned by African Americans and socially disadvantaged farmers as defined by the USDA. Over the next year, the program will conduct needs assessments that include listening sessions within communities of color to identify knowledge gaps, challenges, and natural resource concerns among target audiences. The goal is to reach 100+ minority farmers and/or landowners.

Future Outlook

UMES, and indeed all of the 1890 universities, are highly committed to finding more innovative ways to continue delivering on the promise of the land-grant mission. At the campus level, we are bringing interdisciplinary teams together to address pressing issues like food security, climate change, and health equity. Serving

the needs of socially disadvantaged minority populations remains at the heart of what we do. I strongly believe that continued and strategic investment in the 1890s will ensure that these universities can continue making meaningful impacts across the nation.

I appreciate the opportunity to provide this testimony to you today. Thank you and I look forward to your questions.

The CHAIRMAN. Thank you for your testimony, Dr. Anderson. And now, Dr. Allen, please begin when you are ready.

STATEMENT OF TONY ALLEN, PH.D., PRESIDENT, DELAWARE STATE UNIVERSITY, DOVER, DE

Dr. ALLEN. Good morning. I am Tony Allen, President of Delaware State University, and I would like to thank Chairman Scott, Vice Chair Adams, Ranking Member Thompson, and all of the Members of the House Agriculture Committee, and the Committee staff for inviting us here today. There is literally no doubt that the U.S. Department of Agriculture, especially the National Institute of Food and Agriculture, and the 1890 Land-Grant Program, are the strong foundation upon which our institutions thrive. It is because of our long running partnership that we continue to have the impact on our students, our communities, and our nation. At Delaware State University, where we aspire to become one of the nation's first HBCUs to reach R1 research status, we know we can't do it without you. I further acknowledge the tremendous support, both past and proposed, from other Federal programs and legislation upon which so many of you on both sides of the aisle have worked. The farm bill, the FLIGHT Act,* the CARES Act (Pub. L. 116-136), the American Recovery Plan (Pub. L. 117-2), and Representative Adams's proposed IGNITE Act are all exceptional examples of your commitment. Thank you for your continued support.

Delaware State University and the other 1890 land-grant institutions have successfully weathered the storm of COVID-19. In our case, we were able to collaborate with Testing for America last summer to perform over 75,000 COVID tests, allowing us to bring our student body back to campus safely during the last school year, with a positivity rate of less than ½ percent. Among these students were our first 43 recipients of the 1890s scholarships that you authorized in the 2018 Farm Bill. We were also able to avoid pausing our aggressive research agenda by applying more thorough safety protocols. As a result, instead of retrenching, our overall research portfolio actually grew by 17 percent in Fiscal 2021, including the construction of the first in-state COVID testing laboratory in Delaware. I should note our gratitude for receiving a USDA/AFRI COVID-19 Rapid Response Grant here. My extended remarks will cover more thoroughly the ways in which we and the other 1890 land-grant institutions apply and leverage the resources you have provided, but I want to emphasize our continuing work of economically sustainable agriculture in a changing climate.

In Delaware we live with this reality every day, from the impacts of Atlantic storms, to the increase in soil acidification, we are deeply involved not only in the research on crop and livestock diversification, but also in pioneering new business models and work-

* **Editor's note:** H.R. 7157, Fostering Leadership and Inclusion by Growing HBCU Training Act of 2020 (FLIGHT Act) was introduced June 11, 2020 in the 116th Congress.

force development. Thanks in no small measure to your support, a biomass research team led by Delaware State University researchers has submitted a patent for developing the novel enzyme which releases more than 200 percent more fermentable sugars during pre-treatment of bioenergy feedstock. Other 1890 institutions are doing similarly groundbreaking work of preparing our nation's farmers and food producers to keep meeting America's food requirements in changing times. I remain constantly aware, as my 1890 colleagues do, that strong bipartisan leadership in agriculture, and especially on this Committee, is critical to our continued success in educating new professionals, training our workforce, conducting the research necessary for long-term sustainability, and maintaining the primacy of American agriculture in the marketplace of an increasingly smaller, interconnected world. We simply could not do it without you, and we remain grateful for your continued support.

As we often say, our students don't just come here for a quality educational experience. They are trying to change the economic trajectory for themselves, their families, and their communities. That is why we need your support, and are honored to be with you today. Thank you very much.

[The prepared statement of Dr. Allen follows:]

PREPARED STATEMENT OF TONY ALLEN, PH.D., PRESIDENT, DELAWARE STATE UNIVERSITY, DOVER, DE

Introductory Remarks

Good morning! I'm Tony Allen, President of Delaware State University, and I'd like to thank Chairman Scott, Vice Chair Adams, Ranking Member Thompson and all of the Members of the House Agriculture Committee, and the Committee staff for inviting us here today.

There is literally no doubt that the U.S. Department of Agriculture (especially the National Institute of Food and Agriculture—NIFA) and the 1890 Land-Grant program are the strong foundation upon which our institutions thrive. It's because of our long-running partnership that we continue to have an impact on our students, our communities, and our nation. At Delaware State University, where we aspire to becoming one of the nation's first HBCUs to reach R1 research status, we know that we can't do it without you.

I'd further acknowledge the tremendous support—both past and proposed—from other Federal programs and legislation upon which so many of you on both sides of the aisle have worked: the farm bill, the FLIGHT Act, the CARES Act, the American Recovery Plan, and Representative Adams' proposed IGNITE Act.

Thanks to your continued support, Delaware State University and the other 1890 Land-Grant institutions have successfully weathered the storm of COVID-19. In our case, we were able to collaborate with Testing for America last summer to perform over 75,000 COVID tests, allowing us to bring our student body back to campus safely during the last school year, with a virus positive rate consistently less than 0.5%. Among these students were our first 43 recipients of the 1890 Scholarships that you authorized in the 2018 Farm Bill. We were also able to avoid pausing our aggressive research agenda by applying more thorough safety protocols. As a result, instead of retrenching, our overall research portfolio actually grew by 17% in FY 21, including the construction of the first in-state COVID testing laboratory in Delaware. I should note our gratitude for receiving a USDA AFRI [COVID]-19 Rapid Response grant here.

My extended remarks will cover more thoroughly the ways in which we and the other 1890 Land-Grant institutions apply and leverage the resources you have provided, but I want to emphasize our continuing work of economically sustainable agriculture in a changing climate. In Delaware, we live this reality every day, from the impacts of Atlantic storms to the increasing soil acidification. We are deeply involved not only in research on crop and livestock diversification but also in pioneering new business models, and workforce development.

Thanks in no small measure to your support, a biomass research team led by Delaware State University researchers has submitted a patent for developing the

novel designer lignin peroxidase, an enzyme which releases ~200% more fermentable sugars during pre-treatment of bioenergy feedstock. Other 1890 institutions are doing similarly groundbreaking work at preparing our nation's farmers and food producers to keep meeting America's food requirements in changing times.

I remain constantly aware, as do my 1890 colleagues, that strong bipartisan leadership in agriculture—and especially in this Committee—is critical to our continued success in educating new professionals, training our workforce, conducting the research necessary for long-term sustainability, and maintaining the primacy of American agriculture in the marketplace of an increasingly smaller, interconnected world. We could not do it without you, and we remain forever grateful for your support.

The CHAIRMAN. And thank you, Dr. Allen, for your excellent report. Now, Dr. McMeans, your 5 minutes are to start whenever you are ready.

STATEMENT OF ORLANDO F. McMEANS, Ph.D., CHANCELLOR, AGRICULTURAL RESEARCH AND EXTENSION CENTER, SOUTHERN UNIVERSITY; DEAN, COLLEGE OF AGRICULTURAL, FAMILY AND CONSUMER SCIENCES, SU, BATON ROUGE, LA

Dr. McMEANS. Thank you, Chairman Scott, and good morning to Chairman Scott, Vice Chair Alma Adams, Ranking Member Thompson, as well as Biotechnology, Horticulture, and Research Subcommittee Chair Stacey Plaskett, and Members of the Committee, as well as the Council of 1890 presidents and chancellors, and the entire 1890 land-grant community. I would like to thank you for this opportunity to testify before you, the House Agriculture Committee, and also share my thoughts on the topic *1890 Land-Grant Institutions: Investing for Agricultural Resiliency, Equity, and Global Impact*. I am Orlando McMeans, and I am the Chancellor of the Southern University Agricultural Research and Extension Center, and Dean of the College of Agricultural, Family, and Consumer Sciences here at the Southern University.

The second Morrill Act, I always like to say, was one of necessity. That is, the establishment, or in some cases, designation of these historically Black land-grant institutions was done because Black Americans at that time did not have access to the majority institutions then of higher education who focused primarily on food, agriculture, the mechanical arts and sciences, and military tactics. The Morrill Act of 1890 gave rise to these historically Black land-grant institutions, and they are collectively and commonly referred to as 1890 institutions, or the 1890s. Let me just say from the first that I am a proud product of an 1890 land-grant institution, Alabama A&M University in Normal, Alabama, or as we called it, and I heard it earlier, the Hill. As a Horticulture major at Alabama A&M in the College of Agriculture, I gained a solid educational foundation. That degree catapulted me to obtain my M.S. and Ph.D. from the University of Illinois, a post-doc at Virginia Tech, and a 21 year career at West Virginia State University, also an 1890 land-grant institution. I owe Alabama A&M a debt of gratitude for providing me with a foundation which yielded these outstanding experiences.

All the universities that I have been affiliated with have all been land-grant institutions, so it has given me an unique perspective on the topic at hand. First, I had a chance to sit in several seats, from a student to a chancellor, including Experiment Station Director, Extension Director, and everything in between. Also a faculty member. I saw all facets of the 1890 academy, but I also saw the

challenges of the 1890s. At the same time, I always observed our resiliency. The 1890s collectively have been well documented as it relates to our priority, but in most cases they stem from issues associated with inequity of funding, and funding disparity relevant to our 1862 counterparts.

One major issue that is been spoken about is the inadequate facilities and infrastructure due to insufficient funding and years of not addressing those infrastructural needs. In particular, many of our research facilities are outdated and in disrepair. I want to acknowledge Congresswoman Alma Adams for her leadership in seeking to address some of these infrastructure issues on the campuses of historic Black colleges and universities. Also, the Association of Public and Land-grant Universities, or APLU, is proposing to establish an Agriculture and Food Infrastructure Grant Program, which was proposed to be funded by at least \$11.5 billion. This number did not come out of the sky. It was one that was done in a research study that assessed all of the research infrastructure and research facilities at all of the land-grant institutions. And so we are hoping that this gains some ground, hopefully in some bill coming up. Also, another vehicle to address infrastructure and facility issues is to target the 2023 Farm Bill, specifically proposing to increase the authorization level for USDA's 1890s facilities program. In order to continue and develop—and implement cutting edge applied research programs, and deliver impactful cooperative extension programs, we must continue to prioritize the 1890 extension and Evan-Allen's research funding line. These capacity funds for the 1890s are core base funding, and thus we continue to seek increases in these lines, and also reauthorization under the next farm bill.

HBCUs have historically developed and implemented research, outreach, and education programs to serve underserved and disadvantaged communities and citizens. What the pandemic has elucidated and exacerbated are those issues, and the disparities as it relates to infrastructure, and access, and health, actually disproportionately affected those communities that we serve. What this means is that 1890s are more relevant than ever. The 1890s have, as a consequence of the pandemic, developed comprehensive, multi-disciplinary educational outreach and research programs to address health and infrastructural disparities in the underserved communities, and states, and regions that the 1890s serve.

All 1890s, and this was stated earlier, receive Federal farm bill funds, but accompanying that is the one-to-one match, or 100 percent match of our Federal funds with state funds. Unfortunately, many of the 1890s continue to struggle with the one-to-one match, and have fallen short, while all states are meeting those one-to-one match requirements where 1862s are represented. The majority of the 1890s still have that challenge, and thus we, in many cases, have to seek a waiver. I would like to pause and thank the Louisiana legislature, just a week ago, who actually stepped up and actually gave us that one-to-one match, so I want to applaud them, and thank them, and the Governor for that fact.

The plight of Black farmers has been well documented, and many of you have read these articles over and over again. Over the last century many Black farmers lost their land by tax sales, emi-

ment domain, and voluntary sales. The number of Black farmers in America had peaked in 1920, and, as a matter of fact, it was 950,000 in 1920, and approximately right now it is 45,500. And so we definitely, as 1890s, will work with President Biden and the American Rescue Plan to definitely try to address some of those issues. It has been historically our area to outreach and support—technically support those disadvantaged farmers. I also want to let you know that climate change is a priority also for the 1890s, and we will continue to seek to address those things related to climate change.

The 1890 community—and I want to take time on this, and I—hopefully I won't go over my time, but I want to thank Congressman David Scott, whose vision was to establish scholarships for 1890s for students wanting to pursue Baccalaureate degrees in Food and Agricultural Sciences. And as a result of this, and you have heard this earlier, we have received numerous amounts of scholarships. This new scholarship rolled out in 2020, and the 1890s are receiving \$752,000 apiece. We were awarded almost up to 800 scholarships, totaling \$11.5 million, and we are happy to say that a number of these were given to Southern students, who will benefit from this. And the most amazing thing about this, this is a scholarship that would not have been available if it was not for the 2018 Farm Bill. So we are looking for your support in reauthorizing this vital and essential educational, academic program.

As I close, I would like to say it is projected that the world will reach a population of ten billion by 2050, and we have to feed these people, and I think that an investment in all of the aforementioned agricultural programs that are being served or delivered at 1890 institutions via Congress and USDA will not only be an investment in 1890s, but an investment in the food security and sustainability of the U.S., as well as globally. Again, thank you to the House Agriculture Committee, specifically the Biotechnology, Horticulture, and Research Subcommittee, for the opportunity to testify here today. We look forward to working with you as we move forward to the reauthorization of the 2023 Farm Bill. We urge you to use this moment, this opportunity, to invest in our 1890 universities, to invest in the future of our communities, and to invest in the people we serve. Thank you.

[The prepared statement of Dr. McMeans follows:]

PREPARED STATEMENT OF ORLANDO F. MCMEANS, PH.D., CHANCELLOR, AGRICULTURAL RESEARCH AND EXTENSION CENTER, SOUTHERN UNIVERSITY; DEAN, COLLEGE OF AGRICULTURAL, FAMILY AND CONSUMER SCIENCES, SU, BATON ROUGE, LA

Good morning, to Chairman Scott, Vice Chair Alma Adams, Research Subcommittee Chair Stacey Plaskett, Members of the Committee, Council of 1890 Presidents and Chancellors, and the entire 1890 Land-Grant Community, I would like to thank you for this opportunity to testify before you and share my thoughts on the topic *1890 Land-Grant Institutions: Investing for Agricultural Resiliency, Equity, and Global Impact*. I am the Chancellor of the Southern University Agricultural Research and Extension Center and Dean of the College of Agricultural, Family and Consumer Sciences.

To put things in context we have to understand that the Second Morrill Act was one of necessity. That is, the establishment of these historically black land-grant institutions was done so because Black Americans at that time didn't have access to majority institutions of higher education who focused on food, agriculture, the mechanical arts and military tactics. The Morrill Act of 1890 gave rise to these HBCU

Land-Grant Universities. They are collectively and commonly referred to as 1890s, named for the year the Act was passed and signed into law.

Let me just say, I am a proud product of an 1890 Institution, Alabama A&M University in Normal, Alabama. We commonly refer to it as The Hill. As a horticulture major at Alabama A&M in the College of Agriculture, I gained a solid educational foundation. That degree catapulted me to attain my MS and Ph.D. from the University of Illinois, and a Post Doc at Virginia Tech. I spent 21 years at West Virginia State University, an 1890 Land-Grant University and I am now in my second year as the Chancellor of the Southern University Agricultural Research and Extension Center and Dean of the Southern University College of Agricultural, Family and Consumer Sciences. I owe all those experiences to A&M. By the way, all five universities that I have been affiliated with are land-grant institutions.

I made the statement about my experiences at the various institutions. It gives me a unique perspective on the topic at hand. First, I had a chance to sit in several seats. Seats you say? One of my favorite books is *Where You Stand is Where You Sit*, by Robert Smith. It simply states the position at a specific phase in your life depicts how you see others and your attitudes towards others in different capacities or seats. The three 1890s I have been affiliated with I have been a student, staff member, faculty, Experiment Station Director, Extension Director, Executive Director, Dean, Vice President, and now a Chancellor. I saw all facets of the 1890 academy and its community. Mainly at all levels, I observed the challenges associated with the 1890s. At the same time, I also observed our resiliency.

As aforementioned, I also attended two 1862 Land-Grant Institutions, the University of Illinois and Virginia Tech. One of the glaring differences I observed was the amount of financial support for academic, research and outreach programs, new and modern facilities and research equipment, technologically advanced classrooms and quality infrastructure. Many of our 1890s cannot boast of these institutional conditions. Let me just say, I want these two institutions to continue to thrive and yield great educational, scientific and public service outcomes. All I'm saying is that we as 1890s are just requesting equity as land-grant institutions.

The 1890s collectively have well documented priorities and in most cases, they stem from issues associated with the inequity of funding and funding disparity relevant to our 1862 counterparts. One major issue is that of inadequate facilities due to insufficient funding and years of not addressing deferred maintenance. Specifically, many of our research facilities are outdated and in disrepair, and thus these institutions are in need of new facilities or at the least renovations to get facilities up to today's technological standards. I want to acknowledge Congresswoman Alma Adams and her colleagues for seeking to address some of these facilities issues on the campuses of Historically Black Colleges and Universities.

