



*A Community
of Scholars
Honoring
Excellence*

2019



2019

Food and
Agricultural Sciences
Excellence
in College and
University
Awards Program

A Community
of Scholars
Honoring
Excellence

INTRODUCTION

This year, 2019, has been an outstanding year for American agriculture and for the academic institutions that have a vital role in enhancing agriculture. It is through our continued partnership with the Association of Public and Land-Grant University (APLU) system, including our land-grant universities and non-land grant universities, that we are able to cultivate ground-breaking discoveries that help our nation's farmers and families, ranchers, producers, and ultimately consumers.

Shortly after last year's APLU meeting in New Orleans, President Trump signed the 2018 Farm Bill. This legislation not only provides for increased funding over the next five years of many of our competitive programs, it also creates opportunities to strengthen our partnerships across the university system and USDA—through new 1890 scholarship funding and a new Urban Agriculture program.

This year has also been a year of transition for NIFA. Kansas City is now NIFA's new home and we are working diligently to staff-up and train-up our workforce to build an improved, forward- focused agency that can support 21st century agricultural innovation. Although, you will see new faces and hear new ideas, our commitment to you and the American people will remain the same. We will continue

to move forward and advance the “scientific needle.” We will continue to work with our partners to focus on investing and finding solutions to agricultural and societal challenges that face our nation.

Today, we recognize the extraordinary efforts of educators, teachers, researchers, leaders, and extension professionals whose science-based work creates a tremendous positive impact by helping their clientele seize the opportunities and overcome the challenges they face through advanced technology.

The Excellence in College and University Teaching Awards recognize university faculty for engaging and preparing students for the future. The Excellence in Extension Awards recognize individuals committed to programs in lifelong learning and contributions to improving communities. The National Extension Diversity Award acknowledges outstanding efforts and accomplishments within the Cooperative Extension Service to enable and sustain diverse cultures and abilities. The Experiment Station Section leadership and diversity awards recognizes those that have advanced the vision of the land-grant innovation and discovery ideal with excellence and inclusiveness. Finally, the Multistate Research Award recognizes the collaborative efforts of state Agricultural Experiment Stations working



J. Scott Angle

DR. SCOTT ANGLE

*Director, National Institute
of Food and Agriculture,
U.S. Department of Agriculture*

together to address critical, regional needs. These awards honor outstanding recipients who have made exceptional scholarly contributions. These awards also recognize the educational, extension, and research system that has long been—and will continue to be—critical to the success of our great nation.

Our congratulations to every member of the family of land-grant, non-land grant agriculture, and resource-related universities, and to the award winners being recognized today.

APLU PRESIDENT'S LETTER

Distilled down to its essence, higher education is a network of people and ideas in exchange with society at large. Seen in this light, educators serve as the connection binding the higher education community together. These remarkable individuals deserve to be recognized for the tremendous contributions they make to their institutions every day.

Less tangible but no less valuable are the contributions scholars make to society. They inspire curiosity in their students, spark creativity through their research, and propel the world forward through service to their communities.

As president of the Association of Public and Land-grant Universities, I commend the 2019 recipients of the Food

and Agriculture Excellence Awards. They have distinguished themselves in a field of men and women who work tirelessly to improve the world through their research, instruction, and community engagement.

This year's winners are the very embodiment of excellence. As we continue to usher in an era of rapid societal and technological change, the individuals at the core of our universities promise to help shape a future that is better than our present or past. This is made possible only through their uncompromising dedication to excellence and their unrelenting commitment to improving our shared destiny.

I warmly congratulate this year's winners and extend our sincere gratitude for their unwavering commitment to excellence.



A handwritten signature in black ink that reads "Peter McPherson".

PETER MCPHERSON

*President, Association of Public
& Land-grant Universities*





National
Teaching
Awards

2019



Dennis R. Decoteau

Professor

Horticulture and Plant Ecosystem Health

The Pennsylvania State University

Dennis Decoteau has pursued sustained excellence in teaching by providing his students with creative content, innovative teaching approaches, and integrative experiential learning. He has 32 years of experience educating and mentoring students and serves as the Undergraduate Program Coordinator for the Plant Science major at The Pennsylvania State University. Decoteau previously served as department head of the Horticulture Departments at Clemson University and Penn State University.

Decoteau has received a number of teaching awards including the Innovative Teaching Award from the APLU Academic Programs Section, the Outstanding Teacher Award from Gamma Sigma Delta Honor Society for Agriculture, the Educator Award from the North American Colleges and Teachers of Agriculture, the Education Award from American Society for Horticultural Sciences (ASHS), and the George W. Atherton Award for Excellence in Teaching from the Pennsylvania State University Schreyer Institute for Teaching Excellence.

He has won numerous research and outreach awards including the L. M. Ware Distinguished Research Award from the Southern Region ASHS and the Innovation Award from the Environment and Natural Resources Institute at Penn State. He has written 68 peer-reviewed journal articles, 90 abstracts, and 77 newspaper and industry columns, and secured over \$2 million in grants. He directed five undergraduate honors theses, chaired 14 graduate student committees, and served as a committee member for an additional 28 graduate students.

Decoteau earned a bachelor's degree from the University of Maine at Fort Kent and master's and Ph.D. degrees from the University of Massachusetts, Amherst. He received postdoctoral training at Purdue University.



Michelle S. Schroeder-Moreno

Professor

Agroecology and Sustainable Food Systems

North Carolina State University

For Michelle Schroeder-Moreno teaching is about empowering and inspiring students to improve their food system and world around them. She has inspired a new and diverse cadre of students to agriculture sciences through agroecology education. Over the past 15 years at North Carolina State, Schroeder-Moreno developed new agroecology courses, curricular programs, internships, study abroad and service learning experiences, and established a multidisciplinary undergraduate major, Agroecology and Sustainable Food Systems. As a way to engage all students together with community, Schroeder-Moreno developed the Agroecology Education Farm bringing together a unique group of teaching faculty, students, campus chefs and community to teach, learn and grow food for the campus and community, making NC State “Think and Do” mission evident. Whether online, in the classroom, or in the field, experiential learning is core to her teaching approach and she is highly regarded among students for her enthusiasm, approachability and genuine care counseling them professionally and in life. Over the course of her career, Schroeder-Moreno has taught more than 1,300 undergraduate students and mentored numerous graduate students and undergraduate students in research. She is a trusted academic adviser, valued educator, and strong advocate for students.

Schroeder-Moreno was one of the founding members of the national Sustainable Agriculture Education Association (SAEA) helping to elevate agroecology as a discipline. She served in various SAEA leadership positions, including Chair and co-hosted the National SAEA Conference. She continues to serve on various academic committees in the college and university and has provided dozens of teaching workshops and conference presentations to promote collaborations in the scholarship of teaching and learning. Schroeder-Moreno has published a series of peer-review articles that span broad topics from research in active student-centered learning to sustainable strawberry production and has been PI/co-PS on grants totaling nearly \$7 million.

She is recognized for her outstanding efforts in teaching receiving several awards by her college, university, and internationally. She was awarded the NC State Alumni Distinguished Undergraduate Professor Award and was the recipient of a Fulbright Scholar.

Schroeder-Moreno earned a bachelor’s degree from the University of California, Irvine and a Ph.D. from the University of Miami.





Regional
Teaching
Awards

2019

Marcy M. Beverly

Professor

Animal Science

Sam Houston State University

Marcy Beverly has been on the faculty at Sam Houston State University (SHSU) for 19 years. She utilizes hands-on active learning environment in her classrooms. Dr. Beverly teaches a wide range of undergraduate classes for the Animal Science majors and minors, but she also teaches numerous graduate classes for the departments' Master of Science degree and the Sustainable Agriculture Food Environment (SAFE) online masters programs. Marcy believes that learning takes place not only in but also outside the classroom. She is an advocate for undergraduate research, which allows her students to find their passion outside the realms of a classroom.



Dr. Beverly regularly conducts research in applied nutrition, producer-based research and pedagogical research. Beverly teams with nutritional companies and private producers for feed trial analysis. Beverly serves as superintendent for various state livestock shows; she also serves on numerous department and university committees, and for the past 5 years, she has served as the chair of the university IACUC.

Beverly has received the SHSU Excellence in Teaching Award, COS Excellence in Teaching Award, NARRU Distinguished Educator Award and the NACTA Teacher Fellow Award.

She earned a B.S. in Agricultural Economics and Ph.D. in Animal Science from Texas A&M University and M.S. in Agricultural Business from Sam Houston State University.

Antonio DiTommaso

Professor

Weed Science

Cornell University

For nearly 25 years, Antonio DiTommaso's teaching philosophy is founded on respect both for students as individuals and for the pedagogical process. His teaching approach is based on the following belief: *As students become active observers, they will be motivated to seek and learn new ways to discover, problem-solve, collaborate, and develop critical thinking.* DiTommaso believes that one of the requisite conditions to promote this development in students is the creation of a safe classroom environment--a practice ground--for meaningful inquiries to take place. He encourages questions and answers from students; he deemphasizes hierarchical interactions between the students and himself so that freer exchanges may take place.



In 19 years at Cornell University, more than 1,200 undergraduate and 65 graduate students have enrolled in DiTommaso's weed science and integrated pest management courses. He advises more than 30 undergraduates per year in four majors. He has received numerous teaching and advising awards including the Outstanding Educator Award from the Northeastern Weed Science Society (NEWSS), Outstanding Teacher Award from the Weed Science Society of America, and Crop Science Society of America Teaching Award. He has also played a significant leadership role in the formation and success of Cornell's Agricultural Sciences undergraduate major.

