

CFAES Testimony – March 2, 2021

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Chairman Kick, Ranking Member O'Brien, and members of the House Finance Subcommittee for Agriculture, Development, and Natural Resources, thank you for the opportunity to testify today. My name is Dr. Jacqueline Kirby Wilkins, and I currently serve as Associate Dean and Director of Ohio State Extension in the College of Food, Agricultural, and Environmental Sciences (CFAES) at The Ohio State University. Dr. Cathann Kress, Vice President and Dean, sends her regrets that she could not be here today. I am joined by Dr. Gary Pierzynski, Associate Dean for Research and Graduate Studies, and Adam Ward, the college's Director of Government Affairs.

CFAES is both literally the cornerstone college of our university — which began as Ohio A&M — and the cornerstone of life on earth because of our disciplines. Our focus is centered around ensuring viable agricultural production, food security and safety, and environmental and ecosystem sustainability. In our college, we prepare people for the ultimate work — we sustain life.

To say 2020 presented challenges would be a great understatement but fortunately, despite the challenges 2020 gave us, our college had an incredible year. The USDA reports the annual demand for college graduates in the agriculture and food industries is outstripping what colleges are producing. The demand for CFAES graduates continues — and we need to increase the number of graduates in our programs.

In response, we're adding programs and helping students get excited about our work and our careers— our Enrollment and Recruitment task force is creating the foundation for increasing our knowledge and understanding of our enrollment trends and data, engaging faculty in considering our goals for student engagement, and reviewing our enrollment plan for implementation across the college.

We need your help – Governor DeWine's budget reductions as a result of COVID-19 reduced the "Cooperative Extension" and "Ohio Agricultural Research and Development" (OARDC) line items by 5%. House Bill 110 adds an additional reduction of 1.7% to both line items in FY 2022 and restoring that 1.7% cut in FY 2023.

We will continue to be vigilant as we navigate FY21 and have implemented measures to continue to hold our college in its strong position — maintaining the hiring pause — using a strategic approach to



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filling vacant positions, continuing to reduce operational spend, and reducing capital spend by focusing on mission critical items during this time.

But we can accomplish more for our students, our industries, and the citizens of Ohio, if the General Assembly increases the state's support for agricultural research and Extension. We respectfully request the General Assembly to restore our funding to levels passed in House Bill 166 of the 133rd General Assembly.

American investment in agricultural research programs has been decreasing for decades. Our competitors in China, Western Europe, and Southeast Asia are exponentially increasing their investment and closing the productivity gap between us and the rest of the world. These cuts impact the number of graduates available for agriculture and our ability to address vexing challenges in water quality, soil health, climate patterns, and to reduce health risks through food.

The CFAES Wooster campus was recently renamed from "OARDC/ATI" to CFAES Wooster to better reflect its role within CFAES and its status as a campus. Changing the name connects this campus with our shared resources, infrastructure, personnel, and equipment. We will continue to use OARDC and ATI to designate the research enterprise statewide and our unique technical institute, but this new name brands the location as an integral part of CFAES and provides a gateway for Ohio State in northeast Ohio.

Our innovative scholarship is focused on our Grand Challenges but reaches across broad complex systems — like the plants and insects focused on in our new CFAES Wooster Science Building — but also engineered systems like Precision Agriculture — where machinery automation and use of spatial data utilize technology to more accurately place and meet site-specific crop and soil needs — to those focused on our environment, like methods to sequester carbon dioxide in the soil in the CFAES Rattan Lal Center for Carbon Management and Sequestration. We span food and biochemical systems, such as in the work of our Center for Foodborne Illness Research and Prevention, to ensure that the global food supply is both safe and healthy.

The complex interactions between Animals and Human systems became more obvious to us all in the year of Covid-19. The Food Animal Health Research Program (FAHRP) located on the CFAES Wooster campus has transitioned into the Center for Food Animal Health (CFAH) within our college. CFAH will move within the Department of Animal Sciences and affirms our CFAES commitment to Ohio's agriculture industry by helping to prevent disease outbreaks and ensuring the safety of our food supply.

With our continued commitment to water quality and management, the OSU Office of Research, and our college began streamlining the reporting structure for Stone Laboratory and the Ohio Sea Grant Program (OHSB), to shift it within our college. Fully integrating Stone Lab and OHSB enhances opportunities for impact and ensures long-term strategic direction, and allows for further integration

across research, teaching, and extension – both within CFAES, OSU at large, and with other university and college partners and stakeholders across Ohio. Restoring the proposed cuts to the Sea Grant line item will aid us in continuing to deliver the outstanding results that our collaborating institutions have come to expect.