Also, the Association of Public and Land-grant Universities is proposing an agriculture and food infrastructure grant program to be funded at the level of at least \$11.5 Billion. This number came out of a study on the deferred maintenance of research facilities at land-grant institutions. We are requesting that these funds be administered by the United States Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA). Another vehicle to address this infrastructure/facilities issue is to target the 2023 Farm Bill. Specifically, increase the authorization level for the USDA's 1890 Facilities Program.

The 1890s are unique, in that we have a mission mandate of research, teaching and Extension. In order to continue to develop and implement cutting-edge applied research programs and deliver impactful and intentional cooperative extension programs, we must continue to prioritize 1890 Extension and Evans-Allen research funding lines. These capacity funds are the 1890s core and base funding and thus we continue to seek increases in these lines and also reauthorization under the next Farm Bill.

HBCUs have historically developed and implemented research, outreach and educational programs to serve underserved and disadvantaged communities and citizens. What this pandemic has done is elucidate and exacerbate the issues around health disparities, infrastructure, and access plaguing those communities. What that means is that we are more relevant than ever. The 1890s, via its extension services and experiment stations, have developed comprehensive, multidisciplinary educational outreach and research program to address health and infrastructural disparities in underserved communities in the states and regions where 1890s are located. Some of these focuses are in the areas of healthy lifestyles, access to healthy foods, broadband, home and community horticulture/gardens, and access to healthcare, to name a few.

The 1890 Land-Grant Institutions who receive Federal formula funds from the USDA have a congressional mandate requiring a 100 percent or one-to-one match of state or non-Federal funds. Section 1449 of ARRERA specifically defines matching

funds as follows, “Matching funds means cash contributions from non-Federal sources made available by the state to the eligible institutions.” Unfortunately, many 1890s continue to struggle with this Federal match requirement. In fact, less than half actually receive the one-to-one match.

The one-to-one matching inequity that is being experienced by 1890 land-grant institutions is not in any way caused by the Federal Government or the U.S. Department of Agriculture. In fact, Congress established the matching requirement so that all land-grant institutions would receive one-to-one matching funds from their respective states. This inequity in funding to 1890s by states has been well documented since the founding of these institutions, and funding at these schools was very poor and not equitable compared to white institutions. While all states are meeting the one-to-one matching requirement for their 1862 institutions, the majority of states do not meet this obligation for 1890 land-grant universities requiring these institutions to apply for a waiver of the one-to-one match requirement or forfeit their funding.

The plight of Black Farmers has been well documented. Over the last century, many black farmers lost their land by tax sales, eminent domain, and voluntary sales. The USDA has admitted to having discriminated against black farmers. The number of black farmers in America peaked in 1920, when there were nearly 950,000. Today, of the country’s 3.4 million total farmers, only 1.3%, or 45,508, are black, according to new data from the U.S. Department of Agriculture released this month. They own a mere 0.52% of America’s farmland. By comparison, 95% of U.S. farmers are white. These farmers and producers live primarily in southeastern and mid-Atlantic states.

As part of President Biden’s American Rescue Plan, about \$4 Billion was set aside for Black, Hispanic and Indigenous farmers to address years of systemic racism and provide legal assistance to farmers of color. In preparation of this rollout, on May 24, Cedric Richmond, Senior advisor to President Biden and Director of the Office of Public Engagement and USDA representatives met in St. James, Louisiana to announce the beginning of the debt relief plan associate with the American Rescue Plan. Farmers and representatives from Southern University were also in attendance for this event. While implementation of this debt relief plan has temporarily been halted, the 1890s, as we have historically, will continue to provide technical support and outreach to our socially disadvantaged farmers.

Climate change has the potential to adversely impact agricultural productivity at local and regional scales through alterations in rainfall patterns, more frequent occurrences of climate extremes (including high temperatures or drought), altered patterns of pest pressure, and changes in seasonal and diurnal temperature. Climate change can disrupt food availability, reduce access to food, and affect food quality. For example, projected increases in temperatures, changes in precipitation patterns, changes in extreme weather events, and reductions in water availability may all result in reduced agricultural productivity.

Science also makes it clear that to avert the worst impacts of climate change, we must address the greenhouse gas emissions from the food and agriculture sectors. This includes capturing and storing carbon in soils, wasting less food, phasing out agricultural chemicals like pesticides and fertilizers, and reducing meat consumption from confined factory farms. With so many crises unfolding on our planet—pandemics, loss of biodiversity, hunger, and poverty—our food system must shift toward practices that increase health, sustainability, equity and resiliency. The 1890s are poised to be players in addressing these issues associated with climate change. Whether that is producing new, stress-resistant and tolerant crops to mitigating the land loss due to erosion and rising waters.

The 1890 community is forever thankful to Congressman David Scott whose vision was to establish scholarships at 1890s for those students wanting to pursue a baccalaureate degree in Food and Agricultural Sciences (FAS) and related fields. Recruiting significant numbers of quality students for the university’s academic programs in FAS is our top priority. The USDA/NIFA 1890 Scholarship Program has and will continue to assist us in increasing our undergraduate enrollment, retention, graduation or near graduation of more baccalaureate degrees, and enhance employment in the USDA and strategic partners’ workforce. This new scholarship rolled out in the fall of 2022, with each 1890 receiving \$752,632. To date, 797 scholarships, totaling \$11,485,288, have been awarded. Which represents 80% of the total dollars awarded. We are seeking your support in reauthorizing this vital and essential educational program.

Over 95% of all students enrolled in Southern University and A&M College, Baton Rouge campus, are supported by some type of financial assistance. The 1890 Scholarship provides apprenticeship opportunities for youth enrolled in college FAS scientific experimentation and extension programming. The project’s success will give

a long-term presence of stimulating research and extension interest in students. The project provides a means to recruit academically talented youth on a more sustainable basis for research and extension careers in FAS. Scholars will be well-trained and equipped to become a part of the USDA and strategic partners' workforce.

As I close, I want to say with confidence the 1890s are an indispensable resource. In fact, it is projected that the world's population will continue to grow and will reach nearly ten Billion by 2050. The new 1890 scholarship program, is an investment in human capital for the food and agriculture industries. Supporting Federal USDA capacity funding is an investment within an investment in addressing COVID-19 related issues, climate change and socially disadvantaged farmers. The 1890s is an investment in not only the food security and sustainability of the U.S., but globally as well.

Again, I would like to thank the House Agriculture Committee, specifically the Research Subcommittee, for the opportunity to testify here today. We look forward to working with you and our colleagues in the university community as we move toward the reauthorizing of the Farm Bill. We urge you to use this moment, this opportunity, to invest in our 1890 universities. To invest in the future of our communities. And to invest in the people we serve. Thank you.

The CHAIRMAN. And thank you for your excellent testimony. And I want to thank all our witnesses and—for your excellent testimony, all of our distinguished Presidents of the 1890 land-grant African American colleges and universities. Thank you very much. Now, at this time Members will be recognized for questions in order of seniority, alternating between Majority and Minority Members. You will be recognized for 5 minutes each in order to allow us to get in everyone that is on our list. And I show it so everybody will know we have quite a few people that want to participate, so we want to be cognizant of our 5 minutes. And please keep your microphones muted until you are recognized in order to minimize background noise. Now let me start, if I may, with my 5 minutes of questions.

Let me just ask each of you very quickly—it is so important that you express, each of you, just how impactful and beneficial the scholarship program is. I want to be able to get that on the record. We are moving, as I said, to make this scholarship program permanent, and in order to do that, we want to make sure we have the evidence to present. We have an extraordinarily talented Agriculture Committee. All of us are working on this, but we have to take it to the full House, and then we have to take it to the Senate. And I can tell you this, I had a wonderful conversation yesterday with my good friend on the Republican side, Senator Grassley, who helped us with the other program, Ranking Member, and so we are looking forward to that. And, as I mentioned, it is not just me with this Agriculture Committee, but all of us worked as a team, and we have some talented people who are anxious to help make this permanent, so I want to be able to get on the record all of what this scholarship program means to each of you.

We have on our Committee such distinguished persons—excuse me for this cold—persons who have worked with us. Our Vice Chair, Ms. Alma Adams, has been very helpful. We also have folks like Sanford Bishop, who is so key, my good colleague from down in Georgia, who is also the Chairman of the Appropriations Subcommittee on Agriculture. I call Sanford my money man. Without him, we can't get the money. So we are all working, and we are anxious to move ahead. And I have my good buddy Austin Scott here, who is standing up strong, and he has asked already, "Is Fort

Valley here?" I said, "Yes, they are." He represents part of that area down there where Fort Valley is.

So let me close my introduction here, where each of you could just very quickly—I don't want to take up much time. I may have time to come back at the end, but if each of you can tell us quickly why this scholarship program is so important to you, what it means to you, and why we need to make it permanent, and go on? Let me start with—Dr. McMeans, we will start backwards, we will work with you first. Very quickly. I only have 2 or 3 minutes left. But please, just—

Dr. McMEANS. All right. Thank you, Chairman Scott. And the one thing that I always use a statement in saying is that this scholarship is a game changer, and your vision of looking at how we recruit individuals to go into a food and ag sciences career, more people are retiring in that area than we are graduating, and so we think it is a game changer here at the Southern University. And in my—and I will just simply close with this, because I know we don't have much time, to see a parent receive a scholarship that was not available or availed to their child a year—well, 2 years ago, and to see this parent break down in tears and saying, "My son has received a scholarship in which, if he keeps his part, and does what he is supposed to do as it relates to the requirements, he will go to school for 4 years free." That is something I wish was around when I was a student at Alabama A&M several years ago. And I just think it is so important—that is why I—my remarks—and my hat is off to you for being a visionary thinker in developing such a program, because it is changing not only these institutions, but it is changing our position globally, as it relates to sustainability of the food and agricultural systems. Thank you very much.

The CHAIRMAN. All right. Thank you. Dr. Jones, Fort Valley?

Dr. JONES. Thank you, Chairman Scott. Let me just say that, in Georgia, the number one industry is agriculture, our ability to invest in this way is having a tremendous impact on our institution, which will have a tremendous impact on industry. As evidenced from our increase in enrollment that I mentioned that was more than 22 percent, the students are there. They just need opportunities, to help finance their education, and this scholarship has enabled that to take place, so we are excited about it. We are looking forward to increasing the number of partnerships that we have with industry. So as Chancellor McMeans said, it is a game changer.

The CHAIRMAN. Thank you. Thank you. Dr. Anderson, very quickly, please?

Dr. ANDERSON. We were able, with the funding, to actually bring 15 freshmen on the campus in fall of 2020, in the midst of COVID, and we are looking forward to, outside of COVID, bringing a lot more students. And we already enrolled ten for this particular fall. But the thing I want to really say is these scholarships change the social mobility of these students for the future, because these students then are able to go forward and become working citizens in the country and contribute tremendously, going forward. Thank you again for the support.

The CHAIRMAN. Okay. Thank you. I have gone a little over my time there, but maybe we will get the responses from Dr. Allen and

Dr. Abdullah as we move on. So, with that, Ranking Member, I will turn it over to you for your 5 minutes. Thank you.

Mr. THOMPSON. All right, Mr. Chairman. Thank you, first of all, to all the members of the panel. Thank you for your leadership. Thank you so much for making a difference. Obviously not just broader scale for rural America, for agriculture, but specifically in the lives of the people that you touch, the students.

Dr. McMeans, as you mentioned in your testimony, you are a product of an 1890 institution. You have been affiliated with five different universities that are all land-grant universities. Can you tell us more about your experience attending Alabama A&M University, and how that motivated you to spend your career serving in a variety of positions to carry out the land-grant mission?

Dr. MCMEANS. Thank you very much, Congressman Thompson. What was interesting was that, prior to attending Alabama A&M, I was just—as a lot of us are as jocks, we were just interested in going to college to play football. But I was introduced to a book by George Washington Carver which gave me interest in looking at plants. But the wonderful thing about Alabama A&M, and I know there are 18 other universities on this call that will say they gave me that attention, that one on one interaction, which gave me a foundation in which I felt not only competent and competitive, but able to move on and pursue a career. And I understood more so the importance of agriculture. And I give so much thanks to Alabama A&M, because it did give me the foundation and understanding.

There are certain things—I was just having a conversation last night with some individuals. I said, “Well, we can do without cell phones, you can possibly even do without a car. You can do without a lot of luxuries in life, but we cannot do without food and agriculture,” and that was taught to me at Alabama A&M. And that sounds so simple, but it is really—as it relates to sustainability and the future of the global population, it is so imperative. And it made me competitive, and also gave me the foundation to go on and be successful. Thank you very much.

Mr. THOMPSON. No, thank you. I open this up to all of our panelists. There has been a lot of talk about the need, and I heard in most of your oral, and I read in your written testimony the need for funding to address deferred maintenance of buildings and facilities at land-grant universities. Can each of you talk more about how your campuses would utilize any funding to improve infrastructure at your institutions?

Dr. ALLEN. Congressman Thompson, I am happy to start. It is Tony Allen. Thank you for the question, I think it is an important one. At Delaware State——*

Mr. THOMPSON. Maybe we will start with—there were two presidents that you were not able to get to, right, with your question?

The CHAIRMAN. Yes. Dr. Abdullah——

Mr. THOMPSON. Yes, let us start with Dr. Abdullah, please.

Dr. ABDULLAH. Thank you. Thank you very much, sir. When we talk about deferred maintenance, that is something that is really important here at Virginia State University, and how we would use

* **Editor's note:** there was an audio malfunction during the hearing broadcast in that Dr. Allen's microphone cut out of the received signal to the Members of the Committee.

additional dollars is to really make up for the fact that for many years our facilities did not receive the kind of funding for deferred maintenance that other schools got. And so when you talk about our facilities for teaching, for teaching of our students, for making sure that our researchers have access to the kind of research equipment and the research labs that they need, then it is critical that we maintain the infrastructure to be able to do the work that we need to do.

One of the real strong keys is that our 1890 land-grant institutions are an incredible investment, and we found, especially during this time of COVID, that we are in the communities where we can make the biggest kind of difference, and our ability to make that difference is directly related to our ability to have the equipment, to be able to have the deferred maintenance on our buildings, to be able to move our initiatives forward. So thank you so much for asking that question. And I will—I know Dr. Allen wants to get in, and so I will make sure he can have some of this time also.

Mr. THOMPSON. Dr. Allen, I am pleased to recognize you for a response to that question on infrastructure.

Dr. ALLEN. Thank you, Congressman Thompson. It is an important question. The one thing I would say to you is that—and to the entire Committee is just to remember that only three percent of all colleges and universities are HBCUs, but we represent about 27 percent of all Black graduates in the STEM discipline, so we significantly punch above our weight, and I think that is important because we do that with resources that are disproportionate to many of our other sister institutions. So to invest in us is to give you a significantly greater return on that investment, particularly as it relates to educational access for all.

Delaware State University, just for context, and this is probably similar to my colleagues, we have significant deferred maintenance issues, upwards of about \$240 million. We have been able to retire some of that debt here recently, but it becomes very, very important for us to maintain our competitiveness, and to make sure that our faculty, staff, and students have the facilities that make this not only a great place to work, but a great place to do research, and make an impact on the communities we serve.

It is also important to our research interests. So, you all know that there are three R&D classifications for research status, R1, R2, and R3. There are 11 HBCUs that are R2 status, but none are R1, which is the highest you can have. I know Congresswoman Adams knows this well, through the IGNITE Act, if we are able to build up our infrastructure, particularly as it relates to our classrooms and our labs, it gives us significant import for one of our institutions, and hopefully more than one, to elevate to the R1 status. So there are lots of reasons as it relates to systemic inequities, but also the value of the return you get by investing in HBCUs and our infrastructure capacity.

Mr. THOMPSON. Dr. Allen, thank you so much. My time has expired, so, Mr. Chairman, I yield back.

The CHAIRMAN. Thank you very much, Ranking Member. And now I recognize the distinguished lady from North Carolina, Ms. Adams. You are recognized for 5 minutes.

Ms. ADAMS. Thank you, Mr. Chairman, again, for your leadership, and to Ranking Member Thompson for hosting the hearing today, and to our witnesses. Throughout the years I have visited several 1890s institutions, and noticed the deterioration of older buildings and classrooms on campus. I mentioned that I served 40 years on a campus in Greensboro, North Carolina, at Bennett College, and I think it was the last 10 years of my tenure that I had air conditioning in my building.

But I know that renovating and securing new buildings and equipment is necessary in order to meet the challenges and opportunities for the 21st century, and so this is the reason that I introduced the bipartisan legislation, the IGNITE HBCU Excellence Act, to help build and rebuild the infrastructure of our campuses. This legislation would make the sort of investments in these institutions to rectify over a century of systemic neglect. And, Mr. Chairman, before I continue, I ask unanimous consent to insert two letters into the record, a letter from a chancellor that could not join us today, my chancellor at North Carolina A&T, Chancellor Harold L. Martin, Sr., and then also another letter supporting the IGNITE HBCU Excellence Act from several prominent companies.

The CHAIRMAN. Without objection.

[The letters referred to are located on p. 65.]

Ms. ADAMS. Thank you. So—thank you very much. So in terms of the questions that I would like to ask, Congress is in the midst of debating an economic package, Dr. Jones, to rebuild our country's infrastructure, and in your testimony you mentioned the major issues of concern to all public institutions, receiving support for food, agriculture, and natural resource research's aging infrastructure, and the lack of funding for maintaining facilities. So could you tell us what are the top priorities for infrastructure on your campus, and what are your deferred maintenance needs?