DiTommaso has published over 110 peer-reviewed articles and 10 book chapters. He served as an Associate Editor of *Weed Technology* and *Invasive Plant Science and Management (IPSM)* and has been Editor of *IPSM* since 2015.

He earned bachelor and Ph.D. degrees from McGill University, and master's from Queen's University in Canada.

Lurline E. Marsh, Ph.D

Professor

*Agriculture, Food and Resource Sciences
University of Maryland Eastern Shore*

A professor in the Department of Agriculture Food and Resource Sciences at the University of Maryland Eastern Shore (UMES), Lurline Marsh has been on the faculty since 2004. She has taught a range of horticulture courses, including plant propagation, current issues in sustainable agriculture, crop physiology and ecology, international agriculture development, and the general education courses introduction to plant science and first year experience seminar. She includes team based teaching with the collaboration of peers to complement her expertise and enrich her courses. Experiential learning is an integral part of her teaching, including her study-abroad trips with students who affirm that the experiences improve their personal growth. According to one of her former students, she constantly encourages students to do more and break out their comfort zone.



Marsh has won over \$4 million in collaborative teaching and research grants that support training, mentoring and professional development of students at UMES. Across different agriculture disciplines, students hone their soft and disciplinary skills through these grants. Her research includes organic agriculture, food safety, soil health, and specialty crop and precision agriculture.

A routine searcher for finding effective ways to improve her teaching and enhance student learning, Marsh has engaged in UMES campus conferences and national teaching workshops of the American Society for Horticultural Science, and North American Colleges and Teachers of Agriculture (NACTA). She is the recipient of a NACTA Educator Award and NACTA Teaching Scholar award.

She earned a bachelor's degree from the University of the West Indies, a master's degree from Tuskegee University, and a Ph.D. degree from the University of Minnesota.

Kevin L. Schalinske

Professor

*Food Science and Human Nutrition
Iowa State University*

For 20 years at Iowa State University (ISU), Kevin Schalinske is driven by a passion to teach and mentor students in both the classroom and the laboratory. His teaching philosophy is built on respect for all students, as well as establishing an inclusive and safe classroom environment, where engagement and inquisitiveness is welcomed. A characteristic of his teaching is integrating critical thinking and real-life examples into the concepts being presented.



Dr. Schalinske has taught throughout the curriculum; served as a faculty and teaching mentor within and outside the department; and as the Director of Graduate Education. He has received college and university awards recognizing his teaching, as well as the Board on Human Sciences Undergraduate Research Mentor Award. He recently was named the 2019 recipient of an ISU award recognizing graduate student mentoring.

For research, Dr. Schalinske's interests are understanding methyl group metabolism in health and disease, research funded by federal, foundation, and commodity agencies. He received the American Society for Nutrition (ASN) Stokstad Award for outstanding research in 2006. He has served on numerous review panels, including as an NIH study section member and panel manager for the USDA National Needs Fellowship program. For service, Dr. Schalinske has been on more than 100 institutional committees in the past 8 years, including as Faculty Senate President. He is currently an Associate Editor for The Journal of Nutrition and sits on the ASN Board of Directors.

Dr. Schalinske earned his BS, MS, and Ph.D. degree from the University of Wisconsin, Madison.

Cody L. Wright

Professor

Animal Science

South Dakota State University

A dedicated educator and student advocate, Cody Wright has been professor in the Department of Animal Science at South Dakota State University (SDSU) since 2001. His career began as a Beef Cattle Extension Specialist; however, in 2006 he ignited a passion for teaching. In 2011, he welcomed the opportunity to take on a significant teaching role and is currently responsible for teaching courses in ruminant livestock production systems, livestock nutrition, and seedstock merchandising.



Wright believes student learning centers on the creation of a positive learning environment, promotion of high expectations, and establishment of the relevance and application of course material. He is an avid proponent of active and team-based learning and regularly

incorporates hands-on learning experiences into his courses. His teaching has been recognized through SDSU F. O. Butler Award for Excellence in Teaching, SDSU Edward Patrick Hogan Award for Teaching Excellence, Gamma Sigma Delta Teaching Award, and he has twice been named the college Teacher of the Year. Wright also serves on numerous university and departmental committees and is frequently sought to share his experiences on teaching and advising across campus.

In addition to teaching, Wright collaborates on beef cattle nutrition and management research. He has published 25 peer-reviewed journal articles and book chapters and secured \$1,575,539 in extramural funding as a PI or co-PI to support research and educational experiences students. He has advised or co-advised 8 graduate students.

He earned a B.S. from SDSU, M.S. from Kansas State University, and a Ph.D. from North Carolina State University.



Early Career
Teacher
Awards

2019

Abigail Borron

*Assistant Professor
Agricultural Leadership, Education & Communication
The University of Georgia*

Known to her students as “Dr. B.,” Abigail Borron has a strong passion for helping students understand the intersection of agricultural sciences and the human dimension through practices of communication and engagement. Using her research area in culture-centered communication as a basis, she realized that the intersection of science and people could best be understood by students through immersion into targeted communities, using complex science issues as the entry point. As such, many of her course designs combine critical pedagogy, service learning, and culture-centered engagement.



Example courses of Borron’s using an immersive design include food pantry clients’ lived experiences in the context of emergency food assistance and sourcing; small scale and niche farmers’ contributions to food hubs in rural Romanian communities; and ag-based businesses working to develop a more strategic online presence to enhance business development.

Borron’s overall goal for students who take her classes, regardless of major, is a better understanding and value of their role as civically engaged professionals who can effectively translate complex notions of science with equally complex audiences in mind.

Borron has participated in a number of teaching-oriented fellows programs, including the UGA Teaching Academy Fellows Program, the UGA Service-Learning Fellows Program, and the University of Florida Global Thinking Academy Fellows Program. In addition, she has received numerous teaching awards including the North American Colleges and Teachers of Agriculture Teaching Award of Merit and the Educator Award, the APLU Academic Programs Section Innovative Teaching Award, and the UGA Service-Learning Research Excellence Award.

Borron earned a bachelor’s degree from Indiana University-Purdue University and a master’s and Ph.D. from Purdue University.

Andrea Lucky

*Assistant Professor
Entomology & Nematology
University of Florida*

With a passion for teaching about insects, their evolution, and their importance to humans, Andrea Lucky inspires her students to appreciate the indomitable micro-world of insects. Her teaching program focuses on training the next generation of leaders in entomology through technical expertise in insect systematics and identification. Equally important is her mission to use the lens of insect biology to inspire and engage non-science students to build lasting connections to science. Her approach involves challenging students through engagement with real-world issues, learning through hands-on experiences in the field, and supporting excellence in science communication.



Lucky’s research focuses on the ecology and systematics of invasive ants and she uses tools including citizen science and science-art to broadly communicate her research. She actively mentors undergraduates and graduates; her students’ academic accomplishments are evidence of her dedication to their success. She has published more than 30 articles with student co-authors, her students have delivered 31 presentations at research conferences, and her mentees have received 10 significant research awards.

Lucky has been recognized for exemplary teaching with the University of Florida’s College of Agricultural and Life Sciences Undergraduate Teacher of the Year Award and the Online Excellence Award for Student Engagement. She received an Educator Award from the North American Colleges and Teachers of Agriculture and was honored with a Graduate Student Teacher award from the College of Agricultural and Environmental Sciences at the University of California, Davis.

Lucky earned a bachelor’s degree from Brown University and a Ph.D. from the University of California, Davis.



National Teaching
and Student
Engagement
Awards

2019

Elizabeth L. Karcher

*Assistant Professor
Animal Sciences
Purdue University*

Since 2008, Dr. Karcher has formally taught over 1,900 students in over 46 course offerings. Dr. Karcher has taught a variety of courses, including mammary physiology, animal health, and introduction to animal agriculture. She has developed four study abroad programs focused on dairy management to the Netherlands, sustainable agriculture to Vietnam, and an Animal Science Learning Community program to Italy. She formally advises undergraduate students, mentors graduate students, and mentors undergraduate students on research projects. As the department's Undergraduate Program Coordinator, she is currently leading the department in a 3-year curricular review.



She has received numerous teaching awards at the college, university, and national level. Examples include the Purdue University Exceptional Early Career Teaching Award, Purdue University PK-12 Emerging Faculty Impact Award, NACTA Teacher Scholar Award, American Dairy Science Association Purina Animal Nutrition Teaching Award, and the NACTA Teacher Fellow Award.

Karcher's research in learning focuses on the development of innovative experiential learning platforms to enhance student learning and develop intercultural competencies in undergraduate animal sciences curricula. She has published 9 journal articles on education-related topics and is PI for two education-related grants from the U.S. Department of Agriculture.

Karcher earned a bachelor's degree from The Pennsylvania State University, a master's degree from Purdue University, and a Ph.D. from Iowa State University. She received her postdoctoral training at Michigan State University.

John D. Tummons

*Assistant Teaching Professor
Agricultural Education and Leadership
University of Missouri*

John Tummons adds value to the student experience by teaching how to manage the people and emotions intertwined with the complex problems associated with feeding the world. He accomplishes this mission through instruction in leadership, youth development, faculty development, agriculture teacher education, and social science research methods. He also provides mentorship to young teachers and leadership to rural Missouri youth through 4-H, commodity organizations, and the National FFA.



