BRINGING KNOWLEDGE TO LIFE

The Ohio State University’s College of Food, Agricultural, and Environmental Sciences (CFAES) provides the very foundation upon which today’s Ohio State was built. We embrace and embody our land-grant history, and with a resounding spirit of determination, our education, research, and outreach efforts benefit Ohio and, indeed, the world.

Our influence on issues of global importance has never been more vital, and now more than ever, people everywhere are looking in one direction—to CFAES—to confront the fundamental challenges of our planet. Food security and human health, biobased energy resources, environmental quality and sustainability—all represent areas of strength for CFAES and opportunities to find solutions for a world in need of answers.

CFAES is where the answers will be found with your help.

The initiatives described here represent $150 million of the But for Ohio State campaign, a $2.5 billion fundraising endeavor. With the support of our alumni and friends, we are preparing tomorrow’s leaders—the confident men and women who will face these issues head on and find the necessary solutions. Join us as we boldly address our rapidly changing world.

Bruce A. McPheron, PhD
Vice President for Agricultural Administration and
Dean of the College of Food, Agricultural, and Environmental Sciences

On the cover: Dr. Katrina Cornish in Ohio State’s College of Food, Agricultural, and Environmental Sciences is project leader of a pilot facility in Ohio that makes latex and rubber products from plants grown in the United States rather than the Southeast Asian trees that currently provide all of the world’s supply of natural rubber—a major step in Ohio State’s effort to develop and commercialize domestic natural rubber sources for this strategic raw material.
The Ohio Agricultural Research and Development Center is the largest university-based agbioscience center in the United States, and Ohio State University Extension is part of the world’s largest non-formal educational system.

The world requires groundbreaking research and stellar education programs to advance in an economically sustainable, yet environmentally compatible and socially responsible way. But for Ohio State and CFAES faculty and students, breakthroughs in these critical initiatives would not be possible.

From identifying new ways to cut crop losses that could save U.S. farmers more than $1 billion annually, to building upon the emerging environmental economy to help create new jobs and industries in Ohio, and from developing nutrition strategies that reduce feed costs for cattle, to enhancing human health by designing faster ways to trace food-borne pathogens, CFAES is meeting 21st-century challenges.
What does Ohio State mean to agricultural sustainability?

FROM HIS LABORATORY IN COLUMBUS, RATTAN LAL, PhD, HAS A GLOBAL REACH. But for Ohio State and Dr. Lal, our world wouldn’t have a tireless advocate for managing and protecting fragile soils. Dr. Lal’s research has advanced the worldwide practice of no-till farming, which leaves the residue from the previous year’s crops on the field, and agroforestry—planting trees and shrubs around croplands to enhance the quality of the soil. Dr. Lal teaches farmers around the world how to turn their struggling cropland into sustainable agriculture, and his work at Ohio State on carbon sequestration and soil management has greatly benefited developing regions in Africa and India—where more than 600 million people don’t know where their next meal is coming from. “Converting natural ecosystems to fields for crop production and pastures depletes a soil’s carbon content by as much as 75 percent,” according to Dr. Lal. “With too little carbon in the soil, crop production is inefficient. Our research to remedy this situation is making a difference in communities around the world.”
What does Ohio State mean to bioproducts innovation?

AGRICULTURE AND THE POLYMER INDUSTRIES COMBINE TO GENERATE close to $200 billion annually for Ohio’s economy. But for Ohio State and the Ohio BioProducts Innovation Center (OBIC), Ohio’s two largest industries would not have a partner to take emerging products from discovery to the marketplace. Founded in 2005, OBIC brings industry and academia together to accelerate the commercialization of specialty chemicals, polymers, and advanced materials made from renewable bio-based feedstocks. The Center provides technical and commercial assistance to companies and industries producing bio-based products—like cleaning and lubricant products created out of soybeans, plastic materials infused with natural fibers, and swine manure processed into an asphalt substitute used to manufacture shingles and roofing materials. “Farmers, rural communities, and agricultural businesses benefit from new markets for commodities,” says Denny Hall, PhD, director of OBIC. “In addition, Ohio industries gain from the development of innovative new feedstocks and materials. And that means jobs for Ohio.”
What does Ohio State mean to food safety and security?