Dr. JONES. Thank you, Congresswoman Adams. We have significant challenges related to deferred maintenance, somewhere upwards—about \$40 million that we need to sort of get caught up in our aging—some of our aging facilities. We are a historic campus. Much of our campus sits in a historic quad, and, as you can imagine, those facilities in particular probably have much greater challenges it—with infrastructure systems and mechanical systems, *et cetera*. So we have a tremendous need in upgrading those systems to preserve these incredible assets. In addition, we want to begin to update some of our laboratories and classrooms. When you think about the significant increase, or significant investment, in the scholarship program, we want to make sure we have facilities that match these scholars, and at the same time providing tremendous facilities for our researchers as well, so they can do the important work that they come here for.

Ms. ADAMS. Thank you very much. Dr. Anderson, as you know, the 2018 Farm Bill authorized the Secretary of Agriculture to recognize at least three Centers of Excellence led by 1890 universities, and in May USDA announced funding for the centers at University of Maryland Eastern Shore, Southern University, Tuskegee, and North Carolina A&T. So would you describe how you see these centers of excellence benefitting the entire 1890 system, and the communities that you serve?

Dr. ANDERSON. Congresswoman Adams. Yes, the Centers of Excellence—and we will be partnering with the other 18 1890 institutions, so all of us will work together in a collaborative fashion. This will allow us to actually enhance the research and the educational needs in all of our particular states, but also continue to—with proper funding there. But I also want to add to the infrastructure question, because that is a critical—with your IGNITE Act. At our university we have 88 buildings, which actually come—the average age of all of them is 44 years, so our deferred maintenance is over \$90 million. At UMES we are poised to be able to add a veterinary science program, a veterinary science school, but we need funding to make sure we change our buildings for that.

I will give you one real life example. When I came here in September of 2018, our library was closed because the roof had leaked so bad, and it was closed for 6 months because of all the damage that had happened with the rain. Imagine a university with no library for their students for 6 months. That is how bad our buildings are, and so I wanted to make sure I added that, and say thank you very much for the IGNITE Act.

Ms. ADAMS. Well, thank you, and, Mr. Chairman, it looks like I am out of time, but I would like to just submit the questions that I had. I had one for Dr. McMeans and Dr. Abdullah as well, in terms of the one-to-one match. So I am going to yield back on that. I know we have a lot of folks that have questions, but thank you all so much for your testimony and for your answers today.

The CHAIRMAN. Thank you, Ms. Adams. And now I recognize my distinguished colleague from Georgia, Mr. Austin Scott.

Mr. AUSTIN SCOTT of Georgia. Thank you, Mr. Chairman, and I want to specifically apologize to Dr. Jones, who is from my area. And I had to slip out a little while ago because of an Armed Services Committee, and after the questions I will have to slip out again because of an Armed Services Committee hearing. But I want to, Dr. Jones, one, say hello, and two, bring Dr. Anderson into the conversation. Both of you mentioned that the rate of recruitment for students in agriculture has been on the rise. While you have not seen the rise in other majors, Dr. Jones, you specifically mentioned the scholarships, the 1890 Scholarship Program, that my colleague David Scott, Chairman Scott, has—and several others worked very hard on, but you deserve a little extra credit there, if you will—for the scholarships. But could you both speak to the rise in the recruitment of people for the agriculture programs?

Dr. ANDERSON. I will be happy to start. First of all, the scholarship funding was very instrumental in helping us increase the student recruitment in that area, but we also had other strategic initiatives that we did. But we actually work with our students in a—in MANNRS, and we have summer students that come on our campus in summer camps. Our agriculture students are already here. In fact, this past Sunday I was visiting with them. We have 20 students who have joined us from various high schools across the state to participate in that program, so it is one of the ways it helped us really increase the enrollment, and that is why I know that we are going to increase it again significantly this particular fall, and urging you to continue with that funding. I will yield to President Jones.

Dr. JONES. Great to see you, Representative Scott. I appreciate all of the support that you provide. In terms of the scholarship, we did an incredible job of bringing together many stakeholders at the institution to ensure that we had an aggressive plan in place. We looked at how we could, in some ways, rebrand ourselves, in terms of helping students to better understand the tremendous opportunities available to them in these incredible agricultural fields. But that message, and our admissions team, and several of our faculty, were part of this process, and those efforts—we learned a lot from that process, and it is my hope that, as we move forward, and understanding the resources that are ahead of us, that we will be in an incredible position to continue to strengthen our recruitment efforts, and we are already seeing that as we look at the fall. Our challenge is going to be having more students than we have funding available as we move forward. So exciting effort, and we are really blessed with the enrollment results.

Mr. AUSTIN SCOTT of Georgia. I look forward to hearing more about the deferred maintenance, and other issues that we can help you with. You have done a pretty good job of creating partnerships with Georgia Power and Ford Motor Company at Fort Valley State University. Could you speak to the value of having the private sector partnerships, and what that means for your graduates, and their ability to literally walk from their receiving a diploma straight into a job?

Dr. JONES. That is absolutely—and thank you for the question. That is essential, and, again, an area that we are ensuring that we are putting greater efforts in. These partnerships with industry are so important. These recent partnerships with Ford, and Chevron, and our Air Force base here are monumental, and they are yielding great results. And, without them—you can't bring these scholars to your campus without providing these kinds of opportunities to them. And so we are continuing to look at ways to partner—we are beginning to work with the poultry industry as well to look at ways where we can enhance these kinds of opportunities. So the efforts with industry are beginning to pay off tremendously, and those are essential as we move forward.

Mr. AUSTIN SCOTT of Georgia. Thank you, Dr. Jones. And my time has about expired, but those partnerships between industry and the HBCUs is very valuable in our country, and it is not just about the education, it is about the opportunity that comes with the education, so I look forward to seeing those partnerships continue to expand, and I yield the remainder of my time, and appreciate all of you taking time to testify before us.

The CHAIRMAN. Thank you, Congressman Scott. And now I recognize the gentlelady from Virginia, Ms. Spanberger, 5 minutes.

Ms. SPANBERGER. Thank you very much, Mr. Chairman, and I am so pleased to have the chance to join you all today. And I am especially excited that we have Dr. Abdullah here from Virginia State University. It is important that we are discussing our 1890 institutions, and the valuable work that they do in advancing the next generation of agricultural innovation. I would like to begin my question for you, Dr. Abdullah. You mentioned in your opening statement the long track record that VSU and other 1890 institutions have in providing a strong return on Federal investments to

the communities that you and your fellow Presidents serve. But locally in Virginia, I represent the district just next door to where Virginia State is located in Virginia's 4th District—in Virginia, and in central Virginia, we are well aware of the robust course catalogue, and strength of VSU, but I think focused on the actual scope of agricultural innovation is something that I know central Virginians would love to hear more about. So could you expand, specific to Virginia, specific to our community, a little bit more on what Federal investments in VSU and other 1890 institutions mean for our local communities, in particular Virginia's agriculture sector?

Dr. ABDULLAH. Well, thank you so much, Representative Spanberger, and I wanted you to know that I was trying to do a PowerPoint presentation earlier, because one of the highlights was a picture of us here at Virginia State University, so thank you so much for your support of the issue. We are very proud of the work that we do in ag research in our cooperative extension program, supporting the many socially disadvantaged and small farmers and ranchers here in central Virginia. And you are absolutely right, there are so many in the Commonwealth of Virginia who really understand the quality of work that happens here at VSU, and are recipients of the work that happens in and around all of our communities.

And, one of the things that makes me so excited is that we have someone like you, who is on the Committee, who really understands what we do at VSU. We have Representative David Scott, and Representative Al Lawson, who I know are both graduates of Florida A&M University, who understand the 1890 land-grant programs. And then to have Deputy Secretary of USDA Jewel Bronaugh at USDA now means that we are going to be able to really get the word out now about the great work that we do. So I firmly believe that our institutions, our 1890 institutions, provide some of the best bang for the buck for the Federal dollar in terms of helping—whether it is helping students here at VSU be able to chase the American dream, to come from their backgrounds to become productive citizens, and/or to help socially disadvantaged farmers and ranchers to become an important part of our food ecosystem.

So we believe that our network of institutions, our infrastructure, is built to be able to do any number of things that really support agriculture, and to support this country, and we are really proud to be able to be here to share that with you. And so thank you so much for your question.

Ms. SPANBERGER. And, Dr. Abdullah, for the central Virginians who themselves may not be in the agricultural sector, which, of course, is a major driver of Virginia's economy, could you speak just a little bit more about the extension program that VSU has, and the advantage that gives to Virginia's farmers in the larger economy?

Dr. ABDULLAH. Yes.

Ms. SPANBERGER. A bit of a primer, if you would, in our time remaining about what those programs do.

Dr. ABDULLAH. We work very closely with Virginia Tech, and Virginia's Cooperative Extension Program, on initiatives that in-

volve 4-H, our Small Farm Outreach Program, again, led by Mr. Crutchfield, who is doing incredible work here at Virginia State, and other areas to make sure that we can impact young people, and young at heart people, who are either interested in ag, ag business, and the ag economy, or interested in learning more about agriculture. And so we are very excited about those programs, and Dr. Ray McKinnie, who is our dean here of our College of Agriculture, also serves as extension director, and he does wonderful work. And so I am very proud of all of the work that all of our faculty and staff do here at VSU.

Ms. SPANBERGER. Excellent. Well, thank you so much. Certainly, having visited the campus multiple times, and being aware of the tremendous work of extension programs, I thank you, and the fellow Presidents and witnesses on the line, for the work that you all do, certainly ensuring that when beginning farmers, socially disadvantaged farmers, somebody who wants to get back to the land and really begin that small business of farming, the work that you all do is so tremendous in helping them have success. So, with that, Mr. Chairman, I yield back, and I am really grateful for the topic of this conversation today.

The CHAIRMAN. And thank you, Ms. Spanberger. And now I recognize for 5 minutes the gentleman from Indiana, Mr. Baird.

Mr. BAIRD. Thank you, Mr. Chairman, and I thank the Ranking Member, both of you, for holding this meeting, and I really want to thank the witnesses for their contribution to the discussion here today. And, the contribution that the land-grant universities have done to improve the quality of life for our communities through education, research, and the Cooperative Extension Service has just been invaluable, and this has been particularly true for the agricultural industry.

So I guess I want to start my questions with Dr. McMeans. Southern University is the home of the 1890 Center of Excellence for Nutrition, Health and Wellness, and the Quality of Life. So, Dr. McMeans, can you tell or talk more about the work that Southern University is doing through the Center to help address diet-related health diseases, as well as through nutrition research, teaching, and the Extension Service? Dr. McMeans?

Dr. MCMEANS. Thank you, Congressman. Southern University, and in particular Southern University Agricultural Center, was fortunate enough to receive one of the Centers of Excellence, as it relates to USDA. And the focus of it really came out of the pandemic, pretty much, so—but we already knew, as 1890s, that the communities we served were disproportionately impacted by certain health disparities. And so what we did is we are partnering with North Carolina A&T, as well as Tuskegee, to look at those issues that are impacting.

And one of the unique things about this program, some of the presenters talked about the fact that we have a tripartite [inaudible] mission, and I have been at five different land-grant universities. Sometimes they are connected, and sometimes they are disconnected. But in this instance, we have the research, we have the teaching, and we have the extension and outreach portion, all working together to address those disparities that are impacting African American communities as it relates to health. From the re-

search standpoint we are looking at metabolomic type of issues, dealing with the cellular level, and how these individuals and communities are impacted. Also, from the teaching standpoint, to make sure that our students are prepared to go out and teach current research-based information to individuals as it relates to dietetics, healthy lifestyles, and what have you. And, of course, from the outreach standpoint, we are collectively looking at best case practices on how we can address the issues associated with diabetes, obesity, and all of these other areas that made us a little bit disproportionately susceptible to some of the issues associated with this pandemic of COVID-19.

So I am really excited about that. We are just kicking that off, and we just started having our meetings, and my hope is that this is not something that is just going to remain between Louisiana and North Carolina and Alabama, but this would be something that the entire country would benefit from as we start to get feedback, information, and data as it relates to our plan, so thank you very much for that question.

Mr. BAIRD. Well thank you, and I think that is a very important aspect, and I like your perspective about the various aspects of a university, being the education, the research, as well as the cooperative extension, and having them all work together to deliver services to constituents and members of the community.

I guess I would like to move on to the idea of the importance of the land-grant universities to the state, and so with that I would like to go to Dr. Anderson. Would you care to address the importance of the land-grant universities, in your perspective, to the state?

Dr. ANDERSON. Very much so, thank you very much for the question. Having come out of a land-grant university, at Purdue University, myself, and also having worked at four other land-grant universities, I can say that the work that we do to help the local farmers and the community is very critical. And here at UMES, with our center that we have received funding for, the Centers of Excellence for Global Food Security and Defense, we are working with the other 1890 universities, and actually helping the farmers improve their systems. And we are doing research in things like pest management to try to help them understand how to increase their knowledge in this particular area, but also how to minimize the pests that are impacting the food that they are eating, and they are growing.

The other thing that we are doing, as far as land-grant institutions, is looking at climate change, and trying to make sure we look at what is happening in those particular areas, and leveraging in emerging technologies in those so that all of us work together in a unified way to help and impact those particular issues. Thank you very much for the question.

Mr. BAIRD. Thank you very much, and I have gone over my time, so I yield back, Mr. Chairman.

The CHAIRMAN. Thank you very much, Congressman Baird. And now we will hear from the gentlelady from Connecticut, Mrs. Hayes.

Mrs. HAYES. Thank you, Mr. Chairman, and thank you so much to our witnesses for being here today. While Connecticut is not

home to any 1890s land-grant institutions, our 1862 land-grant university, the University of Connecticut, works to pursue connections with graduates to support a diverse group of new and beginning farmers, agricultural educators, and researchers. This is extremely important in a state like Connecticut, where about $\frac{1}{3}$ of our residents are residents of color, yet there are very few minority farmers.

My question actually could be for anyone on the panel, but I will ask Dr. Abdullah, how would you describe the role of the 1890s land-grant universities in ensuring equity both in access to higher education, and for ensuring equitable employment and business opportunities within the U.S. agricultural sector?

Dr. ABDULLAH. Thank you very much, Representative Hayes. I would love to say that, as an 1890 land-grant institution, that we have more Connecticut residents at Virginia State than any other institution, but I have a sneaking suspicion that my colleagues from Delaware and Maryland are going to dispute that, so I won't say that out loud. Thank you so much for your question. I really firmly believe that our 1890 institutions are critical in access. If I can go back to take the question about the scholarships, one of the important things about the scholarships, which ties into access, is one of the things that the scholarship program allows us to do is you have young people who are motivated, who are intelligent, who have the ability to do the work who might not have the finances to be able to finance an education. All of our 1890 institutions are among, or are possibly the most important institutions in our state, and so we try to keep our tuition down as low—and we provide a quality level of instruction for our students.

But the other thing that the scholarship program does is it also starts to attract students who come from urban environments, who have the wrong understanding of what agriculture is so they can understand what it means to have a career in the agricultural sciences and ag business. The scholarship program allows students to kind of look at ag and go, "Wait a minute, I think I can consider agriculture as a career moving forward." It is critically important that all of our institutions are educating—our Pell eligible rates, all of them, are above 60 to 70 percent. We are all proud that our institutions are among the nation's leaders in providing access to the American Dream for all of our citizens here in the United States of America.

And, your question also points out the one place that we can have—partnerships and collaborations are in those states that don't have an 1890 land-grant institution. For students who are interested in pursuing careers in agriculture, and maybe they want to do that in an 1890, but there is not an 1890 in their state, to be able to work closely with the 1862 in that state so that we can provide quality careers and opportunities, and students—send young people back—send citizens to Connecticut to be able to move the economy of Connecticut. And so thank you so much for your question.

Mrs. HAYES. Well, thank you for that. Here in Connecticut we have—we also have many farmers who work in urban agriculture. Currently our UConn extension is looking to bring on new staff to focus on urban agriculture and work with 4-H programs to pro-

mote food and agricultural literacy in underserved areas. This is an exciting opportunity for our state, and I want to work to help support these geographically diverse communities in Connecticut District 5. Also, on my other Committee of Education and Labor, where we are talking about career and technical training, I am really hoping that we will find funding to promote agricultural programs at the high school level, and in our trade schools. I guess my—with the remainder of my time, Dr. Anderson, can you tell us how your institution partners and collaborates with organizations like 4-H, FFA, Minorities in Agriculture and Natural Resources, and Related Sciences, or different programs that bridge a partnership between institutions and communities?

Dr. ANDERSON. Thank you, Representative, for the question. Can you hear me all right?

Mrs. HAYES. Yes.

Dr. ANDERSON. I had a slight broadband problem, so they came and fixed it. Yes, we have students come into our programs from MANNRS. We actually have, annually, students enter the campus to actually be on summer programs, but also work with them throughout the year. We bring these individuals to our campus to meet with our faculty. They work hand in hand with them, with their research projects, right there in the lab. In addition to that, we have a working farm on the campus, so the students are able to learn from the farming, and our 4-H students mixed with them at the same time. So it is really a nice collaboration because you are bringing middle school, high school students to the campus to be here with our students who are freshmen, sophomores, seniors, *et cetera*, and actually planning and working together. They actually help them learn what the food—better food preparation, and also pesticides, as I mentioned earlier, and how to control that.