John is a national leader in implementing inquiry-based instruction in agriculture. He models carefully crafted authentic assessments, developed in cooperation with industry experts, and paired with experiential learning methods, to create an environment where students are challenged to think and grow as leaders. Tummons mentors students to discover and cultivate their strengths and talents so they may develop their individualized toolbox of strategies for creative problem solving.

John has been honored for his outstanding teaching, advising, research, and service, but he's most proud when students and advisees are recognized for their accomplishments. In 2019, CAFNR's Outstanding Freshman, Sophomore, and Junior were all his advisees. John's legacy of living to serve is assured by the 80+ former students currently teaching high school agriculture in Missouri and the thousands more who grow people through leadership roles in the agricultural industry each day.

He earned a B.S., M.S., and Ph.D. from the University of Missouri.

TEACHING AWARDS SELECTION PANEL

Jean A. Bertrand

*Associate Dean for Undergraduate Studies
College of Agriculture, Forestry & Life Sciences
Clemson University*

Babu Valliyodan

*Assistant Professor of Molecular Biology & Genomics
Department of Agriculture and Environmental Sciences
Lincoln University*

Joe H. Sullivan

*Associate Dean for Academic Programs
College of Agriculture & Natural Resources
University of Maryland, College Park*

Ania Wieczorek

*Interim Associate Dean for Academic and Student Affairs
College of Tropical Agriculture and Human Resources
University of Hawai'i at Mānoa*

UNIVERSITIES OF EXCELLENCE

As recognized by the Excellence in College and University Teaching Awards

University of Florida (19)	University of Massachusetts (3)
Kansas State University (15)	University of Minnesota (3)
Texas A&M University (15)	University of Wisconsin–Madison (3)
University of Illinois (14)	Washington State University (3)
Iowa State University (12)	Auburn University (2)
Cornell University (11)	California State University, Fresno (2)
Oklahoma State University (10)	Clemson University (2)
Purdue University (10)	Delaware State University (2)
The Ohio State University (10)	Langston University (2)
North Carolina State University (9)	Michigan State University (2)
University of Connecticut (9)	North Dakota State University (2)
The University of Georgia (9)	Southern University and A&M College (2)
University of Missouri–Columbia (7)	University of California, Riverside (2)
Colorado State University (6)	University of Delaware (2)
The Pennsylvania State University (6)	University of Vermont (2)
New Mexico State University (5)	California State Polytechnic University, Pomona (1)
University of Arkansas at Fayetteville (5)	California State University, Chico (1)
University of Nebraska (5)	Florida State University (1)
Utah State University (5)	Illinois State University (1)
Rutgers, The State University of New Jersey (4)	Montclair State University (1)
Sam Houston State University (4)	North Carolina Agricultural and Technical State University (1)
University of Arizona (4)	Southwest Missouri State University (1)
University of California, Davis (4)	Tarleton State University (1)
University of Idaho (4)	University of Hawaii (1)
University of Kentucky (4)	University of Maryland, College Park (1)
University of Rhode Island (4)	University of Maryland Eastern Shore (1)
University of Wyoming (4)	University of Michigan (1)
Virginia Polytechnic Institute and State University (4)	University of Nevada, Reno (1)
Louisiana State University (3)	University of North Carolina, Greensboro (1)
Oregon State University (3)	University of Wisconsin–River Falls (1)
South Dakota State University (3)	West Virginia University (1)
Texas Tech University (3)	

() denotes number of recipients since inception of awards in 1992

ROLL OF RECIPIENTS

Excellence in College and University Teaching Awards (2007–2019)