In 2020, we broke ground on the Controlled Environment Food Production Research Complex located on our Waterman Agricultural and Natural Resources Laboratory, in Columbus. It will provide us the infrastructure needed to improve food security, our food systems, and make progress towards the Rural and Urban Interface grand challenge.

Waterman is a as a proof-of-concept model for the work that will be done at the university's new Interdisciplinary Research Facility located just south of Waterman.

All of these developments emerged for one singular purpose — to advance our innovative scholarship. To ensure we convert priorities to actions. To create more opportunities for us to leverage interdisciplinary systems which have the greatest potential to sustain life.

As you would expect, our research portfolio continues to be robust with more than 1,000 active projects, almost 200 capacity funded projects, and over \$50 million dollars in competitive research grants. In FY20, 553 proposals were submitted — about a 20% increase and 11 new grants were received at \$500,000 or more.

It's complex to sustain life, the challenges don't stay within disciplinary boundaries and new challenges can emerge suddenly. In our college, our faculty work across academic and research areas and focus on systems to deliver the science and innovation needed today.

To address shifts in climate, you won't just find Aaron Wilson, our atmospheric scientist and Extension specialist focused on effective adaptation — but also Jeff Firkins in Animal Sciences, whose research is on reducing greenhouse gases from Dairy production. He's joined by Zhongtang Yu, whose work examines the ruminant microbiome. Meanwhile, Alex Lindsey in Hort & Crop Sciences, examines drought and flooding stress related to corn, and Brent Sohngen in AEDE focuses on the economics of climate and carbon management. Their work is complimented by many others — whether the interdisciplinary applied research for mitigating new pests and diseases by many of our Entomology and Plant Pathology faculty, or those focused on plant breeding, whether soybeans, barley, wheat, tomatoes, or even peppers and grapes.

In FY20 our Intellectual Property included 7 active startups, 33 invention disclosures, 5 patents issued, 27 new inventors, and almost \$374,000 in licensing revenue.

We'd even go so far as to say that science isn't done until its communicated. In October, we launched our Knowledge Exchange website, which offers a robust catalogue of translated research related to CFAES disciplines and is a collaborative network of CFAES researchers, Ohio State University Extension professionals, communicators, data scientists, and industry experts whose mission is to communicate our science outside of the academic landscape and into the hands of the public.

While our research and Extension is an engine for all the work of our college, at the center of our college and its purpose — are our students.

Our college maintained steady enrollment throughout the 20-21 school year despite the challenges posed by the COVID-19 pandemic. During the Autumn 2020 semester, CFAES showed a decrease of less than 1% in its total student enrollment. The Spring 2021 semester was similarly successful with only a 2.4% decrease in enrollment.

Our undergraduate students comprise 5% of the Columbus campus' undergraduate population, ranking the college as the 5th highest enrollment unit at the University (out of 15 total units).

The School of Environment and Natural Resources has been attracting new students extraordinarily well throughout the 20-21 school year, as enrollment in the school is projected to have increased nearly 6% over the previous year.

As a direct result of the strong connections with our faculty and staff, 93% of all CFAES students are retained to their second year and our 6-Year Graduation rates exceed the university's average since 2012. Our 4-Year Graduation rates have substantially exceeded the university's average since 2010. The most recent cohort, which began in 2016, graduated at a rate of about 75%, compared to the university average of 69%.

And about 94% of graduates are employed or are enrolled in graduate or professional school within six months of their graduation.

Our student-centered philosophy continues — with our college awarding the largest amount of scholarship funding within the university — approximately \$2.8 million.

Much of what we achieved in this challenging year would not have been possible without our generous stakeholders, alumni, donors and partners. Thanks to their generosity, we have set fund-raising records since 2017 — even during a pandemic.

Our college's External Relations team has been continuing to lay the foundation upon which our Strategic Partnerships unit is anchored. Emerging public/private partnerships with Nationwide and Nationwide Foundation, Kubota Tractor Corporation, Priva, Cargill, Scotts Miracle Gro, Apple, and General Electric Lighting are just the beginning. For example, ATI is partnering with Kubota Tractor

Corporation and the National Coalition of Certification Centers to implement a Kubota-endorsed credentialing for students who are studying in our engineering technologies area. Students at ATI who take these courses will graduate with their degrees, as well as with this industry-recognized credential. Kubota will also be providing students mentoring and internship opportunities.

We also are leveraging partnerships with others committed to STEM education — such as COSI — where we are co-creating science kits for kids across Ohio — the first kit is on water, designed by 4-H and Stone Lab educators.