Mrs. HAYES. Thank you so much. Mr. Chairman, I apologize for going over, but that was music to my ears, to bring these programs to middle and high school students. Thank you so much. I yield back. I am sorry, did you hear me? I apologize for going over, Mr. Chair, but that answer was music to my ears, about bringing this programs to middle and high school students. I yield back.

The CHAIRMAN. Yes. Isn't it great? It is bringing music to my ears as well, the great contribution that the scholarships are providing. And now if I may go to the gentleman from Georgia, Congressman Rick Allen.

Mr. ALLEN of Georgia. Thank you, Mr. Chairman, and again, thank you for getting us together. Obviously we have a lot of work to do on the Agriculture Committee—

Mr. RUSH. I am ready.

The STAFF. We just wanted to let you know you are next.

Mr. RUSH. All right. Thank you.

Mr. ALLEN of Georgia. Okay. So—can you hear me okay? The—something happened there. Can you all hear me? Mr. Chairman, can you hear me okay?

The CHAIRMAN. Yes, I hear you.

Mr. ALLEN of Georgia. Okay.

The CHAIRMAN. Let me just remind all Members, mute yourself when you are not there. We don't want to interfere with anyone speaking. Thank you. Go ahead.

Mr. ALLEN of Georgia. All right. Well, thank you so much. Well, again, thank you for getting us together today. Obviously, education is important. My family was involved in education, and—of course, I too serve on the Education and Labor Committee, and I am having dual hearings, which is why I am virtual. I was trying to get down to the hearing, but then got caught in the other hearing. But, anyway, these things happen while you are in Congress.

Obviously, we have a lot of issues we have to solve, and, Mr. Chairman, one of the biggest issues, and President Zippy Duvall brought this out in a hearing some time ago, President of Farm Bureau, it is labor. And, of course, it is very critical, as far as education is concerned, but certainly what the American Rescue Plan has done is created—we have ten million people unemployed, we have 3½ million people on enhanced unemployment. And, of course, we addressed this in the last farm bill, but we have 20–25 million trapped on welfare, and there are lots of opportunities to educate and retrain folks, and give them the respect that they deserve in holding a good job. Of course, in Georgia our governor has rescinded the Federal unemployment benefits, and I think that ends next week, so hopefully this will get folks back to work.

But there are also supply chain disruptions with prices, we have a problem with that, and then, of course, there are other things about the tax policy that is coming out that could create a tremendous burden on our farmers as far as inheritance taxes. And then, of course, the *Waters of the U.S.* Rule is coming back up. And, too, we could address today, in this hearing, the cost of higher education. Many people in this country now believe that it is unaffordable, and the cost is outrageous, and we have students going in debt that they should never encounter. But—because the worst thing—the worst burden is debt.

But—and I don't know who to direct my questions to, so I will just ask first, in this current employment picture, what the Presidents—and, of course, we have Paine College in my district, and—very proud of Paine College, and we have done a lot to help Paine get to where it is today. But what opportunities are you seeing for your students out there today in this post-COVID economy? Are you seeing a lot of opportunities for your students? Is it creating a lot of interest? And who would like to address that question?

Dr. ALLEN. Congressman Allen, I am happy to—

Dr. MCMEANS. I can address it, you can go ahead, you can go ahead. Yes.

Dr. ALLEN. Congressman Allen, I am happy to answer the question from our perspective. At Delaware State University, we have seen significant increases in interests in health and behavioral sciences. You may know that, as of July 1, we will acquire a small private liberal college down the road, Wesley College, and build our new College of Health and Behavioral Sciences there, which will add significant increases of healthcare practitioners, nurses, and medical professionals and the like. That is been a significant boost for us. We also know that, relative to the job market, there is significant need and shortages in those fields, and because of the pandemic we have seen a significant increase there.

Secondarily, I would say on average we have also seen a significant increase in our graduate profile overall, and specific to agri-

culture. So a lot of our students, at the graduate level, are choosing to continue to pursue their education in ag and ag-related sciences. We think that bodes well for research and practitioner training overall, particularly in our extension programs. And then overall we are very happy to say that 86 percent of our graduating students find themselves employment in their discipline or in grad school, 6 months after they graduate. So I think we are all headed in the right direction. I think that is why 1890 land-grant institutions are so important, because—

Mr. ALLEN of Georgia. Good. That is what I wanted to hear. That is fine.

Well, I tell our educators, it is your responsibility is to get our folks employed. The other thing I want to do, and I will leave you with this, and I am out of time, but we have to address the cost of higher education, and I want to know what this Congress can do. Is it a regulatory issue, or what is it causing all of this increased cost? And hopefully that can be addressed at this hearing. With that, Mr. Chairman, I will yield back.

The CHAIRMAN. Thank you very much, Congressman Allen. And now we will turn to the gentleman from Illinois, my good friend Bobby Rush.

Mr. RUSH. Well, thank you, Mr. Chairman. Mr. Chairman, it is very heartening to hear today about the research happening at the 1890 land-grant institutions. Today it strengthened my belief that when it comes to agricultural innovation in our workforce, America is not only competitive in the global economy, but it is indeed the best in the world. Earlier this month, Mr. Chairman, I saw firsthand what our students are accomplishing when I toured the Chicago High School for Agricultural Sciences, which is located in my district. These high school students are competing annually at the national level at the Annual Agriscience Fair, and their talents truly blew me away.

Dr. Allen, are there ways that we can provide opportunities for our students at the 1890 land-grant institutions, or even earlier, at the high school level, to compete and collaborate globally, given how this world that we live in is so interconnected and inter-related?

Dr. ALLEN. Congressman Rush, thank you for the question. It is an important one. I should say at Delaware State we actually operate a high school. We call it the Early College High School. There are about 425 students in that school from ninth to 12th grade, and while they are in that high school, they are able to accumulate upwards of 60 college credits before they are ever admitted into any university. So think of those students coming out of that institution into a university as either a second semester sophomore or a first semester junior. And we are really proud of that, and built that program because we wanted to build a pipeline even earlier than when they started college.

I could also say that many of those students have gone into our College of Agriculture, Science, and Technology, and have been intrigued not just by what they would think of as the typical agricultural discipline, but also by ag business, and the opportunities that lie ahead there. We also have very good relations in about 23 different countries, where we are able to expose our students with

student and faculty exchanges that give them a sense of the global community and global experiences.

Mr. RUSH. Thank you. Now, I am running out of time, so I want to move on, if I might be able to, all right? I recently introduced the Farm Subsidy Transparency Act (H.R. 3794/S. 1980), along with Senator Booker, which will require USDA to track and publicly disclose the race and gender of all individuals who receive or who are denied farm assistance. This bill is in response to the decades of discriminatory lending practices which, intentionally or otherwise, put Black farmers at a serious disadvantage compared to their White counterparts. Dr. Abdullah and Dr. McMeans, will increased transparency help you better assist minority farmers in receiving financial aid, and how can this Committee be of assistance to you and to others?

Dr. ABDULLAH. Thank you very much, sir, Makola Abdullah. It definitely would. Understanding and knowing what is happening in the world so that we can begin to make a difference—and so without capturing the right data—the whole reason that we know that there have been discriminatory practices in lending is because we have that data in lending, and so that is important.

Dr. MCMEANS. This is Orlando McMeans. And, this is something that is close to me. Recently, President Biden actually sent a representative down to actually talk to us about the importance of this very issue, and Congressman Cedric Richmond, by the way. And we had an opportunity to have dialogue, and talk with farmers, and that is—was one of the questions that they were asking. And I think that our relationship with USDA—it is imperative that we have open and frank conversations, that we demand on behalf of our socially disadvantaged farmers, that there be transparency.

And, like President Abdullah said, it is obvious what was going on for the last 100 years or so, and we have to get down to what is causing these issues, where we are getting our loans at a lower rate than counterparts. It is my hope that the 1890s will be working closer not only with USDA in D.C., but our local USDA and state agencies to work to make sure that there is transparency, and we are an asset and an advocate to them being more successful, and their success rate, as it relates to loans and other support for farms. And so we will be looking at that heavily, and also pursuing other endeavors, as it relates to the 2023 Farm Bill.

Mr. RUSH. Well, I thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Thank you, Mr. Rush, for those comments. Now we will recognize the gentleman from California—

Mr. LAMALFA. Is that me, Mr. Chairman?

The CHAIRMAN. I am sorry, Mr. Moore from Alabama. My mistake.

Mr. MOORE. Thank you, Mr. Chairman, and thanks to the panelists for speaking today before the Committee, and for describing the good work that each of you guys are doing for your students, and for the larger agriculture community. I am proud to represent a state that has two of the 1890 land-grant universities, obviously Alabama A&M, and Tuskegee University. And in my hometown we have a monument to the boll weevil, and that is because of the work that George Washington Carver did at Tuskegee University to help us figure out all the uses for peanuts, we were glad to get

away from cotton and get to peanuts, so we have a debt of gratitude in our state to, obviously, Tuskegee University.

And, Dr. McMeans, first, it is great to see an alumni from Alabama A&M in such position of influence, and testifying before this Committee on these issues today. I will ask this to you, Dr. McMeans, and then some of the others may want to chime in, but how do each of your institutions collaborate with the other land-grant universities in your state to best meet the needs of your state and its students, and to avoid the duplication in efforts on research and extension?

Dr. McMEANS. Thank you for that question. I have been very fortunate, because my LSU counterpart, Dr. Bill Richardson, and I knew each other while I was at West Virginia State, and one of the things that you have to understand is that—I tell people all the time, Alabama is very unique because we have three land-grants, because most of us at the most have two, and we have so much work that has to be done, even if we had three or four land-grant institutions, can we really get all the work done?

But the thing about it is that—one of the things that we are doing is we are working on a joint plan of work. We are working on a joint strategic plan, and we are looking at those areas where we are strong at, and our strengths are working with disadvantaged and minority farmers, and LSU advantages are working with big commodity groups, and big farms, and what have you. And we look at those niches where we fit, they fit, but there is a lot of overlap when it comes to youth development.

And there was a question earlier about what are we going to do about the workforce for agriculture in the future? Well, we are both working in that area, because we have to do what we can to recruit and graduate individuals who will be working in the food and agricultural sciences, and related fields. It is imperative that we work together, that we support one another. Some areas we are going to duplicate and overlap because the need is so grand, but those other ones are niches. And the other thing is that we go to the legislature together. We support one another. And we have to do that. And I know once it becomes—when you start dealing with extension, and things of that nature, sometimes—yes, territorial—may jump into it or what have you, but in the best interests of the collective communities and clientele that we serve, it is in the best interest that we work collectively and collaboratively in those areas.

Dr. ANDERSON. Representative, I would like to answer the question as well, please? Thank you. Thank you for the question. Here at the University of Maryland Eastern Shore we are part of a system of 12 institutions, and the University of Maryland College Park is our flagship institution, so we have the luxury of being able to work very collaboratively with one of our sister institutions, who is also the flagship. We do that in a number of ways. Because we are located on the Eastern Shore, 85 percent of the farmers are here in our particular area, and so our extension groups from both of the institutions work extremely well, going out, helping educate the socially disadvantaged farmers. And because we also are surrounded by the coastal bay areas and the peninsula, we actually help do work with our local farmers not just with—many people

think of us as poultry, but also with what is happening in the aquatic area.

And so our two institutions have annual meetings together, our faculty have collaborative research and teaching that they do, using some technology like this. We do have broadband issues here on our part, you probably noticed that from me today, but those are the kind of things that we merge and work together on, and continue to try to have those kind of partnerships. So thank you again for the question.

Mr. MOORE. Okay. Thank you, Mr. Chairman. If Mr. Abdullah, would you like to answer? Yes, please go ahead. Please do. I have time, so go ahead.

Dr. ABDULLAH. Thank you, sir. Here in Virginia, Virginia State University and Virginia Tech, my colleague from Virginia Tech, Tim Sands, and their agricultural staff, along with ours, led by Dr. McKinnie, I work very closely together to make sure that, again, as Dr. McMeans mentioned, that we don't duplicate programs, and that we use the investments from the state, and the investments from the Federal dollars, to help farmers and ranchers here in Virginia, that we use those together in a collaborative manner. Just in the past couple of months we all met with the entire extension staff across Virginia to kind of share with them the kind of collective vision for the Commonwealth of Virginia, and to learn from them. And so we work, whether it is at the President level or at the staff level, there is a lot of collaboration to make sure that things work well.

Mr. MOORE. Thanks to our panelists. Mr. Chairman, with that, I am out of time, so I will yield back.

The CHAIRMAN. Thank you very much, Congressman Moore. Now, if I may, the lady from New Hampshire, my friend, Ms. Annie Kuster. You are recognized.

Ms. KUSTER. Thank you so much, Mr. Chairman. I appreciate your leadership in elevating racial justice issues on our Agriculture Committee this year. And much like our discussion on the state of Black farmers back in March, this hearing is timely, and long overdue. Through the American Rescue Plan, and other measures, we have been working to address systemic inequity facing farmers of color, and in the face of historic discrimination, the number of Black farmers in our country, and the amount of land they own, has shrunk dramatically, and is continuing to decline. It is incumbent upon Congress and the USDA to reverse this trend. It is not only a question of fairness, but also an important investment in the future of our agricultural economy.

In order to strengthen our food supply for decades to come, it is imperative that all farmers and producers, regardless of color, have a truly fair chance to thrive as growers and producers. A key piece of this issue is the 1890 institutions, as well as other historically Black colleges and universities, which help passionate and innovative young people hone their skills and develop promising careers in farming. With the average age of farmers and foresters climbing, and countless acres of ideal farmland needing to be transitioned to a new generation in the coming years, the role of 1890 institutions has never been more critical.

On that note, Dr. Abdullah, I would like to ask you about a point raised in your testimony. You mentioned that 1890 institutions have a 131 year track record of providing a strong return on investment for every dollar supporting 1890 programs. Could you elaborate on the incredible value that 1890 programs provide to the country as a whole?

Dr. ABDULLAH. Thank you so much. Our programs at our 1890 institutions, whether they are addressing teaching, research, or extension, what you will find is that all of our programs are addressing the social needs and the socially disadvantaged needs of our communities. When we talk about education, again, I wanted to highlight the Congressperson who was talking about the high cost of college education, our 1890 institutions are among the most affordable institutions in the country, and we do that on purpose because we understand how important it is that we provide quality access for students. Our research and extension programs are concentrated on making sure that we provide critical feedback and critical input for socially disadvantaged farmers and small farmers. That allows more of our farmers, more people, to have access to the food ecosystem, and to be ready for the burgeoning economy.

We want to make sure in every facet of everything that we do that we are part of making—people can achieve the American Dream, and that is what we have been doing for so many years. And we firmly believe that a more—a greater investment would then beget a greater return, that we have done incredible work with resources that I believe are commensurate with the level of expertise that we have on our campuses. We can educate more students, we can provide more and better research and extension for our small and disadvantaged farmers. We can do that with your help. Thank you, ma'am.

Ms. KUSTER. Well, thank you so much. Dr. Allen, we talked a bit about the incredible research coming out of 1890 institutions. In your written testimony you described some of the impacts the State of Delaware has experienced as result of climate change, including increased frequency of Atlantic storms and soil acidification. Can you take a moment to describe the climate impacts you are witnessing across your state, and how your university is working to adapt to and mitigate climate change?

Dr. ALLEN. Thank you, Congresswoman, and if I could just add on to President Abdullah's commentary about the value of 1890 land-grants, I will turn your attention to the social mobility rankings in *U.S. News and World Report*. That mobility ranking effectively says can you graduate the lowest resourced students at the same rate that you can graduate all your other students? Most HBCUs in the country scored 100 out of 100 on that particular notion. So, again, the notion of social mobility for us is paramount to who we are, and clear with our mission.

With respect to your question about climate change in specific, since 2001, Delaware has been hit by 31 hurricanes and tropical storms. You probably know that a lot of our tourism economy relies on our beaches, and there has been significant soil degradation as a result. Our College of Agriculture, Science, and Technology has been studying that issue fairly frequently, has certainly exposed our opportunity for research with our two research farms, one for

crop dust diversification, and one for animal livestock. We are also doing a lot of inland fisheries research. We have an aquaculture center which really investigates disease along the waterways as it relates to some of the impacts we are seeing from climate change, and we are able to do that with about 20 man-made ponds we have on campus that allow us to do that research as well. So the land-grant mission of all of us really relates to how we impact the states and communities where we serve, and it is been particularly important for us to be very much involved in this work around climate change in Delaware.

Ms. KUSTER. Great. Well, thank you so much. I am so impressed at how you all kept going during COVID-19, and thank you for the great work you do. And, with that, I yield back.

Dr. ALLEN. Thank you.

The CHAIRMAN. Thank you, Ms. Kuster. And now I recognize the gentleman from California, Mr. LaMalfa.

Mr. LAMALFA. Thank you again, Mr. Chairman, I appreciate you. Your calm demeanor in running our Committee is much appreciated, and so I thank you for that. Also, forgive me for meeting here at the bounce between another committee as well. Let me focus on a couple things here with our great panel we have here today, and the great heritage and history that you all bring.

Now, I know the 2023 Farm Bill will be just around the corner here, and it is not an easy thing to get done, because it requires a lot of collaboration, and I am glad we are having part of this collaboration right now, leading up to it. I wanted to talk about, for your universities, and the effect you have. So much of rural America relies on the need for technology for better communication, meaning rural broadband. And it may have been touched on previously. I am sorry, I was out, if this is redundant, but to the panel here, whoever cares to comment on that, how is your broadband and your communication speeds presently at your facilities, and what more do we need to be doing to better have these ties with each other, and to broaden that out for your work and research, and how that comes back out to the general public? How is our communications in that area? Anybody on the panel that wants to weigh in.