NATIONAL

George Acquaaah
Langston University, 2007

Teresa C. Balsler
University of Wisconsin, 2009

Michael J. Boehm
The Ohio State University, 2010

Terence J. Centner
The University of Georgia, 2015

Ann D. Christy
The Ohio State University, 2016

Daniel L. Civco
University of Connecticut, 2007

John L. Crompton
Texas A&M University, 2012

Dennis R. Decoteau
The Pennsylvania State University, 2019

Garey A. Fox
Oklahoma State University, 2015

Tiffany M. Heng-Moss
University of Nebraska–Lincoln, 2013

Shida R. Henneberry
Oklahoma State University, 2014

M. Douglas Kenealy
Iowa State University, 2009

Kerry K. Litzenberg
Texas A&M University, 2011

Steven M. Lonergan
Iowa State University, 2018

Joshua J. Millsbaugh
University of Missouri, 2008

Robert A. Milvae
University of Connecticut, 2011

Gregory Möller
University of Idaho, 2014

S. Suzanne Nielsen
Purdue University, 2017

F. Bailey Norwood
Oklahoma State University, 2016

Candice A. Shoemaker
Kansas State University, 2012

Michelle S. Shroeder-Moreno
North Carolina State University, 2019

Ricky W. Telg
University of Florida, 2010

Ann Marie VanDerZanden
Iowa State University, 2017

Michael E. Wetzstein
The University of Georgia, 2013

M. Susie Whittington
The Ohio State University, 2008

X. Ben Wu
Texas A&M University, 2018

NORTH CENTRAL REGION

Anna L. Ball
University of Missouri, 2014

Jason Scott Bergtold
Kansas State University, 2018

Michael Boland
Kansas State University, 2008

Emily B. Buck
The Ohio State University, 2016

C. Lee Burras
Iowa State University, 2011

Joseph F. Donnermeyer
The Ohio State University, 2010

Allen M. Featherstone
Kansas State University, 2011

Janice J. Haggart
North Dakota State University, 2013

Alan C. Hansen
University of Illinois at Urbana–Champaign, 2015

Richard W. Hartel
University of Wisconsin–Madison, 2011

Walter L. Hurley
University of Illinois, 2014

Soo-Yeun Lee
University of Illinois, Urbana–Champaign, 2013

Donald Jiann-Tyng Liu
University of Minnesota, 2007

Brian H. Lower
The Ohio State University, 2016

Christian Y. Oseto
Purdue University, 2008

Kevin L. Schalinske
Iowa State University, 2019

Richard C. Schultz
Iowa State University, 2008

Janice Marie Siegford
Michigan State University, 2017

Michael F. Smith
University of Missouri, 2010

Daniel U. Thomson
Kansas State University, 2012

Cheryl Joy Wachenheim
North Dakota State University, 2018

Michel A. Wattiaux
University of Wisconsin–Madison, 2009

Kimberly A. Williams
Kansas State University, 2009

Cody L. Wright
South Dakota State University, 2019

Curtis R. Youngs
Iowa State University, 2014

NORTHEAST REGION

Kenneth P. Blemings
West Virginia University, 2012

John C. “Jack” Clausen
University of Connecticut, 2013

Ashim K. Datta
Cornell University, 2011

Joshua Martin Duke
University of Delaware, 2018

John C. Ewing
The Pennsylvania State University, 2016

Thomas P. Husband
University of Rhode Island, 2007

James P. Lassoie
Cornell University, 2014

David A. Levitsky
Cornell University, 2009

Lurline E. Marsh
University of Maryland Eastern Shore, 2019

Antonio DiTommaso
Cornell University, 2019

Rama B. Radhakrishna
The Pennsylvania State University, 2010

Steven Andrew Zinn
University of Connecticut, 2017

SOUTHERN REGION

Antoine J. Alston
North Carolina A&T State University, 2010

Sarah Liberman Ash
North Carolina State University, 2007

Marcy M. Beverly
Sam Houston State University, 2019

J. Chance Brooks
Texas Tech University, 2014

Dale A. Coleman
Auburn University, 2011

W. Stephen Damron
Oklahoma State University, 2007

Molly Espey
Clemson University, 2012

L. Suzanne Goodell
North Carolina State University, 2017

Jeffery A. Hattey
Oklahoma State University, 2008

Susan K. Jacobson
University of Florida, 2017

Michael E. Kane
University of Florida, 2009

Stanley F. Kelley
Sam Houston State University, 2012

Robert A. Lane
Sam Houston State University, 2017

Foy D. Mills, Jr.
Sam Houston State University, 2015

Kimberly A. Moore
University of Florida, 2018

Zhu H. Ning
Southern University and A&M College, 2016

Lawrence R. ‘Dick’ Oliver
University of Arkansas, 2009

Tracy A. Rutherford
Texas A&M University, 2014

Jeffrey W. Savell
Texas A&M University, 2013

Robert L. Shewfelt
The University of Georgia, 2008

William J. Silvia
University of Kentucky, 2013

Patricia K. Smith
Texas A&M University, 2015

Nicole L.P. Stedman
University of Florida, 2016

George W. Wardlow
University of Arkansas at Fayetteville, 2008

Alan Elliott Wilson
Auburn University, 2018

Elizabeth B. Wilson
North Carolina State University, 2010

WESTERN REGION

Amin Ahmadzadeh
University of Idaho, 2007

Elizabeth A. Applegate
University of California, Davis, 2016

Stephen Devadoss
University of Idaho, 2010

Thomas R. Famula
University of California, Davis, 2012

W. Marshall Frasier
Colorado State University, 2015

James A. Knight
The University of Arizona, 2007

Timothy D. Paine
University of California, Riverside, 2015

Dennis T. Ray
The University of Arizona, 2009

William E. Walton
University of California, Riverside, 2018

Brian K. Warnick
Utah State University, 2013

Karen C. Williams
University of Wyoming, 2012

EARLY CAREER

Abigail Borron
The University of Georgia, 2019

Leslie D. Edgar
University of Arkansas, 2013

Kellie J. Enns
Colorado State University, 2014

Miriam Ferzli
North Carolina State University, 2011

Jason D. Hans
University of Kentucky, 2009

Jennifer L. Hardesty
University of Illinois, 2008

David W.W. Jones
North Carolina State University, 2013

Amy L. Kaleita
Iowa State University, 2007

Tracy Kitchel
University of Missouri, 2011

Neil A. Knobloch
University of Illinois at Urbana–Champaign, 2007

Rebecca G. Lawver
Utah State University, 2016

Andrea Lucky
University of Florida, 2019

Michael L. Mashtare, Jr.
Purdue University, 2018

Eric S. McLamore
University of Florida, 2016

Courtney A. Meyers
Texas Tech University, 2015

Chad T. Miller
Kansas State University, 2017

Christine Whitney Miller
University of Florida, 2017

Brian E. Myers
University of Florida, 2008

Maria Navarro
The University of Georgia, 2012

Haley F. Oliver
Purdue University, 2014

Ranjith Ramanathan
Oklahoma State University, 2018

Michael S. Retallick
Iowa State University, 2012

T. Grady Roberts
University of Florida, 2010

Lori Unruh Snyder
Purdue University, 2009

Jennifer R. Strong
Texas A&M University, 2015

Amanda D. Weaver
South Dakota State University, 2010

NATIONAL TEACHING AND STUDENT ENGAGEMENT

Elizabeth L. Karcher
Purdue University, 2019

Monika W. Oli
University of Florida, 2018

Shelly Peper Sitton
Oklahoma State University, 2018

John D. Tummons
University of Missouri, 2019





National Award
for Excellence
in Extension

2019



Matthew John Devereaux

*Professor and Human Development Extension Specialist
University of Tennessee*

Matt Devereaux recently assumed the role of Interim Assistant Dean and Department Head for Family and Consumer Sciences with the University of Tennessee Extension.

Much of Devereaux's time and energy over the past 21 years has been in the area of developing innovative and highly impactful youth programs. Specifically, he has focused his efforts and research on best practices for positively developing youth in afterschool settings. Since 2005, Devereaux has secured \$11 million to develop innovative afterschool programs across the state of Tennessee. Through a collaboration with Yale Universities' Center for Emotional Intelligence, his findings show the importance of focusing heavily on a student's social/emotional development during the beginning of the school year so as to improve the student's academics as the year progresses. His research has shown students have greater gains in grades and standardized test scores when incorporating significant social/emotional learning programming that teaches students how to recognize, understand, label, express, and regulate emotions.

His other current areas of emphasis include development of resources around the topics of adverse childhood experiences (ACES), mindfulness, quality childcare and early brain development. He wishes to focus his future efforts on the impact of positive fathering.

Devereaux received the national 2008 Early Achievement Award for outstanding work as a Family Life Specialist. He earned his bachelor's degree from the University of Georgia, and his master's and Ph.D. from the University of Tennessee.



Regional Awards
for Excellence
in Extension

2019

1890S REGION

Dorothy P. Brandon

*Professor, Specialist
Family & Child Development, Consumer
& Personal Finance
Alabama A&M University*

Dorothy Brandon's programs are designed to impact the financial well-being by helping adults reduce debt and improve their credit worthiness. She updated and modified a series of lessons from the Making Money Count Curriculum. Over the past three years, 5 urban agents, used the series of lessons to reach over 12,000 participants of which 2,386 applied for their first credit report, and 1,794 started tracking their spending and using a spending plan. Additionally, during the same timeframe, her Successful Aging program has reached 18,267 older adults of which 1,555 have completed an Advance Health Care Directive and 2,315 have organized their important papers as part of Estate Planning.



Brandon, a proponent of the Ecological Systems theory, emphasizes the importance of the family as a child's first teacher. Her reading literacy program targets underserved, hard to reach, disadvantaged families. The program goal is to teach parents with children ages 4 to 9 effective reading strategies.

In addition to working with urban extension agents, Brandon, since 2014, developed and teaches an eight-week basic computing program twice a year to seniors 50 to 80 years of age. She is committed to narrowing the technology gap for seniors and strives to help seniors "age in place".

Brandon received her bachelor's degree from Norfolk State University, and her master's and doctorate degrees from The Ohio State University.

NORTH CENTRAL REGION

Dianne E. Shoemaker

*Extension Field Specialist, Dairy Production Economics
and Associate Professor
The Ohio State University*

Dianne Shoemaker serves as an Extension Field Specialist in the College of Food, Agricultural and Environmental Sciences at The Ohio State University. Her work focuses on farm business management, dairy farm management, and milk marketing with the objective of improving the profitability and sustainability of Ohio's dairy and crop farms.



Shoemaker prioritizes building teams and collaborating with colleagues across departments, colleges, and universities to effectively identify and meet the needs of Ohio's farmers. These collaborations are enhanced by strong farmer and industry relationships. Through these collaborations she has received more than \$1.2 million dollars in research and training grants to fund research and support farm management work.

Through her leadership, the Ohio Farm Business Analysis program is rebuilding to meet the needs of Ohio's farmers, contributing over 300 farm business analyses to the FINBIN national database in addition to publication of annual summaries and integration of data into teaching research, and extension activities. Forty-four farms completed a comprehensive analysis for 2017. They farmed 30,796 acres, and controlled assets totaling more than \$192 million which generated more than \$58.7 million of agricultural income. The results of her research sets benchmarks for profitability for Ohio dairy and crop farms.

Shoemaker prioritizes service through leadership of the CFAES Faculty Advisory Council, teams, and Agriculture Educator training and mentoring.

She earned her bachelor's and master's degrees at The Ohio State University.

NORTHEAST REGION

Gordon C. Johnson

*Assistant Professor and Extension Specialist
Fruits and Vegetables
University of Delaware*

With an Extension career of 25 years at University of Delaware, Gordon Johnson currently serves as Extension Specialist and assistant professor in the Department of Plant and Soil Sciences at the University of Delaware. He has consistently developed applied research and extension programs to address critical needs identified by fruit and vegetable producers both in Delaware and in the Mid-Atlantic region.



Early in his career as an extension educator, he provided leadership to the convening of divergent groups in the early formation phase of the Delaware Nutrient Management committee that ultimately resulted in the DE Nutrient Management Plan that was adopted and put into law.

Dr. Johnson's research and extension program today provides science-based answers to grower questions and problems for fresh market and processing vegetable and fruit crops. Yearly, he is the lead on numerous variety trials and provides a weekly blog on current fruit and vegetable production information.

The impact of his work includes his seminal research on pollination as the source of hollow heart disorder in watermelons. The adoption of best management practice recommendations has impacted over 400 watermelon growers representing over 20,000 acres in seven states. He has also provided educational expertise for growers to comply with the Food Safety Modernization Act. He partners with Extension colleagues to provide the Horticulture section of the Mid-Atlantic Commercial Vegetable Production recommendations.

Dr. Johnson earned his bachelor's degree from University of Maryland, master's from Clemson University and Ph.D. from the University of Delaware.

SOUTHERN REGION

Mark R. Peterson

*Professor
Community and Economic Development
University of Arkansas*

Mark Peterson is a Professor of Community and Economic Development with the University of Arkansas System Division of Agriculture, Cooperative Extension Service. His passion is to equip community leaders to think and act strategically in times of rapid change, and he has taught workshops in Canada, Peru, Italy, Germany, and Ukraine. The Ponderoso Community Betterment Association in Missouri named their county road "Mark Peterson Drive" in honor of his community development work with them.



Mark is the founder and coordinator of the Breakthrough Solutions Program, an internationally-recognized partnership initiative committed to building vibrant, sustainable communities and regions in the emerging 21st century economy. Breakthrough Solutions has 21 partner organizations in the public, private, and non-profit sectors who are involved in Breakthrough Solutions initiatives. He has worked with dozens of communities that involved over 10,000 citizens and initiated projects with a value exceeding \$83 million. Breakthrough Solutions has developed 6 strategic community brands and received 13 state and national awards.

The annual Breakthrough Solutions Conference attracts community leaders from across the state and features a keynote speaker, over 25 in-state speakers, and new technologies such as 3D printing, drones, and virtual reality. The pilot community for the new Breakthrough Solutions Program is Harrison (pop. 12,943), which has attracted over 40 new businesses into its downtown area, plus many other accomplishments.

Mark received a bachelor's degree from Iowa State University, two master's degrees from University of Missouri-Columbia, and a Ph.D. from St. Louis University.

WESTERN REGION

David G. Schramm

*Family Life Extension State Specialist
Human Development and Family Studies
Utah State University*

Dave Schramm serves as a state specialist and assistant professor in the department of human development and family studies with Utah State University Extension. His work centers on improving personal well-being, parent-child, and couple relationships. This includes developing, delivering, and evaluating a variety of programs. Dave has also embraced innovative approaches to improving couple and family relationships. He regularly shares research-based messages on his Extension Facebook account (@DrDaveUSU) and appears monthly on Utah's Fox 13's television program, *The Place*.

As an Extension State Specialist at the University of Missouri for nine years, Dave taught a divorce education program (Focus on Kids) to more than



4,500 divorcing/separating parents. He also helped develop an online version of that program, and after arriving at USU in 2016, he co-developed an online divorce education program that is used by the state of Utah to serve divorcing parents.

He has a passion for traveling, speaking, and training on happiness, positivity, and parenting. From homeless participants to high school assemblies, Dave has provided more than 500 presentations to diverse audiences, and is looking forward to giving a TEDx talk this January in Florida.

Dave believes in the power of teamwork and collaboration and in his 12 years of Extension has helped secure more than \$17.5 million dollars in grants and contracts to help countless families improve relationships.