And we continue strong partnerships with the Ohio Department of Agriculture, USDA National Resources Conservation Service, Ohio Farm Bureau Federation, Ohio Soybean Council, The Nature Conservancy, and other important industry groups.

I'm deeply proud of our CFAES community and how we have managed and responded during 2020. CFAES was one of the first colleges to gain approval for research exemptions under Governor Mike DeWine's "stay at home order". With this approval, CFAES researchers worked with The Ohio State University Wexner Medical Center physicians on COVID-19 antibody blood tests; and tested polymer face masks to protect against COVID-19. Extension educators were able to maintain on-farm research aimed at increasing food supply and security when the pandemic hit.

Last spring the CFAES Lean on Your Land Grant Food Supply Chain Task Force was convened to address pressing and long-term issues in our food system that have been created or exacerbated by the COVID-19 pandemic.

Many 4-H programs could not meet in-person last summer and had to quickly adapt. Lorain County 4-H created "STEM in the Summer" activity kits that were distributed to more than 2,000 youth to learn about STEM. When county fairs were scaled back, Cuyahoga County 4-H created a "Fair-in-a-Box," with supplies for a car parade, club competitions, and service projects. Special thanks to all of our county agricultural societies for working with Ohio 4-H to make junior fairs possible in nearly all of our counties in 2020.

We extend our deepest appreciation to the thousands of volunteers who pivoted from the usual way of leading activities to ensure Ohio 4-H members still had positive youth development experiences, including home-based community service projects and demonstrations on club Facebook pages.

OSU Extension Community Development educators created a business survey to learn about impacts of COVID-19. The responses helped identify opportunities for financial relief and prepare materials for state and federal stimulus packages that, in turn, could help local businesses recover from impacts of COVID-19.

COVID wasn't the only challenge this year — in response to current events, we affirmed the CFAES Principles of Community. Our college is working to ensure that we become a just and equitable learning community that prepares the next generation to lead in a better world.

We continue our work through the launching of our Diversity, Equity and Inclusion Action Council and our conviction that racism and inequality have no place in CFAES. I appreciate the many thoughtful discussions, openness to listening to one another, and actions taken to ensure we not only affirm, but live our principles.

Within Ohio, we can see the challenges facing all of us which we need our cornerstone college to continue to address — increasing population, pressures on farmland, climate and water shifts, emerging diseases and pests, impacts of policies or leadership. The Ohio Agricultural Research and Development Center line item helps us operate eleven research stations and field labs, from Stone Lab to Ashtabula, from Northwest in Wood County to South Centers in Piketon. This line item also helps us maintain the capacity to address the challenges at the intersection of agricultural production, food security and safety, and environmental sustainability.

During the 2020 World Food Prize celebration for Dr. Lal, we reaffirmed our commitment to the Center for Carbon Management and Sequestration (C-MASC), and Dr. Lal's research which takes place on our Waterman Agricultural and Natural Resources laboratory, secured additional resources for its support, and the Board of Trustees approved the renaming to the CFAES Rattan Lal Center for Carbon Management and Sequestration.

Within Extension Agricultural and Natural Resources — we continue to expand our work engaging and being embedded across the state as with the eFields Report just released to the public — with over 218 trials, 107 partner farms, 55 industry partners, and 65 OSU contributors — we also increased webinars and podcast series on issues that impact agriculture, reaching over 1 million participants in 2020.

Last year, changes in the federal farm programs resulted in OSU Extension aiding farmers by enrolling them in the right Farm Bill programs. We developed and trained farmers to use a Farm Bill tool and performed consultations with literally thousands of individuals to aid in decision-making. We are aware of one farmer in western Ohio realizing benefits of over \$44,000 by working with their local Extension educator.

Real Money, Real World is a financial literacy program housed in both 4-H and Family and Consumer Sciences. The program has the potential to be implemented statewide, and we are working to increase awareness by partnering with Treasurer Sprague to help spread the importance of financial literacy.

In 2021, we anticipate the development and roll-out of a CFAES outward-facing, non-credit course catalog and marketing effort reaching even more people with our timely, research informed programs.

It's clear that these are challenging times — especially when our collective focus is on the complex interlocking systems which are at the core of sustaining life — but our college is ready. Our people are dedicated, productive, and engaged. We are aligning our systems, processes, and facilities. We prepare students, and solve challenges impacting us locally, throughout the state of Ohio, across our country, and around our world. We are grateful for your support of our work, consideration of our request, and we strive every day to ensure we are upholding our end of this outstanding partnership. Together — We Sustain Life.