Dr. ANDERSON. Representative LaMalfa, I would love to start first, because my colleagues will tell you yesterday I was unconnected because of the lack of broadband. But let me tell you, during COVID, actually, before COVID, was looking at 25,000 interactive minutes per month. After COVID, with our broadband, and having to shift, two million interactive activities per month. And basically when all of that activity happens at the same time in our very rural area, you can imagine the interconnectivity problems that we had. Not only from our teachers, our students, and even with our extension people, going out to our farmers, because many of our local farmers don't have any connection whatsoever. So it made a big difference as far as lack of interconnectivity. It is a huge issue here in our area, and we really hope, and really encourage, Congress to really try to pay attention and help us out in this regard.

Mr. LAMALFA. Others?

Dr. MCMEANS. Yes, this is Orlando. It definitely was an issue here in Louisiana. Fortunately, one of the assets that we had is that we had a mobile education technology center, where we had to actually bring the technology to the individuals, where we had ten computers that we had to take to individuals. But one of the things—as it relates to the pandemic, the governor set up a number of task forces, and there may have been about 10 or 15, and the number one priority was broadband, in the State of Louisiana, it was the number one priority. And I know that is a priority of the state legislature, and I am hoping that the USDA and Congress can continue to support the 1890s, because most of the individuals we serve are located in a lot of those rural communities, and we really need to make sure that we help to build up their capacity, as it relates to technology and broadband. So that is a priority for us as well.

Mr. LAMALFA. Thank you. Anyone else on the panel, or maybe general thoughts on other things we should be looking for in the 2023 Farm Bill as a priority, whether we are talking in areas of additional research in agriculture, or in manufacturing, technology? With my remaining time, are there any thoughts on that?

Dr. ALLEN. Congressman, it is Tony Allen. Let me just comment with my colleagues on broadband issues. We actually have my CIO participating in a hearing today on that issue with the acting FCC Chairman. In Delaware there are not many distinctions between our rural and urban settings, but I can tell you that it has been an issue, and it is largely an issue because not only is the concern on campus, but in many of the communities that those students returned home to, particularly during COVID, it became a significant concern. So we see it as universal, connecting back to what we are able to accomplish at the university, and what they are able to accomplish when they go home.

Relative to some of the other opportunities I think that are important for you all to continue to consider, as we think about ag business, and building some interdisciplinary opportunities for our students, it is very important to them that they see it as an opportunity to really understand the business of agriculture, and being able to help farmers of all different abilities and ethnicities to build their capacity to grow as well. So the practitioners around the agricultural community are very important, and you can support the—building resources for those disciplines is going to be very important to the overall industry.

Mr. LAMALFA. Okay. Thank you, Dr. Allen. I am a farmer in my real life, and I know that we need to have a lot broader understanding of what it is that we are all doing and we are all facing out there in order to keep our country fed, and clothed, *et cetera*, so thank you, panelists. I will yield back, Mr. Chairman. I appreciate it.

The CHAIRMAN. Thank you, Congressman LaMalfa. I really appreciate that line of questioning. And now I would like to recognize the gentleman from Florida, my good friend Mr. Al Lawson, who is also a graduate of an 1890 called Florida A&M.

Mr. LAWSON. Thank you very much, Mr. Chairman, and it is a real honor to have the distinguished panel here today, and it is good to see Dr. Abdullah again. I haven't seen him in a while. And

I would like to say that to Maryland Eastern Shore, my brother-in-law, Dr. Henry M. Brooks, worked there throughout his career, and his father was also in agriculture at Florida A&M University, and a professor, so I have been around farming a great deal, it is just that, when I married his daughter, I couldn't hardly take care of a farm so—being a basketball person, but my parents' farm on weekends in the country, and he worked at the university during the day to help bring in other resources.

So I can't say enough about how the Chairman worked so hard on the scholarship program. And I remember one day when I told him that the scholarship was not in the budget, he almost went crazy—and Sonny Perdue, who was the Secretary, had a lot to do with it, Conaway and Collin Peterson, the former Chairmen, in working on this, so it was a great accomplishment to have the opportunity to serve on that. And, I have a nephew to benefit—I was telling Dr. Taylor at FAMU, the benefit from the scholarship program—that graduated this spring, and will be working at Washington, D.C. at the Department of Agriculture, which is incredible, in agribusiness.

My question would be really to the panel: in what way would you like to see USDA and our community not only support but advance the ways of 1890 land-grants—enable to conduct extension service within their communities? What is holding your institutions back from doing more in your areas? And I say that to say how do we go forward in the next farm bill? Scholarships are great, but what do we need to help put you more and more on a level playing field? And that is to the whole panel.

Dr. ABDULLAH. Congressman Lawson, it is so good to see you, sir. I think the last time I saw you I was Dean at FAMU. It is really good to see you. I will take the question, if it is okay? One of the biggest challenges that we have—and we talked about funding, and so I am going to move to—just opposite of funding, is making sure that those in Congress, and those at USDA, really understand the true value of our institutions, and the true value of the partnership really that already exists. Our infrastructure, and our 19 schools across 18 states, are an incredibly valuable resource to tackle any number of problems in this country. I believe that, had we really understood the true magnitude of the COVID-19 challenge, that the 1890 institutions, in terms of really addressing health disparities in our area, addressing some of the broadband issues in our area, addressing some of the challenges with education—because now with broadband, education and broadband become a public need—that we were really at the ready to begin to help, but I am not sure that everyone—maybe we didn't know, but everyone didn't know the way that we could all work together.

I think I mentioned this earlier, but to have two Rattlers on this Committee, to have Dr. Jewel H. Bronaugh, who is the former Dean of Ag at Virginia State University, be the Deputy Secretary of Agriculture, making sure that the 1890s and the 1890 system is really at the table to begin to help address the needs of our country, and the needs of agriculture in our country, is critically important. So, I really want to applaud the Committee, because I think that this is really a part of that work, in making sure that Con-

gress, and that our entire nation, understands the value of our 1890 land-grant universities.

Mr. LAWSON. Maryland Eastern Shore—have a few seconds.

Dr. JONES. If I may I would just like to—

Dr. ANDERSON. Well, President Abdullah responded very, very well, and I agree, the collaborative effort of our 19 universities really can be powerful. And I think that is the message that I want to get across to this particular panel, just recognizing that the collaborative work that we could do could really solve many of the problems that our citizens have in the country, from food insecurity, all the way to healthcare disparities, and blending those two. And you can tell that on this particular panel today, President Allen, Del State, and I, we work together. President Abdullah and I are talking about how to work together with healthcare disparities, and that is—I would agree with the message, making sure that people recognize the power in the numbers that we have here.

Mr. LAWSON. And, Mr. Chairman, I yield back.

The CHAIRMAN. Thank you, Congressman Lawson. And now we will go to Ms. Letlow from Louisiana.

Ms. LETLOW. Chairman Scott, Ranking Member Thompson, Members of the Committee and witnesses, thank you for taking the time to discuss continuing opportunities in investment in the success of 1890 land-grant institutions. As discussed here today, 1890s play a pivotal role in the mission of agriculture, education, research, and extension services. In the past this Committee has made great strides to improve capacity and access to assistance for these institutions of learning. The critical work engineered by land-grant institutions goes a long way in ensuring our American farmers remain the safest, most abundant food supply in the world. In addition, HBCUs in Louisiana have a vested history in providing educational opportunities, and contributing to the successful futures of many young men and women throughout the 5th District, and across the state.

When I first joined this Committee, I shared with the Ranking Member my sincere concerns with the aging population we are experiencing in agriculture today. While there are existing programs targeting young, beginning, and small farmers, I am eager to get to work with my colleagues in exploring new avenues to not only get beginning farmers into agriculture, but to keep them there. Agriculture is the backbone of my district, accounting for 49 percent of the agriculture output in the state. Our hardworking farmers, ranchers, and loggers contribute to the overall rural economies, and it is essential for our region in Louisiana that agriculture continues on for generations to come.

My question is for Dr. McMeans. Given that Southern University's Agriculture Research and Extension Center encompasses programs and services set aside for this effort, can you share with the Committee how the center contributes to and benefits small scale farms with limited resources to help them maintain viable farming operations? Dr. McMeans?

The CHAIRMAN. Mr. McMeans? Dr. McMeans, I think that question was directed to you. Is his—

Ms. LETLOW. I can repeat it.

The CHAIRMAN. Yes, if you could repeat it, and perhaps Mr. McMeans may check his microphone system?

Dr. MCMEANS. Okay. Yes, am I good?

Ms. LETLOW. Yes.

The CHAIRMAN. Yes. Go ahead, Doctor.

Dr. MCMEANS. Okay.

Dr. MCMEANS. Okay. Yes, we have a really—what I call one of the—when I came aboard 2 years ago, one of the more successful land-grant programs—outreach that I see in the nation, and we have, it is called our Enhancing Capacity of Louisiana's Small Farms and Businesses Certification Program, and it offers certification in small business development, food safety, dealing with small ruminants and sustainable urban agriculture. And so we have connected with over 400 clientele and trained them on virtual platforms, even during the pandemic. And so—normally we actually take this to the individuals across the entire State of Louisiana.

And I am happy to say one of the things that we are investing in, thanks to USDA, Congress, and also the State of Louisiana, we have hired an additional 11 or 12 individuals who work in the area of agricultural outreach. And this is so important to me—and we are coordinating this, going back to a previous question, with LSU Ag Center. So we are working together, and we understand and value the importance of small farmers. I mean, we could talk about socially disadvantaged farmers and minority farmers, but when you look at where—the potential for us to grow in the State of Louisiana, it is those small farms, and making sure that we give them the resources adequate enough for them to become prosperous. Prosperous small farms, prosperous Louisiana, so we are excited about that.

Ms. LETLOW. Thank you so much for sharing all of that, Dr. McMeans. That is so encouraging to hear, especially Southern University's efforts to enhance opportunities for not only small farmers, but for the next generation in agriculture related professionals. Thank you, Mr. Chairman. I yield back the remainder of my time.

The CHAIRMAN. Thank you, Congresslady, I appreciate that. And now we will recognize the distinguished lady from Washington, Ms. Kim Schrier.

Ms. SCHRIER. Thank you, Mr. Chairman, and thank you for convening this hearing on a very important topic. I am going to focus on an essential issue that a few of our witnesses touched on, our nation's agriculture research infrastructure. Modern agricultural research and education facilities serve as the backbone of our nation's cutting edge agricultural and food research enterprise. But according to a 2021 report by the Association of Public and Land-grant Universities, 69 percent of research facilities at U.S. colleges are at the end of their useful life. The cost of upgrading deferred maintenance on these buildings is estimated at \$11.5 billion. Advances in agriculture and food innovation are the foundation of the U.S.'s rich tradition in food and farm entrepreneurship, and our research facilities not only generate solutions, but also aid in recruiting a whole new generation of diverse scientists, innovators, and agricultural leaders. That is why I support addressing our deferred

research maintenance backlog and increasing investments in the next generation of ag research.

Now, Dr. Anderson, Dr. Jones, and Dr. McMeans, in your testimonies you all mentioned the urgent need for funding to replace or renovate outdated research facilities, and I was wondering, Dr. Anderson, can you provide a little more detail on the status of agricultural research facilities at your university, and the kinds of deferred maintenance projects that your university needs?

Dr. ANDERSON. Thank you very much, Representative, for the question. I would be happy to provide some further insights. At our university, as I mentioned earlier, we have 88 buildings. This is accounting for 1.8²⁷ million gross. The average age of all of our buildings is 44 years, and our deferred maintenance is over \$90 million. If you look specifically at agriculture, one of our key buildings, Trigg Hall, was built in 1954, and it sits on what we call our Academic Oval. It is on the National Registry. But that particular building has poor HVAC system, it has outdated electrical system, there is no wireless in that building. And, because it is a historic building, you could imagine, just doing something as simple as changing the windows becomes very, very problematic because of the historic nature of the building.

Carver Hall is where we have our students first introduced to biology, and they come to us, a number of STEM students we have on our campus, and yet that building has poor ventilation and poor circulation. The building is over 50 years old. So those are just the type of examples—just to renovate the one building, Trigg Hall, where our Agriculture Research Extension Program is at, would be over \$25 million. And in addition, we had an opportunity here to grow our ag experiment station, but we are also short in the funding on that particular resource.

And, finally, I would like to just say we are working to help our poultry farmers, as well as the other farmers that I have mentioned here on the lower Eastern Shore, and we have an opportunity to look at adding veterinary sciences, but we cannot do it in the existing infrastructure that we have.

Ms. SCHRIER. It is just astounding. These are the buildings where we are doing scientific research, and they are this old, and this decrepit. We actually have a facility—we don't have any 1890s in Washington State, but we have a facility with no indoor plumbing. So I just want to thank you for underscoring that urgent need, and making really clear what you need, and the real state of our lack of investment. So a multi-year investment will reposition the United States for long-term success, competitiveness, and leadership in global agriculture and food research. It will keep us competitive.

Now, estimates suggest that strategic Federal investments in these facilities at land-grant and non-land-grant schools of agriculture would create 200,000 new jobs nationwide, and each dollar invested in agricultural research at public land-grant institutions provides abundant strong returns to the economy. So in the coming weeks I will be joining with my colleagues in sending a letter to Congressional leadership urging the prioritization of a once in a generation investment to reposition the United States for success in food and agricultural research. I am hoping others here today

will join me, and I thank you all again for participating today. Thank you very much. I yield back.

The CHAIRMAN. Thank you very much, Ms. Schrier. And I am so delighted you mentioned that last item, and we all join with you. That is a very noble endeavor. And now let me recognize Mrs. Fischbach, the gentlelady from Minnesota.

Mrs. FISCHBACH. Thank you very much. And I apologize, I had to pop out for a very quick Rules Committee meeting, but I did catch, I guess at least part of Congresswoman Schrier's questions with Dr. Anderson, and maybe this is more for everybody. When I was in the State Legislature, we did—and it is an 1890, but a land-grant university, University of Minnesota, and the state did a lot of the funding for buildings, and things like that. So just throwing it out there, I am kind of curious about state support that the schools are getting, but in addition to that I also was kind of wondering—I know that funding is a top priority, but also just kind of wondering if there was something else that the House Agriculture Committee could do to help the universities achieve their goals. So kind of those two questions, and I will open it up to whichever witness has some input on that.

Dr. JONES. Congresswoman, let me at least take a part of that question, in terms of your comment about state support. You are absolutely correct that the states—or at least the State of Georgia plays a very pivotal role in supporting our 26 public institutions, relative to deferring maintenance, but there is such a backlog. The state appropriates somewhere between \$40 and \$60 million for those 20–26 institutions annually. We might receive anywhere from \$½ to \$1 million. But when you think about it over time, it is almost impossible for the—with the current funding structure to stay on top of these challenges that we are facing on our campus, from a deferred maintenance perspective. So, we need to sort of do a partnership from the Federal and the state level to help us to address these deferred maintenance challenges, but you are absolutely correct, the states are playing a vital role, but we could use that additional support, and that is why this infrastructure bill is so critical for the 1890 community, and beyond.

Mrs. FISCHBACH. Thank you very much. And if anyone would love to add anything about what else could, like I said, I know that funding is priority, but are there other things that we could do at our level that would be helpful for the universities?

Dr. ALLEN. Congresswoman, the only thing I would add is that—public-private partnerships that really help us thrive here at Delaware State University. We have a couple in play in the ag community, most notably FMC, which is an ag sciences company, that does fellowships, faculty, and employee exchange, and joint research projects. But if you can continue to encourage the private-sector to be connected with 1890s as we build capacity for our students to get real world experience, really at the start of their educational careers, those things are really important and vital to how they come into those professions, and the return that the businesses themselves get on recruiting those young people. As I said, we have created some unique partnerships in the ag community with—in the—within private companies, but certainly not enough.

And to have the voices come from a Committee like this around those relationships would be very important.

Dr. ABDULLAH. That is, actually, my favorite question, Congresswoman Fischbach, and I apologize if it sounds like I am repeating myself, but I do love that question. I do think that we have a unique opportunity, as a group of 19 institutions across 18 states, that have been committed to making sure that we help socially disadvantaged farmers, ranchers, and students, that we are an incredible network that Congress and the USDA can really look at to help solve problems—future problems that maybe we are not even working on today. And so having us be here for you to be able to lean on us to help solve the nation's problems is something that we are very interested in, and so we really appreciate you asking what else can you do? We want to be that valuable resource to help the nation move beyond the challenges that we have.

Dr. ANDERSON. Only thing that I would like to add, Congresswoman, is the fact that, looking at infrastructure broadly, not just our aging buildings that we have, like I said earlier on the deferred maintenance, but also this whole issue of the broadband, and also the human capital that is important as well. I think the—and the strength of our 19 universities together. Thank you.

Mrs. FISCHBACH. Well, and my time is almost up, but I appreciate the responses, and I appreciate that this is just the beginning of the conversation. As I ask about what we need to do, obviously there is a lot more discussion, a lot of things that we can do into the future, so I appreciate it. Thank you very much, and I yield back.

The CHAIRMAN. Thank you very much, Congresslady Fischbach, for your very pertinent questions. And now I would like to recognize the gentleman from California, Mr. Panetta.