He earned his bachelor's degree from Brigham Young University, master's from Utah State University, and Ph.D. from Auburn University.



National
Diversity in
Extension
Award

2019



Juntos and Abriendo Caminos Work Teams

Iowa State University

Teams of Extension educators, students, and faculty were formed to work in partnership with community organizations in Iowa to implement and evaluate Extension programs to reduce education and health disparities among Iowa Latino families. Kimberly Greder, Professor, Human Sciences Extension and Outreach Family Life Specialist (pictured here), led the efforts.

Through *Juntos Para Una Mejor Educación* (Together for a Better Education), a curriculum developed by North Carolina State University, 1,300 Latino youth and parents gained information, developed skills, accessed resources, and broadened networks to help youth identify paths to post-secondary education. Longitudinal data revealed increased parent engagement in youths' education, increased youth self-efficacy, critical thinking, decision-making, bonding to pro-social institutions, and decreased youth risky behaviors.

In partnership with the University of Illinois, Iowa faculty engaged 262 parents and children of Mexican heritage in an Extension research study focused on testing the efficacy of *Abriendo Caminos*, a curriculum designed to promote healthy lifestyles and reduce obesity risk. Preliminary findings revealed that families who participated had larger increases in HDL levels, and larger decreases in blood cholesterol and blood inflammation, thus, suggesting improved life style behaviors that reduce obesity risk. *Abriendo Caminos* appears to have created a sense of social support, which in turn may buffer stress associated with obesity risk. These efforts led to significant strides in expanding Extension's capacity to engage with, and provide responsive programming to Iowa Latino families. Latino college students gained experience in Extension research and programming, which in turn provided opportunity to shape the next generation of Extension professionals.

ROLL OF RECIPIENTS

Excellence in Extension Awards (2007–2019)

NATIONAL

Elizabeth L. Address

The University of Georgia, 2012

G. A. 'Art' Barnaby, Jr.

Kansas State University, 2009

Barbara Chamberlin

New Mexico State University, 2011

Matthew J. Devereaux

University of Tennessee, 2019

Jeffrey T. Edwards

Oklahoma State University, 2013

Stephen D. Green

Texas A&M University, 2016

Ronald J. Hustedde

University of Kentucky, 2007

Robert L. Kallenbach

University of Missouri, 2014

Lesia Oesterreich

Iowa State University, 2018

Joe Outlaw

Texas A&M University, 2015

Louie Rivers, Jr.

Kentucky State University, 2017

Marilyn J. Smith

University of Nevada, 2008

Alison Van Eenennaam

University of California, Davis, 2010

1890'S REGION

Dorothy P. Brandon

Alabama A&M University, 2019

Fitzroy 'Roy' D. Bullock

Tennessee State University, 2009

Kevin Crenshaw

Alabama A&M University, 2012

Jason de Koff

Tennessee State University, 2018

Henry English

University of Arkansas at Pine Bluff, 2014

Karnita Golson-Garner

Alabama A&M University, 2016

David Heikes

University of Arkansas at Pine Bluff, 2010

Thelma Sanders-Hunter

Tennessee State University, 2007

Marion F. Simon

Kentucky State University, 2013

Claudette L. Smith

*North Carolina Agricultural and
Technical State University, 2011*

Nathan M. Stone

University of Arkansas at Pine Bluff, 2008

Misty Blue-Terry

*North Carolina Agricultural and Technical State
University, 2017*

Virginie Zoumenou

University of Maryland Eastern Shore, 2015

NORTH CENTRAL REGION

William J. Angell

University of Minnesota, 2009

Frederick P. Baxendale

University of Nebraska—Lincoln, 2007

Nozella L. Brown

Kansas State University, 2016

John DeFrain

University of Nebraska—Lincoln, 2010

Kevin Erb

University of Wisconsin—Extension, 2017

Rick Funston

University of Nebraska—Lincoln, 2014

Julie Garden-Robinson

North Dakota State University, 2015

Kimberly A. Greder

Iowa State University, 2013

Kathleen A. Lodl

University of Nebraska—Lincoln, 2011

Joe D. Luck

University of Nebraska, 2018

Richard J. Rasby

University of Nebraska—Lincoln, 2008

Dianne E. Shoemaker

The Ohio State University, 2019

Fred Whitford

Purdue University, 2012

NORTHEAST REGION

Chester Arnold
University of Connecticut, 2009

Chet Arnold
University of Connecticut, 2017

Elaine Bowen
West Virginia University, 2013

Molly E. Donovan
University of New Hampshire, 2018

Jerome L. Frecon
Rutgers, The State University of New Jersey, 2008

Elizabeth “Betsy” Greene
University of Vermont, 2011

Gordon C. Johnson
University of Delaware, 2019

Walter E. Kee, Jr.
University of Delaware, 2007

Chad Ripberger
Rutgers, The State University of New Jersey, 2010

Richard W. Taylor
University of Delaware, 2016

Richard W. VanVranken
Rutgers, The State University of New Jersey, 2014

Changlu Wang
Rutgers, The State University of New Jersey, 2015

SOUTHERN REGION

Stanley Culpepper
The University of Georgia, 2016

Damona Doye
Oklahoma State University, 2017

R. Dwayne Elmore
Oklahoma State University, 2018

Clark D. Garland
University of Tennessee, 2010

Denise M. Holston-West
Louisiana State University, 2013

John S. Jacob
Texas A&M University, 2014

Garry D. Lacefield
University of Kentucky, 2008

Mark L. McFarland
Texas A&M University, 2009

Derrell S. Peel
Oklahoma State University, 2015

Mark Peterson
University of Arkansas, 2019

Nancy M. Porter
Clemson University, 2007

Tom A. Vestal
The Texas A&M University System, 2012

Lisa Whittlesey
Texas A&M University, 2011

WESTERN REGION

Michael Bondi
Oregon State University, 2010

Mary E. Burrows
Montana State University, 2012

Daniel L. Fagerlie
Washington State University, 2009

Marsha A. Goetting
Montana State University, 2017

Brian J. Higginbotham
Utah State University, 2013

Dana Martin
Oregon State University, 2015

Donald B. Meehan
Washington State University, 2008

Terry Allan Messmer
Utah State University, 2016

Marcia R. Ostrom
Washington State University, 2007

Madeleine Sigman-Grant
University of Nevada Cooperative Extension, 2014

David G. Schramm
Utah State University, 2019

Michael P. Vogel
Montana State University, 2011

ROLL OF RECIPIENTS

National Diversity in Extension Awards (2007–2019)

Cesar Asuaje

University of Florida, 2014

Attitudes for Success Youth Leadership Program

Oregon State University, 2017

Ronald B. Cox, Jr.

Oklahoma State University, 2018

Susan Given-Seymour

Northwest Indian College Cooperative Extension, 2013

Jeff G. Hart

University of Nebraska–Lincoln, 2007

Hector Mendiola

Utah State University, 2009

Juntos and Abriendo Caminos Work Teams

Iowa State University, 2019

People of the Land

University of Nevada, 2011

Rural Agricultural Improvement and

Public Relations Project

New Mexico State University Cooperative Extension Service, 2008

Texas Grow! Eat! Go! (TGEG) Program

Texas A&M AgriLife Extension Service, 2015

The University of California Small Farm Program

2010

UC ANR 4–H Youth Development Program

IDI Qualified Administrators

University of California, 2016

Michael P. Vogel

Extension Tribal Housing & Health Program Montana State University, 2012

UNIVERSITIES OF EXCELLENCE

As recognized by the Excellence in Extension Awards

University of Nebraska–Lincoln (7)	Utah State University (2)
Texas A&M University (6)	Clemson University (1)
Rutgers, The State University of New Jersey (5)	Louisiana State University (1)
University of Nevada, Reno (5)	New Mexico State University (1)
Oklahoma State University (4)	North Carolina A&T State University (2)
University of Arkansas at Pine Bluff (4)	North Dakota State University (1)
Montana State University (3)	University of Tennessee (2)
Tennessee State University (3)	Purdue University (1)
Washington State University (3)	University of California, Davis (1)
Alabama A&M University (2)	University of Florida (1)
Iowa State University (2)	University of Maryland Eastern Shore (1)
Kansas State University (2)	University of Minnesota (1)
Kentucky State University (2)	University of Missouri–Columbia (1)
Oregon State University (2)	University of New Hampshire (1)
University of Connecticut (2)	University of Vermont (1)
University of Delaware (2)	University of Wisconsin (1)
The University of Georgia (2)	West Virginia State University (1)
University of Kentucky (2)	

UNIVERSITIES OF EXCELLENCE

As recognized by the Diversity in Extension Awards

University of California (4)	Oklahoma State University (1)
Oregon State University (3)	Purdue University (1)
Utah State University (3)	Texas A&M University (1)
Michigan State University (2)	University of Florida (1)
Mississippi State University (2)	University of Illinois at Urbana–Champaign (1)
The Pennsylvania State University (2)	University of Maine (1)
Cornell University (1)	University of Minnesota (1)
Iowa State University (1)	University of Missouri (1)
Lincoln University (1)	University of Nebraska (1)
Montana State University (1)	University of Nevada (1)
New Mexico State University (1)	University of Wisconsin (1)
Northwest Indian College (1)	

() denotes number of recipients



National
Excellence in
Multistate
Research Award

2019

SOUTHERN REGION

S-1056: Enhancing Microbial Food Safety by Risk Analysis (2013–2018)

Kristen Gibson, Technical Committee Chair
Steven Lommel, Administrative Advisor

Foodborne pathogens cause an estimated 48 million illnesses and 3,000 deaths in the U.S. each year, racking up over \$55 billion in associated medical expenses annually. Food companies feel the pain, too. In addition to damaging brand reputation and sales, food recalls cost companies at least \$10 million in direct expenses. Since 2013, a multidisciplinary team of researchers and Extension educators from 39 institutions across the U.S. (*Multistate Research Project S-1056: Enhancing Microbial Food Safety by Risk Analysis*) has helped the nation's growers and processors address food safety concerns.