But for Ohio State and the Department of Food Science and Technology, the mysteries and nature of foods, the causes of their deterioration, and the principles underlying food processing and safety would go unknown. Food science and nutrition students learn the chemistry, structure, engineering, and nutrition of food as it moves from processing to general use, as well as the role of diet in the prevention of chronic illnesses. “Our graduates are in high demand, and for good reason. They are prepared for the workforce and for graduate school,” says Sheryl Barringer, PhD, the department chair. Our team—made up of eight undergraduate students—won the 2011 Institute of Food Technologies national championship held in New Orleans, and Abby Snyder placed first in the undergraduate research competition. Additionally, Yuan Yan placed third in the Developing Scientist Awards competition at the annual meeting of the International Association of Food Protection in Milwaukee. And a 16-member student team from Ohio State, representing expertise in food science, food business, and culinary skills, created the delicious, beet-based “Unbeetable Burger,” which took first place in the Student Product Development Competition at AACC International.
THE 21ST CENTURY HAS GENERATED A GROWING MARKET LINKING THE BIOSCIENCES to real life agricultural concerns, as well as opportunities to expand traditional agriculture-based industries.

CFAES faculty and students are involved in innovative, multidisciplinary partnerships all across the Ohio State campus, bringing the new and promising field of agbiosciences together with zoology, medicine, engineering, business, law, education, chemistry, physics, microbiology, and much more.

Together, these collaborations are unlocking the nature of plants and animals, their behavior, their evolutionary history, and their value to society. These discoveries are then translated into the communities in which Ohioans live and work through the reach and power of OSU Extension.

CFAES is guiding our state, our country, and Ohio State forward in these exciting new fields, and we have identified three signature areas aligning state, national, and international priorities with the college's core strengths. These emerging fields of study offer an exceptional opportunity to position CFAES as a global leader.

**Food Security, Production, and Human Health**
Improving agricultural production to ensure adequate and affordable food sources, preserving agro-security to safeguard food supplies, and promoting the basics of nutritional health for a growing global population.

**Environmental Quality and Sustainability**
Understanding, protecting, and repairing the environment and essential ecosystems to ensure long-term sustainability.

**Advanced Bioenergy and Biobased Products**
Developing biomass-based advanced energy technologies and value-added biobased products such as fuels, specialty chemicals, and fiber products.
PLACE STUDENTS FIRST
$20,000,000
CFAES students transform their beliefs and ideas into the real-world inventions and innovations of tomorrow. Ensuring that outstanding students choose Ohio State and have access to resources to carry them to graduation is critical to our college. Financial support for students creates unique and powerful opportunities to educate and train future generations of leaders for agriculture and environmental sciences, and their related industries.

Four-Year Scholarships
Providing tuition scholarships, such as those that are part of the Moser Scholars Program, to enable the college to compete with other universities for the best students.

General Endowment
Providing additional scholarship resources for deserving students.

Undergraduate Research Awards
Providing resources for faculty-led undergraduate research to position students for success after graduation.

Study Abroad Scholarships
Opportunities for international study provide students with a global perspective, an essential expectation in today’s job market. CFAES has a stated goal of 50 percent of our undergraduates participating in a study abroad program.

Graduate Student Support
Graduate student funding is very competitive. Private support will enhance the college’s ability to recruit superior graduate students and produce the next generation of memorable professors.

ELEVATE FACULTY AND THE ACADEMIC ENTERPRISE
$30,000,000
Great students deserve great professors who will challenge and guide them to academic success. The hallmark of the CFAES experience is an outstanding faculty—dedicated scholars inspiring our students to become leaders in their chosen fields. A robust endowment provides the resources necessary to attract and retain faculty members of the highest caliber, as well as critical program and research support to advance signature areas and improve the college’s competitive position. The esteemed scholars who are chairholders receive recognition for personal achievements in their fields and the satisfaction that Ohio State supports research and quality teaching in their discipline.

Endowed Leadership Opportunities
Endowed Dean’s Chair
Endowed Research Leadership Chair

CREATE MODERN LEARNING ENVIRONMENTS
$50,000,000
Our aging CFAES buildings impede faculty and student recruitment and detract from the world-class experience our students and faculty expect in our classrooms, labs, and research environments. New facilities are critical to advancing our mission of education, research, and outreach.

Targeted Opportunities
Reinventing the university campus with a master plan for the 21st century, the One University Framework calls for building a new campus for the college and for expanding the green spaces of both the Wooster and Columbus campuses through the college’s arboreta.