Mr. PANETTA. Thank you, Mr. Chairman. I appreciate this opportunity, and thanks to all the witnesses for your time today, and of course your service. And also clearly want to thank you for all you are doing for leading our nation's 1890 institutions. Dr. Abdullah and Dr. Jones, welcome back, and as you know from our conversation in December, I represent the Central Coast of California, and I am sure you know well the farmers and farmworkers in my district are a part of the very rich agricultural history in the region, including the stories and leadership of people like Cesar Chavez, who advocated tirelessly for farmworkers, and whose legacy continues to guide us as we work to address the systemic inequity in our Federal farm programs. Now, I know this inequity has posed significant barriers to success for Black farmers nationwide, and although no set of circumstances is the same, clearly there are parallel challenges that exist for farmers and farmworkers of color in the Salinas Valley. And as we look to developing a once in a generation infrastructure package, and later, as we look to writing the next farm bill, we need to make sure that we are listening to these producers, these farmers, and these farmworkers.

Now, building off of the last few questions, and addressing our agriculture infrastructure, I think we understand clearly as has been expressed by the witnesses, and yes, the questioners, deferred maintenance backlog is critical if we want to maintain American leadership in agriculture research and development. And today the

overall share of the R&D spending as a percentage of the GDP is at its lowest since the 1950s. Shockingly, food and agriculture research in this country lags even further behind most other Federal areas.

And at the exact same time, other countries, including, yes, that is right, China, are investing heavily in R&D. That is why I believe, and I think you will agree, that we in Congress must work to develop an infrastructure package, and that is why I am making sure, with the letter that Ms. Schrier talked about, all of us there on the—most of us on the Agriculture Committee are working together for—to call for leadership to make sure that there is strong, robust investment of at least \$40 billion, once again, \$40 billion, for agricultural research, including at least \$11.5 billion for ag research facilities that we talked of earlier. I do believe, and I think you will agree, that it is that type of level of funding which is critical if we want to provide socially disadvantaged and beginning farmers and producers, along with established producers and farmers, to the tools and knowledge they need to be successful in the 21st century.

And so what I pose to you, Dr. Jones, Dr. Anderson, and Dr. McMeans, if that is all right, as we work to develop this huge infrastructure package, I think we know, do you think that type of level of funding and that type of level of investment is necessary?

Dr. MCMEANS. This is Orlando. I will go first, and anybody who has read my written testimony, that was probably $\frac{1}{3}$ of what I wrote about. I think an investment in research is an investment in the United States, is an investment in economic development. The other thing is that, as we talk about—first of all, the answer to your question is yes. I—that was music to my ears right there, because I am a part of the APLU's initiative on increasing research capacity via this infrastructure funding. And so what I say is that—and I hate to say this, but we are falling behind as it relates to our competitiveness in the area of R&D as it relates to agriculture. Agriculture is essential—foundation, fundamental to the advancement of the United States, and our standing in the global community.

So I say this to say that this is so important to me that, when I was ranking priorities, I said infrastructure number one, agriculture number two, but infrastructure as it relates to agriculture means a more prosperous America. And so I want to thank you, first of all, for what you are proposing, and I hope that—and encourage others to jump on board, because I just think that is a game changer. That will make us more prosperous, and also when you are talking about food security, sustainability, and all of that. So thank you so much for proposing that, and I don't think anybody is going to say "No, that is not enough money", because you said the word B, the billion is always good.

Dr. ANDERSON. And I would jump in as well, Representative. I agree, none of us can say no to that. The answer is yes, and it is very simple. The world is growing people. We have more people in the country, we have to take care of their food needs, and we have to have research infrastructure to help us deal with climate needs, going forward. So the answer is yes, yes, and the more the better. Thank you.

Mr. PANETTA. Thank you. And Dr. Jones, thumbs up or thumbs down? There you go. I yield back, Mr. Chairman. I will take that. Thanks to Dr. Abdullah and Dr. Allen. Thank you. I yield back.

The CHAIRMAN. And thank you, Congressman Panetta. You brought up some excellent points, and we have really got to maintain strength, and our strong position. China, as you mentioned, along with Russia, there is no way we can let them get ahead of us, and I thank you for mentioning that as well.

And now I would like to recognize the distinguished Member from Georgia, my good friend Sanford Bishop. I think I mentioned before that Sanford is also our Subcommittee Chairman on Appropriations for Agriculture, and Sanford has played a critical role in us securing the \$80 million for our scholarship program, which means he is definitely a very vital part of our efforts here to make our scholarship program. And so Sanford has played a very important role in that, and we all appreciate it, and I just wanted to say that in my introduction of him. Sanford, you are recognized for 5 minutes.

Mr. BISHOP. Thank you very much, Mr. Chairman, and thank you for the tremendous leadership that you have given to this Committee. Let me welcome all of our Presidents, but let me give a special shout-out to my President, Dr. Paul Jones, from the Fort Valley State University. Dr. Jones has done such a tremendous job, and I have a couple of questions that I want to raise which touch on finances. Dr. McMeans referenced it in his testimony, talking about the glaring differences in financial support for the 1862 institutions *versus* the 1890 institutions, and also the one-to-one funding matches, because it seems to be quite frequent that the one-to-one funding match from the respective state legislatures that are tasked with funding our 1890s don't match with the 1862s.

And a question for anyone who will—and you can start with Dr. Jones, how would you describe the working relationship between your institutions and the 1862 counterparts within your states, specifically in the context of joint education, joint research, and joint extension activities? And how can Congress, in your opinion, facilitate this relationship, and create opportunities for more collaboration between the 1890s and your 1862 counterparts? What I have done—my 1862 is always beating down my door for research projects, and, of course, I have tried, to the extent that I could, to insist that they collaborate with our 1890s, and that has worked in some instances, and in other instances it has not. But let me hear from your thoughts with regard to that.

Dr. JONES. Well, first of all, Congressman Bishop, good afternoon, and great to see you again, and we appreciate tremendously what you have done for this institution, and for this—for the district here. Let me just say that because of you, we—particularly during my tenure, we have seen a tremendous growth in our partnership with University of Georgia, research—joint research opportunities with both the University of Georgia and our agricultural research stations. And that has proven to have tremendous impact on our institution, and on—I believe those institutions, as we are forging greater partnerships, and looking for other ways in with we—in which we can strengthen those relationships.

As you know, we are co-located with University of Georgia and the 35 counties that we represent from an extension perspective, and that allows those agents to work very closely together, as they are, I am sure, throughout the 1890s system. But I would say that Congress, if we can continue to take that kind of approach in pushing the 1862s more towards collaboration, you will see tremendous results as we are seeing. So, again, I can't thank you enough for setting the stage for growth in this regard.

Mr. BISHOP. Anyone else?

Dr. MCMEANS. Congressman Bishop, first of all, I know you represent Georgia, but it is always nice to see a fellow Mobilian, so it is great to see you again.

Mr. BISHOP. Georgia claimed me, but Alabama named me.

Dr. MCMEANS. That is right, that is right. So first of all, I want to thank you for all the—of the support that you have given to the 1890s. I have visited with you, and your door is always open to us, and so I thank you for that. We are in 34 of the 64 parishes in Louisiana, and for the most part we are co-located with LSU. We work daily with one another, we have the same boards that we answer to, or commissions, and so our—it is working well, especially for extension.

And, as I stated earlier, our strength is in our unity, and working collaboratively, and I think that the main thing is that we cannot lose focus that our mission is the same, and that is for the betterment of the citizens and communities that we collectively serve. So in everything that we do, we want to work together. It is always good, and I thank you, and I hope others will follow, encouraging the 1862s to work with 1890s to support efforts. I will go on record, and I don't know whether he is on here, but my counterpart at LSU basically conveyed to me—he is like, this is some of the things that you guys are very strong in, and so we will support you in that endeavor. But we are developing academic programs together, we are developing research programs together, and so the last couple of years at Southern University I have really enjoyed working with my 1862 counterpart, and I see the value, going forward, as that relates to our similar missions, but the main thing is Louisianans will benefit more so.

Mr. BISHOP. Thank you. I believe my time has expired, but thank you very much. And if someone else asks another question, could talk about the inequities between the funding for the 1890s and the 1862s, I would appreciate hearing your thoughts on that.

The CHAIRMAN. All right. Thank you, Congressman Bishop. And now I would like to recognize the gentlelady from the Virgin Islands, Ms. Plaskett. You are recognized for 5 minutes. Ms. Plaskett is also the Subcommittee Chair of the Biotechnology, Horticulture, and Research Subcommittee. Does a wonderful job, and is our partner in helping our 1890s. Ms. Plaskett, you are recognized.

Ms. PLASKETT. Thank you so much to Chairman Scott, and to our Ranking Member, and to the witnesses who are with us today. Because I am the Subcommittee Chair of Biotech, Horticulture, and Research, my first question is related to research.

Dr. Jones, I would like to start by touching on the importance of investing in agricultural research. As you may know, the United States' share of overall research and development spending as a

percentage of GDP is now at its lowest point since the 1950s. Food and agriculture lag even further behind most other Federal research and development areas. Additionally, agricultural research funding at the USDA has remained flat over the last 50 years, while funding for other Federal research agencies has increased 10, 20-fold during that same period. My question is, in your opinion, how important is it for the United States to increase our Federal investment in agricultural research, especially as other countries around the globe heavily invest in those same agricultural research and development?

Dr. JONES. Well, thank you for that question. What I would say, real quickly, is that much of the country oftentimes does not understand that, when we think of agriculture, agriculture is everything. It is so critical that we make these investments—it is an economic development question in our country, and so—and to invest here will make a significant impact across the country. I think that you are hearing that theme throughout the testimonies from the various leaders here today, is that—the importance of those investments, that will—an investment here is growing our economy, and so there needs to be even more focus on what we do in this area of agriculture, and we support that 100 percent.

Ms. PLASKETT. Thank you very much. Dr. McMeans, we talked about the role that extension services at 1890 institutions play in addressing historic discrimination, longstanding racial disparities in the agricultural sector. The information that you have given in your testimony is profound as to the jarring statistics. Congress took steps to address these disparities in the American Rescue Plan by providing \$1 billion to provide technical assistance to socially disadvantaged farmers, with at least one percent of these funds to be used at 1890 institutions. What additional steps should Congress, and the Biden Administration, take to support farmers of color and address these longstanding disparities? Thank you.

Dr. MCMEANS. Thank you for the question, and thank you for your support. One of the things that we are so thankful and appreciative, I know as I am speaking for my other 1890 leadership, and research director, and experiment station directors, in that the \$4 billion goes a long way in supporting those farmers. However, the fact of the matter is it is specific for certain USDA loans. My hope is that we will continue to look at ways that we will support financially our socially disadvantaged farmers. In particular I am speaking about the Black farmers. I have had the opportunity to listen to testimonies firsthand about the discrimination, and some of it is so deplorable and despicable you can't really talk about it on this particular Zoom, but I say this to say that there is still a lot more work to be done to make sure that our minority and small farmers feel like they are a part of the advancement of agriculture for the United States, because they make up the larger amount of farmers in the United States.

I think that one percent that is going to the 1890s, I would really hope that the Administration would look to increase those resources so that our extension individuals, through human capital, will be able to do more outreach to our farmers that we have historically served, because it is very imperative that we have those individuals work with these farmers, whether that is paperwork,

whether that is knowing about loans, whether that is knowing about crops, and things of that nature. There is so much for us to do, but an investment in 1890s is an investment in small and minority farmers as well.

Ms. PLASKETT. Thank you very much, and I yield back.

The CHAIRMAN. Thank you, Ms. Plaskett. And now, ladies and gentlemen, as we reach the conclusion of this extraordinarily impactful hearing, I want to thank all of our witnesses for giving some of the most riveting and informative testimonies here on behalf of the importance, and significance, and history of our great 1890 institutions. And before I give my adjournment and my closing statement, I want to recognize my friend here, and partner, our Ranking Member, for any closing statement he would like to make.

Mr. THOMPSON. Mr. Chairman, thank you so much. Thank you for your leadership on this hearing. Incredibly important topic. Thank you to every member of our panel. I thought their information they shared is reflective of their outstanding leadership in those institutions of higher learning that they help lead.

The CHAIRMAN. Yes.

Mr. THOMPSON. I will just close. Also, I think we would be remiss if I didn't say thank you to a gentleman that I had the privilege in serving under, when we were doing the 2018 Farm Bill, when we made much of these enhancements happen, when I was serving as Vice Chair of the full Committee, and that is Chairman Mike Conaway.

The CHAIRMAN. Yes.

Mr. THOMPSON. Whose leadership, just very effectively played such a key role of achieving these improvements and enhancements, and no less than six specific sections in the 2018 Farm Bill that was dedicated to our 1890 land-grant colleges. I think that is a testament to his leadership, and much appreciate that. And I look forward to continuing our work together as we support these great agriculture-based universities, colleges, that just serve all things rural which is so important.

The CHAIRMAN. Yes.

Mr. THOMPSON. And with that, I will yield back.

The CHAIRMAN. And let me just echo what you said, my friend, about Mike Conaway, because, ladies and gentlemen, you might now know this, but Mike Conaway was the Chairman, a Republican Chairman, of this Committee when we were able to get the \$80 million for our scholarship program. Truly bipartisan, and Mike Conaway played an important role. And, by the way, his Congressional district represents Prairie View, which is an 1890s land-grant.

And so, ladies and gentlemen, I think you have seen a great display here of the strong bipartisanship from the intense interests of both our Democratic Members and our Republican Members. And, in closing, let me just say this, that agriculture, as I often say, is without question our single most important industry. It is the food we eat, the clothes we wear, our shelter, our water. It is all of these things that we cannot do without. On top of that, in 44 of our 50 states, agriculture is the largest, most important part of 44 of our states' economies out of 50. And so you see how important agriculture is, and the role that African Americans have played in es-

tablishing agriculture as the premiere agriculture industry in the world, and the role that our 1890s institutions play now. And so I think you have seen the intense interest and support from both sides of the aisle for the continuation of our work we are doing, and all of the areas in research, in terms of helping with the infrastructure of our institutions, it is right here, in Congress. And now we must go forward and establish this 1890s Land-Grant Colleges and Universities Scholarship Program permanently so that, for generations to come, African Americans, and others—our land-grant African American colleges and universities have college students from all races, all colors. And that is the way America is. And so, to say in closing, our agriculture system is for everybody, and nobody demonstrates that more than our land-grant 1890s colleges and universities.

So I just want to say thank you, we move forward. Nothing is easy. We have a challenge to move ahead, and make sure that our 1890s are totally involved in the movement forward of our great agriculture system of our great nation, the United States of America. Thank you, and—I must read the correct—under the Rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any questions posed by Members. And I just want to say I thank God for this extraordinary hearing, and for this great opportunity he has given to each of us. This hearing of the Committee on Agriculture is adjourned.

[Whereupon, at 1:10 p.m., the Committee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUBMITTED LETTERS BY HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM
GEORGIA

LETTER 1

ON BEHALF OF LAURENCE B. ALEXANDER, J.D., PH.D., CHANCELLOR, UNIVERSITY OF
ARKANSAS AT PINE BLUFF

June 15, 2021

Hon. DAVID SCOTT,
Chairman,
House Agriculture Committee,
Washington, D.C.;

Hon. GLENN THOMPSON,
Ranking Minority Member,
House Committee on Agriculture,
Washington, D.C.

RE: Hearing on 1890 Land-Grant Institutions: Investing for Agricultural Resiliency,
Equity, and Global Impact

Dear Chairman Scott and Ranking Member Thompson:

On behalf of the University of Arkansas at Pine Bluff (UAPB) community, I would like to express my sincere thanks and gratitude to you as well as Vice Chair Alma Adams, and Subcommittee Chair Stacey Plaskett for convening this hearing to increase awareness of the historical and systemic disparities among 1890 land-grant institutions and set a course for action to secure permanent funding priorities that preserve our unique land-grant mission. We are pleased to work with our Arkansas Congressional delegation including Congressman Rick Crawford, a Member of the House Agriculture Committee, on all of these important issues. Thank you for inviting me and my colleagues to this hearing. Your vision for committing additional funding and long-term investments to our universities and agriculture programs is historical and unprecedented. Specifically, current funding and support included:

- CARES Act: Higher Education Emergency Relief Funds,
- Increased funding for the 1890 Scholarship Program,
- Upgrades/Infrastructure Improvements to 1890 land-grant agricultural/research facilities, and
- Creation of Centers of Excellence in Aquaculture and Fisheries and Agricultural Regulatory Science at UAPB.

In addition, I am equally appreciative for the most recent \$1 billion appropriation to USDA for the QLA Program for agriculture producers and those who have already received WHIP+ payments. Moreover, I extend my support to Representative Adams' plan to help our institutions secure full state matching funds, for improvements of our campus infrastructure, and to foster cutting-edge innovation in agriculture research. With these new investments are major steps towards ensuring funding equity for UAPB and other 1890 land-grant institutions.

Of equal importance are the provisions under the Farm Bill, which are necessary for the survival of our Socially Disadvantaged Farm Producers (Black farmers and ranchers) and their farmlands. Again, I am in full support of seeking permanent funding for this purpose. Furthermore, I applaud Representative Scott's efforts to eliminate equity challenges faced by farmers and rancher of color and authorize debt forgiveness through the American Rescue Plan relief package.

In retrospect, I am also providing a snapshot (see below) of how the Committee's efforts have impacted UAPB directly and which can be enhanced through permanent funding and investments from USDA, highlights of current research and extension initiatives to enhance the land-grant mission, and critical infrastructure needs for campus research facilities that align with moving UAPB's agriculture and research agenda forward.