Over the years, S-1056 has illuminated how microbes react to their environment and designed cutting-edge models to better anticipate how foods might become contaminated. For example, scientists evaluated how pear firmness affects the transfer of *Salmonella* during mechanical slicing (Michigan State), how temperature affects pathogen growth in leafy greens (Rutgers), and how glove material affects bacterial transfer during jerky production (Virginia Tech). Other project members designed devices to help detect pathogens. Scientists at the University of Wyoming developed inexpensive, disposable paper-based devices that detect even low concentrations of *E. coli*, and University of Illinois researchers developed a custom spectroscopy system that identifies toxic mold in single corn kernels. Researchers also monitored pathogen presence on farms and in food processing environments, including tree fruit packing houses (Penn State), small pork product manufacturers (Texas A&M), catfish processing plants (Louisiana State), and artisan cheese factories (UConn). Better prediction and detection of foodborne pathogens helps growers, processors, and others prevent threats or control them before they become dangerous and costly.

S-1056 researchers have also suggested interventions to control risks along the food production chain. Some scientists focused on ways to prevent or eliminate bacteria, such as packaging fruit in natural edible films loaded with essential oils (K-State); dipping fresh-cut cantaloupe in aloe vera solution (University of Puerto Rico); feeding prebiotics to poultry (University of Arkansas); spraying antimicrobials on beef and poultry products with electrostatic sprayers (Colorado State); and using intense pulsed light technology to pasteurize powdered foods without heat (University of Minnesota). Other studies (Virginia Tech) have informed management practices that keep bacteria from developing resistance to antimicrobials.

Multistate research has guided food safety policy in major ways. In particular, exhaustive water sampling and data analysis by S-1056 scientists in New York, Florida, and other states showed that the irrigation water quality requirements stipulated by the FSMA did not adequately reflect the risks of using water from ponds, canals, and streams to irrigate fruit and vegetable crops. As a result, the U.S. Food and Drug Administration has delayed the requirements while they try to find a more effective, practical way to reduce the risk of introducing pathogens to produce via contaminated agricultural water. This research has also given growers the information they need to accurately assess the quality of their irrigation water and implement interventions that protect produce from pathogens. Produce causes about half of all foodborne illnesses in the U.S.

By providing learning materials and experiences for both the food industry and consumers, for varying age groups and platforms, and in multiple languages, including Spanish, Navajo, and Chinese, S-1056 has improved food safety knowledge and practices among a wide audience. Many researchers and Extension specialists have collaborated with New Mexico State University to create interactive learning curriculum. These materials have been widely used. For example, *Ninja Kitchen*, an online game that teaches middle schoolers about safe food handling and storage, has been accessed 2.3 million times since 2013. In 2015, the University of Florida leveraged funding and manpower from prior S-1056 partnerships to help launch the Southern Center, which coordinates food safety training, outreach, and technical assistance for the region's produce industry. With participation from land-grant institutions in 13 states and Puerto Rico, the Southern Center has been able to reach more people in more locations and with distinct needs. In less than two years, Southern Center collaborators have developed a cadre of over 400 trainers who help the region's produce industry understand and comply with FSMA rules.



S1056 group members on a tour of an oyster farm (top) and produce farm (bottom) in Rhode Island.

Solutions to the nation's food safety problems lie well beyond the capacity of any single researcher, discipline, producer, retailer, or regulator. *Multistate Research Project S-1056* is the first comprehensive attempt to develop risk-based strategies for controlling foodborne pathogens at all points along the nation's food system spectrum and across all food commodities. S-1056 was funded in part by the Multistate Research Fund through USDA-NIFA. Since 2015, the project has acquired robust external funding of at least \$12 million through leveraging across multiple institutions.

PARTICIPATING INSTITUTIONS

Auburn University
 Clemson University
 Colorado State University
 Cornell University—Geneva and Ithaca
 Iowa State University
 Kansas State University
 Louisiana State University
 LSU Ag Center
 Michigan State University
 Mississippi State University
 New Mexico State University
 New Mexico State University—
 Cooperative Extension
 North Carolina State University
 North Dakota State University
 Oregon State University
 Purdue University
 Rutgers, The State University of New Jersey
 The Ohio State University
 The Pennsylvania State University
 Texas A&M University
 Texas A&M University—AgriLife Research
 University of Arkansas
 University of Arkansas—Pine Bluff
 University of California—Cooperative Extension
 University of California—Davis
 University of Connecticut—Storrs
 University of Delaware
 University of Florida
 University of Georgia
 University of Idaho—Cooperative Extension
 University of Illinois at Urbana—Champaign
 University of Kentucky
 University of Maine
 University of Maine—Cooperative Extension
 University of Maryland
 University of Massachusetts
 University of Minnesota
 University of Missouri
 University of Nebraska
 University of Puerto Rico
 University of Rhode Island
 University of Tennessee
 University of Wisconsin—Madison
 University of Wyoming
 Virginia Polytechnic Institute and State University
 Washington State University
 Wayne State University

NATIONAL EXCELLENCE IN MULTISTATE RESEARCH AWARDS

Enhancing Microbial Food Safety by Risk Analysis
(S-1056), 2019

Drainage Design and Management Practices to
Improve Water Quality (NCERA-217), 2018

Water Management and Quality for Ornamental
Crop Production and Health (NC-1186), 2017

Fly Management in Animal Agriculture Systems and
Impacts on Animal Health and Food Safety
(S-1060), 2016

Improving Sustainability in Fruit Tree Production
through Changes in Rootstock Use (NC-140), 2015

Microirrigation for Sustainable Water Use
(W-2128), 2014

Sweet Potato Collaborators Conference
(SERA-5), 2013

Response to Emerging Threat: Soybean Rust
(NCERA-208), 2012

Improving the Sustainability of Livestock and Poultry
Production in the United States (S-1032), 2011

Biological Improvement of Chestnut through
Technologies that Address Management of the
Species, its Pathogens, and Pests (NE-1033), 2010

Biology, Impact, and Management of Soybean Insect
Pests in Soybean Production Systems (S-1039),
2009

Porcine Reproductive and Regulatory Disease:
Methods for the Integrated Control, Prevention,
and Elimination of PRRS in United States Swine
(NC-229), 2008

REGIONAL EXCELLENCE IN MULTISTATE RESEARCH AWARDS

NORTH CENTRAL

Strategies to Improve Reproductive Efficiency for Sustainable Cattle Production (NC-1201)

J. Richard Pursley, Technical Committee Chair
George W. Smith, Administrative Advisor

PARTICIPATING INSTITUTIONS

Kansas State University
Michigan State University
Mississippi State University
North Dakota State University
South Dakota State University
Texas A&M University
University of Illinois at Urbana-Champaign
University of Missouri
University of Nebraska
University of Wisconsin-Madison
USDA-ARS (Nebraska)
Virginia Polytechnic Institute and State University

NORTHEAST REGION

Poultry Production Systems and Well-being: Sustainability for Tomorrow (NE-1442)

Ken W. Koelkebeck, Technical Committee Chair
Kumar Venkitanarayanan, Administrative Advisor

PARTICIPATING INSTITUTIONS

Auburn University
Alabama A&M University
Delaware State University
Iowa State University
Michigan State University
Mississippi State University
Neiker Technalia, Spain
North Carolina State University
The Pennsylvania State University
Purdue University
University of Arkansas
University of Bern, Switzerland

University of California-Davis
University of Connecticut-Storrs
University of Delaware
University of Georgia
University of Guelph, Canada
University of Hawaii
University of Illinois at Urbana-Champaign
University of Kentucky
University of Maryland
University of Minnesota
University of Nebraska
University of Wisconsin-Madison
USDA ARS (Georgia, Indiana, Mississippi)
Virginia Polytechnic Institute and State University

WESTERN REGION

Beneficial and Adverse Effects of Natural, Bioactive Dietary Chemicals on Human Health and Food Safety (W-4122)

Adam Chico, Technical Committee Chair
Chris Pritsos, Administrative Advisor

PARTICIPATING INSTITUTIONS

Colorado State University
Michigan State University
New Mexico State University
Oregon State University
Purdue University
Rutgers, The State University of New Jersey
University of Arizona
University of California-Berkeley and Davis
University of Hawaii
University of Illinois at Urbana-Champaign
University of Minnesota
University of Nebraska
University of Tennessee
University of Vermont
University of Wisconsin-Madison
USDA ARS (Georgia)
Utah State University
Washington State University





Experiment Station
Section National
Excellence in
Leadership Award

2019

1890 RESEARCH DIRECTORS (ARD)

Mortimer H. Neufville

*President & Chief Executive Officer
1890 Universities Foundation*

A collaborative leader with a demonstrated record of creating and implementing mission-aligned academic, research and Extension programs, Mortimer H. Neufville (Mort) was named President & CEO of The 1890 Universities Foundation in February 2017. Mort thoroughly understands and appreciates the land-grant system, as it exists in 1890 and 1862 universities because of his visionary leadership over the past 40 years in higher education and international development administrative roles.