New college buildings in closer proximity to other colleges will improve classroom, laboratory, and administrative services of the college on its Columbus
CFAES IS DRIVING FUTURE ECONOMIC DEVELOPMENT IN OHIO AND BEYOND

CFAES is driving future economic development in Ohio and beyond. We envision additional research support directed toward bioenergy resource development, human health needs, food security initiatives, and environmental sustainability. These resources are critical if we are to challenge conventional thinking and strategically act on the knowledge we generate.

EMBOLDEN THE RESEARCH AGENDA
$38,000,000
In today’s “flat world,” where creative and nimble systems are highly valued, students and faculty need the tools to adapt, solve problems, and apply new ways of thinking. Our signature areas of research require us to be visionary—to turn new ideas into sustainable solutions that add economic or social value. Competitive seed grants for research innovation are required to advance imaginative ideas from theory to practice. Such grants also build collaboration among our faculty, a key component of our research, extension, and education programs, and make us competitive at the national and international level for additional funding.

DRIVE HIGH-IMPACT INNOVATION
$12,000,000
Discretionary resources are necessary to support the college’s greatest needs including outreach and alumni relations programming, student co-curricular activities, undergraduate research initiatives, tutoring and mentoring support, lab and technology equipment, library acquisitions, and seed grants for the college’s signature areas. This flexibility allows the college to react to emerging opportunities, address critical needs of our students and stakeholders, and strengthen every aspect of the CFAES community.

CAMPAIGN PRIORITIES
- Place Students First ........................................... $20,000,000
- Elevate Faculty and the Academic Enterprise ...... $30,000,000
- Create Modern Learning Environments ............ $50,000,000
- Embolden the Research Agenda ...................... $38,000,000
- Drive High-Impact Innovation .......................... $12,000,000
Total ..................................................................... $150,000,000
ONE OF THE GREAT ATTRIBUTES OF CFAES IS THE WAY WE TRANSLATE FUNDAMENTAL understanding and discovery into practical use for the benefit of all. We are unwavering in our commitment to providing programs that meet the needs of the food and agricultural industries we serve, as well as the needs of society.

CFAES faculty and students are harnessing their creativity; their intellectual power is felt around the world. Through your support, we are developing new household products from biological resources. We are engineering wetland kits that allow small livestock farms to meet clean water standards.

Our researchers are addressing life-threatening diseases such as avian influenza and identifying cancer-fighting properties in our foods.

The challenges ahead are great, but the solutions are in sight.

CFAES has an extraordinary opportunity to lead the world in agbioscience learning and innovation, and we find inspiration and excitement in tackling the grand challenges of the 21st century. Your investment in our students, faculty, and programs during the But for Ohio State campaign will make a difference—now and tomorrow—in your community and around the world.
WILL WE FIND CURES FOR THE WORLD’S DEVASTATING DISEASES? | IS THERE A WAY TO MAKE OUR FOOD SUPPLY ABUNDANT AND SAFE? | CAN WE PRODUCE THE NEXT GENERATION OF SUSTAINABLE ENERGY?

THE EXTRAORDINARY PEOPLE AT THE OHIO STATE UNIVERSITY BELIEVE THE ANSWERS to these and other monumental questions will ultimately be “yes.” But for Ohio State’s immense breadth and depth of academic programs, outstanding students, world-class scholars, and extensive research capabilities, some of today’s most brilliant interdisciplinary teams would not be closer than ever to finding meaningful solutions for people in Ohio and far, far beyond.

Instead, because of the talent, intellect, and ambition at Ohio State, one of the most comprehensive universities in the nation, significant progress is possible on nearly every front. Founded because Abraham Lincoln believed education could lead the nation out of its darkest days, Ohio State now provides a powerful platform, unparalleled in scope and opportunity, from which leaders emerge and change the world.

The But for Ohio State campaign is a $2.5 billion fundraising endeavor that invites those who believe in Ohio State to invest in our students, our faculty, and our potential. By supporting Ohio’s land-grant institution, alumni, friends, parents, and partners can help us secure educational opportunities for future generations of students and meet the enormous challenges we face as a society. Together, we will sustain an enduring tradition of scholarship, service, and pride.

But for Ohio State ….. How would you answer? What does Ohio State mean to you?