They are as follows:

1890 Scholarship Program: Through USDA/NIFA funding from the 1890 Scholarship Program, UAPB continues to provide a premier education to the most under-represented student population in the agriculture. The 1890 Scholarship Program has been beneficial to limited resource and first-generation college students admitted in our agricultural sciences degree programs. UAPB hired a full-time Coordinator position to focus only on recruiting scholarship applicants, one-on-one mentoring for scholarship recipients, and ensuring the successful management of the

program. This year, the 1890 scholarship awards have afforded 74 students the opportunity to pursue a college education without the burden of student loan debt and has brought increased awareness to agricultural sciences, as well as work experiences at USDA agencies. The COVID-19 pandemic caused economic strain on many families and students. However, because of USDA/NIFA funding, UAPB was one of two universities in Arkansas which experienced an increase in enrollment overall and in the agriculture programs, in particular. UAPB remains fully committed to the success of the 1890 scholarship program efforts to increase enrollment, retention, and graduation rates for students enrolled in the School of Agriculture, Fisheries and Human Sciences. We believe that with continued funding from USDA/NIFA, UAPB can triple the number of minority students pursuing agricultural and food sciences degrees, double the number of students who graduate because of the scholarship support, and ultimately produce more minority students working in the agriculture and food sciences professions, as well as at USDA agencies.

Facilities Improvement and Management. Through potential investments from Research Facilities Act administered by USDA/NIFA, UAPB can enhance its research infrastructure program and receive support for facility construction, acquisition, and renovation. Our campus and scientific research have both been severely hampered by outdated and inadequate agricultural research facilities, green houses, classroom buildings, research labs, and aging physical and mechanical infrastructure. Therefore, the lack of up-to-date facilities places the university at a competitive disadvantage. This research infrastructure development will enhance agriculture innovation for our small farmers and farm operators, enhance our capacity as a leader in agricultural research in Arkansas and regionally, and allows the university to equip its laboratories with state-of-the-art equipment in research areas such as aquaculture, biotechnology, nanotechnology and other research designed to create economic opportunities for farmers and farm businesses, as well as prepare our agriculture students for 21st century jobs with in major corporations, national laboratories, and at USDA. Specifically, our current agricultural research infrastructure advocacy plan focuses on renovations and upgrades for the following research facilities at UAPB:

- Poultry Science Building (upgrade)—This facility is used for animal science research. Currently, UAPB (1890 land-grant) collaborates in a joint 3+1 program with the University of Arkansas (1862 land-grant).
- UAPB Research Greenhouse (replacement)—The research greenhouse was used for teaching demonstrations, graduate student research and lab work and to demonstrate plant science and horticulture research and extension activities for greenhouse production, to include hydroponics systems. This new greenhouse will be a commercial structure equipped with computer-controlled heating, cooling, ventilation, back-up generator, and lighting that optimizes the conditions for plant growth. The original greenhouse was destroyed by fire.
- UAPB Value-Added Laboratory (upgrade)—Conducts food science research and service outreach to historically disadvantaged citizens in the Arkansas Delta region.
- Larrison Hall (renovation)—23,000'² needed to expand the availability of laboratory space for agriculture faculty and students to conduct cutting-edge research. It also houses the Center for Excellence in Regulatory Science.

Debt Relief Services for Black Farmers. Congress has approved for USDA to begin paying out debt relief payments to under the American Rescue Plan Act of 2021 (ARPA). UAPB has assisted approximately 2,750 Socially Disadvantaged Producers (Black farmers), including farm and non-farm businesses with completing applications for USDA loan programs designed to off-set losses during the pandemic and restructure farm debt. We plan to increase this assistance to Socially Disadvantaged Producers (Black farmers) as a result of the American Rescue Plan Act (ARPA) of 2021 which will provide debt relief to Socially Disadvantaged Producers (SDPs) who had USDA/Farm Service Agency (FSA) Debts. Many of the SDPs and other SDPs are still seeking USDA loan funds to continue their farming or ranching operations. Some of the services that UAPB will provide to SDPs are:

- Assistance to SDPs in developing financial business plans and assistance in completing and submitting USDA Loan applications.
- Assistance to SDPs in using USDA Conservation Program to install land improving conservation practices to their land.
- Assistance to SDPs in developing crop production and livestock production plans based on Cooperative Extension Service recommended production practices.
- Assistance in developing marketing plans for their proposed operations.

Establishment of Biotechnology and Nanosciences Center at UAPB: UAPB has demonstrated extraordinary accomplishment and promise for research, teaching, extension, and outreach in the innovative field of nano and biotechnology. As part of the University’s long-term strategic initiative, we envision constructing a state-of-the-art Biotechnology and Nanosciences Center to help advance the economic and research productivity of the state, region that impacts the nation and global community. With investments from the Research Facilities Act administered by USDA/NIFA and through other public-private contributions, the Center can become a reality on the UAPB campus. Currently, several research initiatives in these areas are implemented in separate buildings with poor infrastructure and conditions to support related research. The School of Agriculture, Fisheries, and Human Sciences currently employs researchers and faculty who are researching to enhance agriculture sustainability via cutting-edge advanced nano, molecular, and biotechnology techniques. Some of the research projects include:

- The use of nanomaterials to develop efficient drug delivery methods, immunostimulant diets to benefit aquaculture farmers;
- Removal of organic pollutants in agriculture crop fields;
- Removal of antibiotics in Agriculture environmental wastewater;
- Mobility and transformation of nanoscale particles in agricultural environments to enhance carbon stabilization and possible sequestration in soil which helps mitigate climate change;
- Use of biotechnology and molecular applications like transcriptome analysis of plant and animal disease models;
- Deployment of CRISPR technology to evaluate disease resistance in plants and fish; *and*
- Use of transgenic yeast and endolysins to develop safe alternatives to antibiotics that prevent antibiotic resistance and gene transfer in aquaculture systems.

Other biotechnology and nanosciences research applications will lead to discoveries in pharmaceuticals, nutrition, cosmetics, and agricultural products. The economic impact from the development of nano and biotech research and extension center in Arkansas at UAPB will promote regional economic development and job creation through technology transfer to the Agriculture industry. It will also create interest in minority students and new researchers in the field and enhance food production. The center will attract the local minority students to advance their careers in agriculture. The research, extension, and outreach services provided through this center will benefit small, socially disadvantaged, underrepresented farmers and communities leading to sustained agriculture in the region.

Digital Transformation: It is our desire that the USDA continues to increase funding for the USDA RECONNECT Program, which aims to provide broadband resources to rural areas throughout Arkansas. The University of Arkansas at Pine Bluff, an 1890 Land-Grant Institution, is also working to “Build Back Better” our underserved areas with high-speed broadband connectivity, impacting our university community, as well as schools, families, and communities in our rural service areas. The university served as a hotspot for many residents during the pandemic and during power outages. However, many rural communities in Arkansas and farm families, particularly in the Lower Delta region, still lack access to and use of wireless broadband connectivity—thus, hampering innovation, food security, and economic development. Specifically, UAPB wishes to strengthen its utilization of hotspots, wireless technologies, and distance learning capabilities that require stronger broadband infrastructure and growing network access for farm families. With these technologies, Extension personnel and agricultural researchers are able enhance live-stream presentations and training sessions on-site at our two rural demonstration farm locations and farm households. In addition, agricultural researchers are experimenting with drone technology will strengthen our capacity to help students, researchers, and farmers to master precision agriculture. With high-speed broadband access on the farms and drone applications, we can assist Socially Disadvantaged Producers (Black farmers) directly on how to monitor and gather data on soil health, crop yields, carbon sequestration, livestock, fishponds, and pest prevention and monitoring.

Again, thank you for the opportunity to provide input for the record. As a result of the efforts of the House Agriculture Committee, I am extremely proud of the outlook and future for UAPB and our 1890 land-grant institutions, in general. We look

forward to the success and outcomes from this hearing, as well as working with the Committee on sustainability of our 1890 land-grant institutions.

Sincerely,



LAURENCE B. ALEXANDER, J.D., PH.D.,
Chancellor.

LETTER 2

ON BEHALF OF M. CHRISTOPHER BROWN II, PH.D., PRESIDENT, KENTUCKY STATE
UNIVERSITY

June 10, 2021

Hon. DAVID SCOTT,
Chairman,
House Agriculture Committee,
Washington, D.C.

Dear Chairman Scott:

As President of Kentucky State University, I want to thank you for convening the hearing entitled “1890 Land-Grant Institutions: Investing for Agricultural Resiliency, Equity, and Global Impact.” We appreciate the Congress’ partnership with our 1890 Universities and look forward to additional future collaborations. The investments in the 2018 Farm Bill and the American Recovery Plan have been critical to our campus and maintaining our academic programs. On behalf of our faculty, students and alumni, I want to thank you and all of the Committee Members, for your commitment to Kentucky State and the other 1890 Universities. We especially want to thank you for your support of the 1890 Scholarships Program, through which 49 students were recipients of a scholarship that has allowed these students to pursue their dreams of having careers in agriculture.

There are still additional needs that are important to Kentucky State, which includes the following areas:

Infrastructure needs: Kentucky State, like many other 1890 Universities/HBCU, has significant infrastructure needs. At Kentucky State, a new Nursing Program Building is critical to expand programing and address Kentucky’s critical health needs. Through strengthening our Nursing Program, we will continue to align with food justice issues, health disparities, and health access programs to create healthy communities and more educational opportunities.

COVID-19 response and recovery: Continued response is needed to expand on-line learning opportunities and create healthy classroom environments. This response will be critical to prevent negative impacts from future COVID variants, as well as address the issue of vaccine hesitancy in African American communities.

Climate change and research and Extension efforts: With greater weather extremes in temperature and rainfall, and environmental challenges to field crops and animal health, research and Extension efforts to address environmental challenges will be critical for farmers, especially small-scale/minority farmers who have limited resources to adjust to these weather fluctuations.

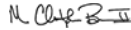
Black farmers: Black farmers continue to face many challenges, due to years of documented discriminatory practices while trying to apply for farm loans through USDA. As a result, the number of black farmers has declined creating a need to preserve and ensure a pipeline of new and beginning black farmers exist in Kentucky and surrounding areas. Many hardships still trouble the Black farmers as it relates to knowledge gaps between alternative production practices and new agritech opportunities. Kentucky State will continue to advocate and provide avenues for Black Farmers to compete at local markets and decrease the effects of food insecurity, food dessert, and access plaguing their communities.

Broadband expansion: Broadband is critical to the continued development of agritech. Therefore making a priority for digital literacy education is especially important to small and Black farms where market access and information access via broadband internet will be critical to compete with larger farms.

As planning for the 2023 Farm Bill moves forward, we ask that you please consider these issues and the importance of USDA/1890 University collaborations in addressing these issues. Again, thank you, Chairman Scott, for convening the hearing,

and thank you to the Committee Members for their work on these critically important issues that are being addressed by Kentucky State and other 1890 Universities!

Sincerely,



M. CHRISTOPHER BROWN II, PH.D.,
Eighteenth President.

SUBMITTED LETTERS BY HON. ALMA S. ADAMS, A REPRESENTATIVE IN CONGRESS
FROM NORTH CAROLINA

LETTER 1

ON BEHALF OF HAROLD L. MARTIN, SR., CHANCELLOR, NORTH CAROLINA AGRICULTURAL
AND TECHNICAL STATE UNIVERSITY

June 15, 2021

Hon. DAVID SCOTT,
Chairman,
House Agriculture Committee,
Washington, D.C.;

Hon. ALMA S. ADAMS,
Vice Chair,
House Agriculture Committee,
Washington, D.C.

Dear Chairman Scott and Vice Chair Adams:

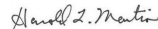
Greetings from North Carolina Agricultural and Technical State University. On behalf of our faculty, staff, and students, I want to thank you, Chairman Scott, Vice Chair Adams, and all Members of the House Agriculture Committee, for your commitment to our 1890 Land-Grant Universities. North Carolina A&T is the largest of the 1890 land-grants and one of the nation's leading land-grant universities, overall.

We thank you for your investment in providing access and opportunity to under-represented students to pursue baccalaureate degrees in the food, agricultural, and environmental sciences. In the spring of 2020, we received \$2,000,000 in grant funding (\$500,000 a year for 4 years) and an additional \$252,000 in discretionary funding. These funds have been used to create the scholarship program, *College of Agriculture and Environmental Sciences 1890 Scholars Program*, which provides support for a total of 40 students with 23 full and 17 partial scholarships. The first recipients received their awards during the 2020–2021 academic year. The outstanding students receiving these awards represent a broad array of disciplines including, Agricultural Education, Agricultural and Environmental Systems, Food and Nutritional Science, Biological Engineering (Agricultural Engineering), Landscape Architecture, Animal Science, and Laboratory Animal Science.

For the 2021–2022 academic year, a total of 70 scholarship awards have been confirmed for new freshmen and transfer students in addition to the 23 full scholarship recipients in 2020–21. Dr. Antoine J. Alston, Professor and Associate Dean for Academic Studies, has implemented an excellent professional development program entitled the *CAES 1890 Scholars—Professional Development Program* that supports the scholars and other students in the college.

Thank you for all you do for 1890 Land-Grant Universities and North Carolina A&T State University!

Sincerely,



HAROLD L. MARTIN, SR.,
Chancellor.

LETTER 2

ON BEHALF OF ADOBE INC., ET AL.*



June 16, 2021

Hon. ALMA S. ADAMS,
House of Representatives,
Washington, D.C.;

Hon. J. FRENCH HILL,
House of Representatives,
Washington, D.C.;

Hon. CHRISTOPHER A. COONS,
United States Senate
Washington, D.C.;

Hon. TIM SCOTT,
United States Senate
Washington, D.C.

Dear Representative Adams, Representative Hill, Senator Coons, and Senator Scott:

We write in strong support of the recently-introduced Institutional Grants for New Infrastructure, Technology, and Education for HBCU Excellence Act, also known as the IGNITE HBCU Excellence Act. According to research from the United Negro College Fund, Historically Black Colleges and Universities (HBCUs) contribute nearly \$15 billion to their communities on an annual basis, produce 134,000 jobs, and create \$46.8 billion in alumni career earnings that can be directly attributed to their degrees.

While HBCUs have been incredibly successful, they have also been significantly underfunded for decades and the IGNITE HBCU Excellence Act aims to boost investments to renovate, modernize, and construct new campus facilities, including instructional, research, and residential spaces. These investments are vital to attracting and retaining students and sustaining these institutions in the long-term.

We believe that diversity is an essential driver of innovation and creativity. The valuable partnerships we have had with HBCUs over the years have contributed to building the innovative workforce we desire, and our country needs, to compete globally. We look forward to continuing and expanding on our partnerships with these institutions.

As Congress works to address the infrastructure needs of the country, we hope that the infrastructure investments provided for in the IGNITE HBCU Excellence Act will be included in the legislative efforts.

We appreciate your long-standing work to invest in HBCUs and we look forward to working with you to advance the IGNITE HBCU Excellence Act.

Sincerely,

Adobe Inc.
Autodesk, Inc.
Dell Technologies
Hewlett Packard Enterprise
HP Inc.
IBM Corporation
Information Technology Industry Council

Mastercard Inc.
Nielsen
Oracle Corporation
Siemens USA
SoftBank Group
Visa Inc.

CC:

House Speaker NANCY PELOSI
Majority Leader CHARLES SCHUMER
Republican Leader KEVIN MCCARTHY
Republican Leader MITCH MCCONNELL

* Adobe Inc., Autodesk, Inc., Dell Technologies, Hewlett Packard Enterprise, HP Inc., IBM Corporation, Information Technology Industry Council, Mastercard Inc., Nielsen, Oracle Corporation, Siemens USA, SoftBank Group, Visa Inc.

U.S. Senator PATTY MURRAY
 U.S. Senator RICHARD BURR
 U.S. Rep. BOBBY SCOTT
 U.S. Rep. VIRGINIA FOXX

SUBMITTED QUESTIONS

Questions Submitted by Hon. Salud O. Carbajal, a Representative in Congress from California

Response from Makola M. Abdullah, Ph.D., President, Virginia State University; Chair, Council of 1890 Universities, Association of Public and Land-grant Universities

Question 1. How are 1890's Institutions partnering with Non-Land-Grant Agriculture and Renewable Resources Universities (NARRU's), especially MSI NARRU's?

Question 2. What can we do to strengthen partnership opportunities between 1890's and NARRU's?

Answer 1-2. Thank you, Congressman Carbajal, and Members of the House Agriculture Committee, for the opportunity to follow up with you on the recent 1890 Universities hearing. This is a topic that needs to be proactively addressed, and I am grateful to share a few thoughts with you.

As I am sure you know, both 1890 land-grants and NARRUs play a significant role in providing accessible and affordable education in agriculture, food and renewable resources, as well as in agricultural research and educational outreach. The 1890 land-grant institutions and NARRUs also have many mutual goals, like: conducting more collaborative research with partner institutions; identifying and focusing on priority issues in teaching, research and outreach; developing student leaders; and as your question suggests, developing more multi-institutional partnerships. Therefore, given that there is usually strength in numbers, one may reason that there would be many benefits of 1890 land-grant institutions working together with NARRU partners to reach these common goals. And I agree.