Mort has served in critical leadership positions as president of Coppin State University, interim president of the University of Maryland Eastern Shore, executive vice president of the National Association of State Universities and Land Grant Colleges (NASULGC), and vice president for academic affairs, and dean & research director of the School of Agricultural and Natural Sciences at the University of Maryland Eastern Shore. In addition, Mort has served as the associate dean of the College of Agriculture and Applied Sciences and Cooperative Extension and Research at Lincoln University, chair of the Association of Research Directors (ARD), chair of the Council of 1890 Deans of Agriculture, and chair of the Board of the International Adult and Continuing Education.

In addition, Mort currently serves as a consultant for ACDI/VOCA, as a member of the Maryland Governor's Intergovernmental Commission on Agriculture and is a commissioner of the Food Systems Leadership Institute (FSLI).

Mort has received a number of awards and honors—APLU 1890 Universities Leadership Award; Caribbean American Heritage Marcus Garvey Lifetime Achievement Award; 52nd Annual Professional Agricultural Workers Conference, Claude C. Marion Memorial Lecture Award; Distinguished Alumnus Award from the University of Florida and was inducted into the IACE Hall of Fame.

Mort earned a bachelor of science from Tuskegee University and the master's in science and doctorate from the University of Florida in Gainesville.

NORTH CENTRAL REGION

Joe P. Colletti

*Senior Associate Dean and Associate Director of the Iowa
Agriculture and Home Economics Experiment Station
Iowa State University*

Joe Colletti is a tireless advocate for research and its application to benefit society. As a dynamic leader in his role as Senior Associate Dean, he brings unbridled enthusiasm, vision and hard work towards a core belief in “team science” and “science with practice” philosophies. He is a daily champion of diversity enhancement programs with multicultural students, staff and faculty, so they are welcomed and successful in achieving their goals. He also served as Interim Endowed Dean and Interim Director.



Colletti has served the North Central Regional Association (NCRA) of Agricultural Experiment Station Directors as an active participant and chair (two terms) plus as a member and chair of the Multistate Research Committee, and originator of efforts with the bioeconomy and service to the National Plant Germplasm Coordinating Committee. Joe has helped to streamline the processes and functions of multistate committees as well as serving as Administrative Advisor to multiple projects. He has served on the ESCOP Science and Technology Committee, which recently completed the Grand Challenge Roadmap Briefs. Within NCRA, he is a tireless advocate for cultural competencies, diversity and inclusion through sharing of best practices and programs.

Joe has been a leader and collaborator with the Iowa State University BioCentury Research Farm, partnership with Tuskegee University, NSF Midwest Big Data Hub, Dean's Leadership Program in Rome with FAO, Big Data Summit and other conferences. Colletti was recognized for his teaching and advising skills, receiving the College of Agriculture-Louis Thompson Advisor of the Year, Outstanding Club Advisor from the CALS Council, the Most Beloved Instructor of the Year from the Forestry Club (multiple times) and the ISU Foundation Award of Outstanding Achievement in Teaching. Joe has been an invited professor at Nanjing Forestry University in China and conducted research at the Yucatan Peninsula of Mexico at the INIFAP research facility.

Colletti earned a B.S. from Humboldt State University in California and M.S. and Ph.D. degrees at the University of Wisconsin—Madison.

NORTHEASTERN REGION

Cameron Faustman

Former Associate Dean, College of Agriculture, Health and Natural Resources, and Associate Director, Storrs Agricultural Experiment Station, University of Connecticut

To the Northeast, Cameron is the quintessential utility player. He has worked on every regional standing committee, serving as the chair of many. Cameron also served as the chair of the Northeast Regional Association of State Experiment Station Directors (NERA) leading the organization through its most challenging periods of change. This included the transitioning of Executive Directors and relocating the headquarters of NERA. While the transition appeared seamless, the devil was in the details; details that Cameron carefully, tactically, and strategically addressed. Cameron is an engaged, thoughtful, and kind leader that the Northeast cherished; the Northeast is better region and NERA is a better organization for having had him at the helm.



Cameron is an exemplary leader for the Land-grant system and the Experiment Station Section. From Administrative Advisor (NE1442 *Poultry Production Systems and Well-being: Sustainability for Tomorrow*, NE1748 *Mastitis Resistance to Enhance Dairy Food Safety*, NRSP9 *National Animal Nutrition Project*), to ESCOP member to ACOP member, Cameron has always answered the call. Importantly, his contributions on behalf of NERA are consistent with his contributions to his area of professional expertise: the biochemistry of food proteins. Cameron has been the recipient of national teaching awards, research awards, and environmental leadership awards.

Cameron earned his B.S. degree at the University of Connecticut, and M.S. and Ph.D. degrees at the University of Wisconsin. After completing his doctoral degree, Cameron returned to Connecticut where he has served as professor, department chair, associate dean (for both academic programs and the Storrs Agricultural Experiment Station) and interim dean of the College of Agriculture, Health and Natural Resources.

SOUTHERN REGION

Saied Mostaghimi

Director, Virginia Agricultural Experiment Station and Associate Dean for Research and Graduate Studies, College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University

Saied Mostaghimi strives to develop and promote the need for interdisciplinary research collaboration among institutions and is a strong advocate for agriculture and natural resources. Mostaghimi is active with the Southern Association of Agricultural Experiment Station Directors (SAAESD), serving as chair in 2013, representative to ESCOP Budget and Legislative Committee, and the Southern Sustainable Agriculture Research and Education (SSARE) Executive Committee. He has also contributed as administrative advisor to two multistate committees and one advisory committee.



At Virginia Tech, Mostaghimi provides leadership to the college's comprehensive basic and applied research programs, and to the eleven agricultural research and extension centers. His responsibilities include program development and overall direction, planning, allocation of resources, oversight of research facilities, support of faculty in their pursuit of extramural funds, and is accountable to stakeholders. He administers graduate programs, fosters the development of interdisciplinary research, and provides support for recruitment of graduate students.

Mostaghimi served as the H. E. and Elizabeth F. Alphin professor and department head of Biological Systems Engineering. His research programs concentrated on the design of water quality monitoring systems, the integration of modeling and monitoring for assessing the impacts of human activities on water quality, and the development and/or validation of computer simulation models.

Mostaghimi's honors include the Virginia Tech Alumni Awards for Graduate Advising and the award for Excellence in Outreach, the Hancor Soil and Water Engineering Award from the American Society of Agricultural and Biological Engineers, and Merit Awards from the Soil and Water Conservation Society. He is a Fellow of the American Society of Agricultural and Biological Engineers. He earned a BS from Pahlavi University in Iran, and MS and PhD degrees from University of Illinois at Urbana-Champaign.

WESTERN REGION

Bret W. Hess

Former Director, Wyoming Agricultural Experiment Station and Associate Dean for Research, University of Wyoming and Interim Executive Director, Western Association of Agricultural Experiment Station Directors

Bret Hess is a visionary leader who aspires to advance strategic initiatives with potential for tremendous impact. His unprecedented enthusiasm is inspirational and contagious. He is a great team builder who has an innate ability to unify diverse interests. Bret emphasizes collaboration and partnership in his approach to advocating for a cause at the local, state, regional, or national level.



Hess has served the Western Association of Agricultural Experiment Station Directors (WAAESD) as an active participant and chair plus as a member of the Multistate Research Committee, and as Administrative Advisor to multiple projects. He co-authored *The Western Perspective* & *The Western Agenda* and has led the joint regional effort to create awareness about the contributions and value of agricultural experiment

station research and Extension in the West. He has served as chair of the Experiment Station Committee on Organization and Policy (ESCOP), ESCOP Budget and Legislative Committee and National Research Support Project Review Committee. While serving as chair of the Experiment Station Section, Hess and fellow chair of the Extension Section took gigantic steps towards expanding the two Sections' partnerships with various national agencies and organizations.

Bret served as Assistant Director and then Associate Dean for Research and Director of the Wyoming Agricultural Experiment Station, and Interim Dean of the College of Agriculture and Natural Resources at the University of Wyoming. He also held positions as Interim Head of the Department of Plant Sciences, Interim Director of the Sheridan Research & Extension Center, and Interim Director of the Powell Research & Extension Center. Hess received the Young Scientist Award from the Western Section of American Society of Animal Science and the American Society of Animal Science Early Career Achievement Award. He recently received the Wyoming Crop Improvement Association Excellence in Service Award.

Dr. Hess earned BS and MS degrees from the University of Nevada, Reno and a PhD from the University of Missouri–Columbia.