Unfortunately, though, our institutions face some roadblocks in doing so. From a geographic standpoint, very few 1890 land-grants have NARRU institutions in their states. Geography plays an important role in who the 1890s can partner with, because collaborations and partnerships usually require financial resources and personnel. Since most of our 1890 institutions do not have spare financial or human resources to devote to additional projects—albeit ones that would most likely be of great value—grants would need to be sought to do so. However, most grant opportunities available to us restrict our scope of work and partnerships to only within our state borders. In order to partner across states, specific Federal resources would need to be identified to allow us to proceed. Additionally, a solution would need to be found to address the fact that if those Federal dollars had a state match requirement attached to them, the 1890 universities do not enjoy a level of state matching that would support the partnership.

Another unfortunate roadblock is that there are few grant opportunities for two limited-resource institutions to partner. And those resources that are made available to us, must also be sustainable.

So, while there is certainly a willingness among our institutions to collaborate, without a specific allocation of resources over and above what is currently appropriated, there is not much of an opportunity to move forward. Our hands are financially tied either by limited resources or by our funding sources' in-state mandates.

On the positive side, I am very glad you posed this question, because I am quite sure that 1890 and NARRU Executive Leadership teams (Research and Extension), with support from the 1890 and NARRU Presidents, could and should begin to address how to carve a path forward to overcome these roadblocks. In fact, as the Chair of the APLU Council of 1890 Universities, I am committing to you that before the end of this year, we will begin to convene meetings to develop some partnership ideas and opportunities. I may recommend that our nation's food insecurity be a good first topic to explore, in addition to the effects of climate change on low wealth communities and/or communities of color. Additionally, I will also recommend that since NIFA conference grants may be available for this purpose, we will explore applying for one to bring these groups together to determine a partnership plan of action.

We welcome any additional thoughts you may have, Congressman Carbajal, on how to improve our performance in these partnership endeavors, and I personally

invite any of the House Agriculture Committee Members to reach out to me with more thoughts on how we may achieve this worthwhile collaboration. Thank you.
Sincerely,



MAKOLA M. ABDULLAH, PH.D.,
President.

Response from Heidi M. Anderson, Ph.D., President, University of Maryland Eastern Shore; Member At-Large, Council of 1890 Universities, Association of Public and Land-grant Universities

Question 1. How are 1890's Institutions partnering with Non-Land-Grant Agriculture and Renewable Resources Universities (NARRU's), especially MSI NARRU's?

Question 2. What can we do to strengthen partnership opportunities between 1890's and NARRU's?

Answer 1-2. Because of the paucity of NARRU institutions in our immediate region, we have only had limited collaborative linkages with NARRU members.

An example of initiative was a professional development project funded by USDA-NIFA for Dr. Madhumi Mitra to link with a faculty at Cal State at Fresno with a focus on bioenergy (see attached).

To strengthen this type of partnership, we can imagine that if there was specific program funding focused on enhancing the linkages (academic, research and extension) between 1890s and NARRU MSI's this could catalyze development of stronger collaborative partnerships. Without specific incentives, it would be difficult to grow such linkages.

Finally, we appreciate the support of all of the Committee Members and our Federal delegation.

Thank you for your patience as we researched this matter.

Sincerely,

HEIDI M. ANDERSON, PH.D.,
President,
University of Maryland Eastern Shore.

ATTACHMENT

United States Department of Agriculture—Progress Report

Report Date: 09/16/2020

Title: Professional Development: <i>Gracilaria</i> (red macroalga) biorefinery system: An integrated approach for bioethanol production	
Sponsoring Agency: NIFA Funding Source: Non Formula Accession No.: 1015180	Project Status: ACTIVE Reporting Frequency: Annual Grants.gov No.: Award No.: 2018-38821-27742
Project No.: MDX-BE20180401 Project Start Date: 04/01/2018 Reporting Period Start Date: 04/01/2019	Proposal No.: 2017-07515 Project End Date: 11/30/2020 Reporting Period End Date: 03/31/2020
Submitted By: Tracie Bishop	Date Submitted to NIFA: 06/29/2020

Program Code: EQ

Program Name: Research Project

Project Director:

MADHUMI MITRA
410-651-6049
mmitra@umes.edu

Recipient Organization:

UNIVERSITY OF MARYLAND
11868 ACADEMIC OVAL
Princess Anne, MD 218531295
DUNS No. 082611302

Performing Department:

{NO DATA ENTERED}

Co-Project Directors:
{NO DATA ENTERED}

Departments:
{NO DATA ENTERED}

Non-Technical Summary

The professional development project will provide essential support for the investigator to conduct sabbatical research on the efficient methodologies in integrated aquaculture and for the generation of sustainable bioethanol from a red macroalgal feedstock, *Gracilaria*, at a pioneer institute of science, engineering, and technology in the USA. The overall goal of this professional development project is to address some of the critical needs of sustainable renewable energy generation and mitigating the harmful effects of the environment through the implementation of a seaweed/macroalgal biorefinery with cocultures of fish-plant species. The specific objectives are: (1) to implement and maintain an integrated aquaculture system with species of *Gracilaria*, and edible white shrimp, *Litopenaeus vannamei* for evaluating the bioremediation potential of the macroalga in a biorefinery setting; (2) to utilize the macroalga, *Gracilaria* for the production of sustainable bioenergy in the form of bioethanol; and (3) to enhance professional training, networking, and strengthening collaborations between two minority serving institutions. The professional development will facilitate the University of Maryland Eastern Shore (UMES) to have the capability for implementing bioenergy research in education (courses and experiential learning activities), student and faculty training (workshops), and outreach activities to the community in the areas of sustainable aquaculture, bioenergy, and bioremediation. In addition, research collaborations with another minority institution, California State University at Fresno, CA, will be expanded and strengthened, establishing a platform for future student exchange and faculty visits.

Accomplishments

Major goals of the project

The overall goal of this professional development project is to address some of the critical needs of sustainable renewable energy generation and mitigating the harmful effects of the environment through the implementation of a seaweed/macroalgal biorefinery with co-cultures of fish-plant species. The specific objectives are: (1) to implement and maintain an integrated aquaculture system with species of *Gracilaria*, and edible white shrimp, *Litopenaeus vannamei* for evaluating the bioremediation potential of the macroalga in a biorefinery setting; (2) to utilize the macroalga, *Gracilaria* for the production of sustainable bioenergy in the form of bioethanol; and (3) to enhance professional training, networking, and strengthening collaborations between two minority serving institutions. The professional development will facilitate the University of Maryland Eastern Shore (UMES) to have the capability for implementing bioenergy research in education (courses and experiential learning activities), student and faculty training (workshops), and outreach activities to the community in the areas of sustainable aquaculture, bioenergy, and bioremediation. In addition, research collaborations with another minority institution, California State University at Fresno, CA, will be expanded and strengthened, establishing a platform for future student exchange and faculty visits.

What was accomplished under these goals?

During the first phases of the project, the construction and installation of the core components of a prototype Integrated MultiTrophic Aquaculture system has been completed. The tanks have been constructed from lumber recycled from shipping crates, then insulated with construction 1" foam, and finally lined with 6 mm construction plastic. The necessary pumps and plumbing have also been installed and the generator has been acquired. More efforts have been focused on racewaytype growth which has shown much promise for the intensive culture of shrimp and may benefit from the integrated remediation abilities of integrated algaculture. A hybridized closed photobioreactor has been constructed to culture the blue green microalga, *Spirulina*, for carbon capture as well as a source of shrimp nutrition. During the first phase, cultures of *Litopenaeus vannamei* post larvae have been obtained from Miami Aquaculture and stocked in temporary stock tanks with sterilized seawater and constant aeration have been provided for a period of 2 weeks. The shrimp was fed with harvested *Spirulina* and soy bean meal obtained from a screw press extrudate. A weekly 50% water change was also undertaken during the acclimation process. *Gracilaria tikvahiae* was harvested from Assawoman and Chincoteague bays of the Delmarva Peninsula. The macroalgal samples were cleaned and maintained in sterilized seawater for 2 weeks prior to the trials with constant aeration to prevent frond deterioration, and artificial light. Samples were fertilized weekly with Micro Algae Grow to maintain the cultures. Water quality parameters including ammonium, nitrate, nitrite, and phosphate levels were recorded once per

week for the duration of each trial. The following trials/cultures were maintained and compared: monocultures of *Gracilaria*; monocultures of shrimp; and integrated cultures of *Gracilaria* and shrimp. The principal performance metric for *Gracilaria* and shrimp performance for the study was the specific growth rate. In addition to the growth rate, the mass, *Gracilaria* tip elongation, shrimp body length, shrimp mortality, and nutrient levels (nitrate, nitrite, phosphate, and ammonium) are being analyzed using an ANOVA and Tukey's separation of means to ascertain differences between culturing conditions (mono *vs.* integrated). During the visit to California State University, Fresno, in summer to fall of 2019, Dr. Mitra received training on the various techniques of algal culturing and extractions. She was trained on the the Algem HT24, a high throughput, compact, computer-controlled photobioreactor for cultivation of various microalgae such as *Chlorella vulgaris*, *Arthrospira platensis*, *Haematococcus pluvialis*, and *Dunaliella salina*.

What opportunities for training and professional development has the project provided?

The project has served as an initiative for faculty professional development and collaborative research in applied agricultural and natural sciences at the University of Maryland Eastern Shore (UMES). The research program will enhance the opportunity for sustainable aquaculture and bioethanol production at the university, facilitating UMES to have the capability for implementing education, student training, and outreach activities in the areas of sustainable bioenergy, bioproducts, and bioremediation. Already some of the activities have been infused in two courses: Marine and Estuarine Ecology and Introduction to Bioenergy and Bioproducts. In addition, research collaborations with another minority institution, California State University, Fresno, CA, (Hispanic serving institution) is expanded and strengthened through this professional development project leading to publishing book chapters and the book on Bioenergy; and also establishing a platform for future student exchange and faculty visits. The students and faculty in the Chemistry and Biology departments at Cal State Fresno learned about the importance of feedstock like macroalgae and their importance in marine aquaculture along with generation of bioethanol and bioproducts. Due to the pandemic of COVID-19, the visit to California State University, Fresno has been postponed until next year, as the university will continue to operate on the virtual platform.

How have the results been disseminated to communities of interest?

An invited panel presentation on Bioenergy, Bioproducts, and Sustainability was led by Dr. Mitra at the American Society of Engineering Education's annual conferences in Tampa Florida, in June of 2019. The panel reached more than 100 people who attended the presentations. Dr. Mitra also shared the results with the collaborators and their students in Chemistry and Biology courses along with university faculty at California State University, Fresno, during her visit in summer/spring of 2019.

What do you plan to do during the next reporting period to accomplish the goals?

Dr. Mitra will be trained on the approaches to generate bioethanol from potential seaweeds in the department of Chemistry at the California State University Fresno, CA. She will be trained on the various techniques for enzymatic hydrolysis of algal pulp along with chemical analysis; and ethanol fermentation with microbes at Dr. Maitra's laboratory. Part of the training was scheduled for summer of 2020, and the remaining training for October through November of 2020. Due to the pandemic of [COVID]-19 with restricted travel and universities going online/virtual platforms for teaching, research, and collaborations, it is anticipated that Dr. Mitra can only travel to Fresno when the restrictions due to travel and research are eased at both the universities. So the expected dates will be in Spring or Summer of 2021 after the request for no-cost extension is granted under special conditions.

Participants

Actual FTE's for this Reporting Period

Role	Non-Students or faculty	Students with Staffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Scientist	1	0.2	0	0	1.2
Professional	0	0	0	0	0
Technical	0	0	0	0	0
Administrative	0	0	0	0	0
Other	0	0	0	0	0

Role	Non-Students or faculty	Students with Staffing Roles			Computed Total by Role
		Undergraduate	Graduate	Post-Doctorate	
Computed Total	1	0.2	0	0	1.2

Student Count by Classification of Instructional Programs (CIP) Code

Undergraduate	Graduate	Post-Doctorate	CIP Code
2	0	0	01.11 Plant Sciences..

Target Audience

Target audiences—Undergraduate students in the Marine and Estuarine Ecology (BIOL 600) at University of Maryland Eastern Shore course that was offered in Spring of 2020, learned about various marine feedstock and how they can be used for the generation of biofuels. They also learned about *Gracilaria's* efficacy as a biofuel feedstock and how to turn a nuisance alga into an investment in cleaner energy. They also learned about culturing marine microalgae and how these could be used for the generation of biodiesel. Such an approach will provide avenues for sustainable aquaculture and energy systems via production of economically valuable and renewable products. The undergraduate and graduate students from the collaborators' labs at California State University at Fresno, CA, were also trained in usage of macroalgae for the purpose of generating biofuels during the investigator's visit in early fall of 2019. More than 50 percent of these students from the above-mentioned universities were from the minority and educationally-disadvantaged populations. Efforts—(1) Increased of content knowledge in the areas of Integrated MultiTrophic Aquaculture; bioenergy from feedstock like micro and macroalgae; (2) Hands-on laboratory and field experiences with respect to utilizing macroalgae for the purpose of producing biofuels were replaced with virtual experiences, as the university was shut down due to the current pandemic of [COVID-19]. These activities were included in the Marine and Estuarine Ecology course, and also a mini online workshop was conducted for the collaborators and their students at California State University, Fresno, CA in Fall of 2019.

Products

Type	Status	Year Published	NIFA Support Acknowledged
Books	Published	2020	YES.
Citation			
Mitra M., and Nagchaudhuri A. 2020. <i>Practices and Perspectives in Sustainable Bioenergy. A Systems Thinking Approach</i> . Springer Publishers ISSN 1865–3529.			
Type	Status	Year Published	NIFA Support Acknowledged
Book Chapters	Published	2020	YES.
Citation			
Nagchaudhuri A., and Mitra M. 2020. <i>Bioenergy Systems—A Wholistic Approach</i> . In Mitra M., Nagchaudhuri A. (eds). PRACTICES AND PERSPECTIVES IN SUSTAINABLE BIOENERGY. A SYSTEMS THINKING APPROACH. Springer Publishers ISSN 1865–3529. pgs 1–12.			
Type	Status	Year Published	NIFA Support Acknowledged
Book Chapters	Published	2020	YES.
Citation			
Mitra M., Henry X. Nagchaudhuri A., and Maitra K. 2020. <i>Photobioreactors for Bioenergy Systems and Lipid Extraction Methods from Microalgae</i> . In Mitra M., Nagchaudhuri A. (eds). PRACTICES AND PERSPECTIVES IN SUSTAINABLE BIOENERGY. A SYSTEMS THINKING APPROACH. Springer Publishers ISSN 1865–3529. pgs 131–157.			

Other Products

Product Type

Data and Research Material

Description

Experiments on the Integrated MultiTrophic Aquaculture and data collected; Analysis in progress

Product Type

Educational Aids or Curricula

Description

Many of the research-related activities pertaining to the professional-development grant have been incorporated in the following courses: Marine and Estuarine Ecology (BIOL 600/BIOL 400); BIOL 112 (Principles of Biology II) and Introduction to Bioenergy, Bioproducts, and Sustainability (MEES 688X).

Changes/Problems

The major problems encountered by the Principal Investigator (Dr. Mitra) and her collaborators were connected to the closure of the universities due to the current pandemic of [COVID-19]. The University System of Maryland required all universities to teach and conduct research (as much as possible) on the virtual platform. Professional travel is also restricted. The University System of California also adopted similar measures of teaching courses online and restricting research and travel as well as hosting collaborators/scholars. The last component of the research for training on the generation of ethanol from seaweeds could not be continued due to the current situation. It is anticipated that Dr. Mitra will be requesting an extension of the project beyond November 2020, to accomplish the final objective of the project.

Response from Orlando F. McMeans, Ph.D., Chancellor, Agricultural Research and Extension Center, Southern University; Dean, College of Agricultural, Family and Consumer Sciences, SU

Question 1. How are 1890s Institutions partnering with Non-Land-Grant Agriculture and Renewable Resources Universities (NARRU's), especially MSI NARRU's?

Question 2. What can we do to strengthen partnership opportunities between 1890s and NARRU's?

Answer 1-2. Non-land-grant Agriculture and Renewable Resources Universities, or NARRU are those universities with agricultural academic, research and outreach programs, but do not have congressional designation as land-grant institutions. These institutions number around 60 and are located throughout the U.S. Many of them having strong Ag programs and graduates go on to work in the same fields as graduate of 1862 and 1890 Institutions.

There are opportunities for NARRU and 1890s to collaborate as relates to agriculture related academic, research and outreach programs. Some of these include, but are not limited to:

Research: Faculty and student exchanges, including summer internships in research areas of common interests. Combined research programs between faculty at both sides which can in turn **result in combined publications through external grant writing.**

Academic Curricula: Help each other in offering specialized courses (*e.g.*, via online platforms)

Outreach: Community and Economic Development is an area of a common interest. Youth and Family development may also be explored. Access to specialized audiences (*e.g.*, Disadvantaged/Black farmers and small businesses).

Capacity Building Grants for Non-Land-Grant Colleges of Agriculture Program (NLGCA) is a line with the USDA's National Institute of Food and Agriculture. I think the current funding level is a little more than \$4 Million. If those funds were significantly increased with the encouragement (additional points) of working with an 1890 that is located within the same state, perhaps that would increase collaborations. For example, in Louisiana we have two non-land-grant schools, McNeese State and Louisiana Tech. Currently we do not have joint programming, but this could be a catalyst in us working together. For example, we have a large population of African American farmers in the state. We available funding, we can develop joint outreach research and efforts to support these farmers. Just my 2¢.

Hope this helps.

ORLANDO F. MCMEANS, PH.D.,
Chancellor-Dean,
Southern University Research and Extension Center,
College of Agricultural, Family and Consumer Sciences.