NATIONAL EXCELLENCE IN LEADERSHIP AWARDS

Barbara Allen-Diaz
University of California System (W), 2016

Carolyn B. Brooks
1890 Research Directors (ARD), 2014

William (Bill) Brown
University of Tennessee (S), 2016

Douglas D. Buhler
Michigan State University (NC), 2018

Fred Cholick
Kansas State University (NC), 2015

Joe P. Colletti
Iowa State University (NC), 2019

Cameron Faustman
University of Connecticut (NE), 2019

H. Michael Harrington
Western Regional Association (W), 2018

Bret W. Hess
University of Wyoming (W), 2019

Walter A. Hill
Tuskegee University (ARD), 2016

Michael P. Hoffman
Cornell University-Ithaca (NE), 2015

George M. Hopper
Mississippi State University (S), 2017

Shirley Hymon-Parker
North Carolina A&T University (ARD), 2018

C. Colin Kaltenbach
University of Arizona (W), 2014

Arlen Leholm
North Central Regional Association (NC), 2014

Ian L. Maw
APLU (NE), 2018

Orlando F. McMeans
West Virginia State University (ARD), 2017

Bruce McPheron
The Pennsylvania State University (NE), 2014

J. Ernst (Ernie) Minton
Kansas State University (NC), 2017

Saied Mostaghimi
Virginia Polytechnic Institute and State University (S), 2019

Craig Nessler
Texas A&M (S), 2014

Mortimer H. Neufville
1890 Universities Foundation (ARD), 2019

Ron Pardini
The University of Nevada-Reno (W), 2015

Dan Rossi
Northeastern Regional Association (NE), 2016

John S. Russin
Louisiana State University (S), 2018

Steven Slack
The Ohio State University (NC), 2016

Lee Sommers
Colorado State University (W), 2017

Alton Thompson
Delaware State University (ARD), 2015

Gary A. Thompson
The Pennsylvania State University (NE), 2017

Eric Young
Southern Regional Association (S), 2015





National Experiment
Station Section
Diversity and
Inclusion Award

2019

Jeff Jacobsen

Executive Director, North Central Regional Association of State Agricultural Experiment Station Directors (NCRA)

The Experiment Station Section (ESS), composed of 1862 and 1890 institutions, has endeavored to increase diversity across its constituencies and foster inclusive environments. A component of this effort is recognition of experiment station individuals, groups or organizations that go beyond meeting EEO/AA program requirements through a national award: The National Experiment Station Section Diversity and Inclusion Award. This award recognizes the activities of individuals or teams at the local, state, regional, or national level, that empower groups and effectively enhance inclusion within organizations. Importantly, the award recognizes efforts that aspire to achieve consistent, holistic, inclusive excellence. The award includes recognition at the ESS/ARD Annual Meeting, a citation in the APLU Annual Awards booklet, and \$1,000 for use by the winning individual or team.



Following a national solicitation for nominations and a rigorous evaluation, the 2019 National Experiment Station Section Diversity and Inclusion Award was given to Dr. Jeff Jacobsen in Nashville, Tennessee on September 25, 2019 during the 2019 Joint ESS/CES-NEDA Meeting.

In 2015, Dr. Jacobsen was the critical lead in the formation of the ESCOP Diversity in Research Leadership Task Force, now known as the ESS/ARD Diversity Catalyst Committee (DCC), a group of research directors and regional associations that also includes representatives from Extension, Academic Programs, diversity professionals and NIFA. Jeff was instrumental in crafting and implementing a strategy that championed a long-term diversity and inclusion agenda for the Experiment Station Section. He has engaged all the ESS directors with conversations, exercises, and multi-agency workshops on contemporary issues associated with the promotion of inclusive organizations. This included challenging every 1862 and 1890 director to take the Intercultural Development Inventory (IDI) coupled with individual debriefs, a noteworthy step in the assessment of intercultural competence summarized nationally and regionally.

Jeff's leadership has changed the culture of the Experiment Station Section and affiliated groups. The Task Force is now a standing committee, the DCC, diversity and inclusion training is a priority at regional and national ESS/ARD meetings, and an award that recognized outstanding efforts toward diversity in the experiment station community was established. Jeff has served as the leader, follower, planner, cheerleader, strategic thinker, and implementer of an agenda that promotes diversity and inclusion within the ESS/ARD. We extend our gratitude to Jeff for the opportunity to join the effort to advance excellence in intercultural competence and to create diverse and inclusive organizations within the experiment station community and beyond.

NATIONAL EXCELLENCE IN DIVERSITY AND INCLUSION AWARDS

Jeff Jacobsen, ESS/ARD Diversity Catalyst Committee
North Central Regional Association of State Agricultural Experiment Station Directors (NCRA), 2019

Neil Knobloch and Levon Esters, The Mentoring@Purdue Team
Purdue University, 2018



Food Systems
Leadership
Institute

2019

FOOD SYSTEMS LEADERSHIP INSTITUTE FELLOWS, COHORT 13

Olga Bolden-Tiller

Professor of Animal Science; Department Head, Department of Agricultural and Environmental Sciences; Asst. Dean of Development, College of Agriculture, Environment and Nutrition Sciences, Tuskegee University

Rich Bonanno

Associate Dean, College of Agriculture and Life Sciences, Director, North Carolina Cooperative Extension Service, North Carolina State University

Jake Bowman

Department Chair and Professor, Department of Entomology and Wildlife Ecology, University of Delaware

Ashli Brown

State Chemist, Associate Professor, Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology, Mississippi State University

Michael R. Burchell II

Professor and Department Extension Leader, Department of Biological and Agricultural Engineering, North Carolina State University

Graham Cochran

Associate Dean for Operations, College of Food, Agricultural, and Environmental Sciences, The Ohio State University

John Cranfield

Associate Dean for External Relations, Ontario Agricultural College, University of Guelph

Juan Marcos Fernandez

Associate Dean and Director of Academic Programs, College of Agriculture, Purdue University

David Fernandez

Interim Assistant Dean of Academic Programs, School of Agriculture, Fisheries and Human Sciences, University of Arkansas at Pine Bluff

Bryan Garton

Senior Associate Dean and Director of Academic Programs, College of Agriculture, Food and Natural Resources, University of Missouri

Amy Grunden

William Neal Reynolds Distinguished Professor, Department of Plant and Microbial Biology, North Carolina State University

Vanessa Jackson

Chair, Department of Retailing and Tourism Management, University of Kentucky

Carolyn J. Lawrence-Dill

Professor of Genetics, Development and Cell Biology, Chair of Graduate Interdepartmental Bioinformatics and Computational Biology, Iowa State University

Terry Niblack

Senior Associate Dean, College of Food, Agricultural, and Environmental Sciences, The Ohio State University

Vara Prasad

University Distinguished Professor and Director of Feed the Future Innovation Lab for Collaborative Research Sustainable Intensification, College of Agriculture, Kansas State University

James P. Prince

Associate Dean for Research and Graduate Programs, College of Agriculture, Food and Environmental Sciences, Cal Poly San Luis Obispo

Robert Roberts

Professor and Head, Department of Food Science, The Pennsylvania State University

Clint Rowe

Manager, Research and Development, Perdue Foods

Katie Thrush

Section Manager, Clinical Development and Compliance, Abbott Nutrition, Columbus, OH

Anne Veeger

Vice Provost, Academic & Faculty Initiatives, University of Rhode Island

John R. Vreyens

Director, Global Initiatives, University of Minnesota Extension

Curt Weller

Head, Department of Food Science and Technology, University of Nebraska-Lincoln

Hazel Wetzstein

Head, Department of Horticulture and Landscape Architecture, Purdue University

Todd Winters

Dean, College of Agriculture and Applied Sciences, University of Tennessee at Martin

Jeff Young

Director for Urban Extension, Cooperative Extension Service, University of Kentucky

APLU FOOD SYSTEMS LEADERSHIP AWARD



Catherine E. Woteki, Ph.D.

*President, Charles Valentine Riley Memorial Foundation
Professor of Food Science and Human Nutrition, Iowa State University
Visiting Distinguished Institute Professor, Biocomplexity Institute of the
University of Virginia*

Dr. Catherine Woteki is President of the Charles Valentine Riley Memorial Foundation and holds positions as Professor of Food Science and Human Nutrition at Iowa State University and Visiting Distinguished Institute Professor in the Biocomplexity Institute of the University of Virginia. She served as Chief Scientist and Under Secretary for USDA's Research, Education, and Economics (REE) mission area from 2010 to 2016. In that role, she developed the Office of the Chief Scientist, established the USDA Science Council, instituted the Department's first scientific integrity and open data policies, and was a founding member of the Meeting of Agricultural Chief Scientists held under the auspices of the G-20. Dr. Woteki is an advocate for building the platforms needed to enhance domestic and international food and agricultural research.

Prior to joining USDA, Dr. Woteki served as Global Director of Scientific and Regulatory Affairs for Mars, Incorporated, where she managed the company's scientific policy on matters of health, nutrition, and food safety. From 2002 to 2005, she was Dean of Agriculture and also head of the Agricultural Experiment Station. Dr. Woteki served as the first Under Secretary for Food Safety at the U.S. Department of Agriculture (USDA) from 1997 to 2001, where she oversaw the safety of meat, poultry and egg products.

Dr. Woteki served in the White House Office of Science and Technology Policy (OSTP) as Deputy Associate Director for Science from 1994 to 1996. During that time, she co-authored the Clinton Administration's policy statement, "Science in the National Interest." Dr. Woteki has also held positions in the National Center for Health Statistics of the U.S. Department of Health and Human Services (1983-1990), the Human Nutrition Information Service at USDA (1981-1983), and as Director of the Food and Nutrition Board of the Institute of Medicine at the National Academy of Sciences (1990-1993). During her tenure as Director of the Food and Nutrition Board she had direct responsibility for twenty-seven studies and co-authored a nutrition book entitled *Eat for Life* which became a Book of the Month Club selection. She is the author of more than 60 peer reviewed articles and 12 books and technical reports.

In 1999, Dr. Woteki was elected to the Institute of Medicine of the National Academy of Sciences, Engineering and Medicine where she has chaired the Food and Nutrition Board (2003 to 2005). She received her M.S. and Ph.D. in Human Nutrition from Virginia Polytechnic Institute and State University (1974). Dr. Woteki received her B.S. in Biology and Chemistry from Mary Washington College (1969).



