

**Invitation for Public Comment on the List of Candidates
For the Environmental Protection Agency's
Science Advisory Board (SAB) Agricultural Science Committee**

August 19, 2015

The U.S. Environmental Protection Agency (EPA) Science Advisory Board (SAB) Staff Office announced (79 FR 73304-73305, December 10, 2014) that pursuant to section 12307 of the Agricultural Act of 2014 (P.L. 133-79), the EPA is establishing a new agriculture-related standing committee of the SAB. On January 26, 2015, the SAB Staff Office announced (80 FR 2965-3966) an extension to the nomination period through March 30, 2015. The SAB Agricultural Science Committee will provide advice to the chartered SAB on matters referred to the Board that EPA and the Board, in consultation with the Secretary of Agriculture, determine will have a significant direct impact on farming and agriculture-related industries. The SAB Staff Office sought public nominations of experts with demonstrated expertise in agriculture-related sciences, including: agricultural economics, including valuation of ecosystem goods and services; agricultural chemistry; agricultural engineering; agronomy, including soil science; aquaculture science; biofuels engineering; biotechnology; crop and animal science; environmental chemistry; forestry; and hydrology.

The SAB Staff Office identified 88 candidates, based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates for the SAB Agricultural Science Committee. Comments should be submitted to Ms. Stephanie Sanzone, Designated Federal Officer, no later than September 8, 2015, at sanzone.stephanie@epa.gov. Email is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

SAB Agricultural Science Committee

Abi-Ghanem, Rita

Bio Huma Netics

Dr. Rita Abi-Ghanem is the Senior Director of Research and Development at Bio Huma Netics Inc., an Arizona based soil and plant liquid-nutrition company. She is also an adjunct faculty of the Department of Crop and Soil Sciences at Washington State University (WSU) and serves as member of the Humic Products Trade Association science committee and the Fluid Fertilizer Foundation research and education committee. Dr. Abi-Ghanem's research interests are primarily aimed at identifying and developing more sustainable agricultural management practices to produce higher quality food and fiber while protecting the environment. Her interest in agricultural research was first established by her educational background consisting of a Bachelor of Science (B.S.) degree in Agricultural Engineering with a focus on Agronomy from the Lebanese University, a Master of Science (M.S.) degree in Plant Protection from the American University of Beirut, and a Doctor of Philosophy (Ph.D.) degree in Soil Science from Washington State University with an emphasis in Soil Microbiology and Sustainable Agriculture. This interest was further established by multi-disciplinary and collaborative research work on numerous high-impact projects with scientists and farmers from both the U.S. and international institutions in academic, private, and governmental sectors. These institutions include the Bill and Melinda Gates Foundation (BMGF); United State Department of Agriculture (USDA); International Center for Agricultural Research in the Dry Areas (ICARDA); United Nations Development Program (UNDP); PROGENE Plant Research in Othello, WA; UNIFERT in Lebanon; University of Florida; Montana State University; University of Arizona; and many others. Among the projects that Dr. Abi-Ghanem has collaborated on are the United Nations-Biodiversity program evaluating foliar and seed-borne diseases on wheat and barley landraces in Lebanon and the BMGF Agricultural Research Connections (ARC) workshop during the summer of 2013 in Kenya for improving soil-plant-microbe interactions and natural nitrogen supplies. She has furthermore educated Iraqi scientists in agricultural methods and soil ecology through sessions held in Egypt, Syria, and Jordan and has instructed several graduate and undergraduate classes during her departmental tenure at WSU. Dr. Abi-Ghanem was awarded a Fulbright Scholarship to conduct research at WSU on disease models for late blight on potatoes.

Barnes, Michael

South Dakota Department of Game, Fish and Parks

Dr. Michael E. Barnes is an Aquaculture and Fisheries Research Scientist and Fish Hatchery Manager for the South Dakota Department of Game, Fish and Parks. He received a BS in Biology, MS in Biology, and Ph.D. in Wildlife and Fisheries Science. He has published over 75 papers involving studies of general aquaculture, fish reproduction, fish nutrition, fish diseases, fisheries management, microbiology, natural resources education, and occupational safety. He has also been involved with production aquaculture for 28 years. The current research focus of Dr. Barnes and his colleagues includes investigating plant-based proteins in trout diets, hatchery rearing practices to improve the post-stocking survival of hatchery trout and the satisfaction of recreational anglers, improvements in aquaculture worker safety, Chinook salmon reproduction, Bacterial Coldwater Disease, and general improvements in hatchery rearing efficiencies. For the past two years his research has been primarily funded by the South Dakota Department of Game, Fish and Parks, while his collaborative research has also received funding from the South Dakota Soybean Research and Promotion Council and South Dakota State University Agriculture Experiment Station. Dr. Barnes is a Past-President of the Fish Culture Section of the American Fisheries Society, has served on numerous American Fisheries Society committees, and is also a Past-President of the American Fisheries Society Dakota Chapter. He has served for several years as an associate editor of the North American Journal of Aquaculture, and also serves on the editorial boards of Research and Communications in Biological Sciences and the Open Fish Science Journal. Dr. Barnes has received numerous awards for his professional service, work performance, and public speaking. He has previously served on a Center for Disease Control – National Institute of Occupational Safety and Health Special Review Panel.

Barrs,Earl D.

Due South Investments

Earl Barrs is a 1974 graduate of UGA Warnell School of Forestry and Natural Resources. He has practiced forestry for 40+ years promoting sustainable forestry practices supporting clean air and clean water. Awards received include 2009 National Tree Farmer of the Year, Conservationist of the Year, Governor's Agriculture Stewardship Award, GFA Wise Owl Award and inductee Southeastern Society of American Foresters Hall of Fame. He has served on the GA Department of Natural Resources Board (including chair), UGA WFNR School External Advisory Committee, American Forest Foundation Woodlands Committee and NRCS Advisory Committee. He presently manages forestlands across the southeastern US. Management includes participation in WHIP and EQUIP programs as well as experimental efforts in silvopasture and reintroduction of native grasses to forestlands. He is a hands on practitioner directly involved with implementing best management practices on all of his forestlands.

Beck,Robert

WinField Solutions, LLC

Dr. Robert H. Beck is Illinois Senior Regional Agronomist for WinField Solutions, LLC, a Land O'Lakes company. He received a BS in Agricultural Science from Montana State University-Bozeman, MS in Soil Physics and Remote Sensing and PhD in Soil Fertility from Purdue University. He interacts with the WinField team to facilitate cropping systems that optimize the inputs for optimum profitability for growers by turning data into insights. He utilizes the Answer Plot System and works with key growers who are students of the game of farming. As manager of delivery for Pioneer Hi-Bred International Sales Training and Development Department located in Johnston, Iowa from 1997 – 2005, he was involved in creating and teaching a professional sales training curriculum impacting Pioneer sales associates in North America, Europe, South America and Africa. His focus has been helping students become prepared to be professionals in the agri-business with skills of agronomy. He has served as President of the Soil and Plant Analysis Council. Dr. Beck was a founder of the Certified Crop Adviser Program and served as Chairman of the International Board. He was an invited member of the 1993 Global Climate Change workshop on Greenhouse Gas Sinks sponsored by the USDA and the White House. He is passionate about teaching agronomy to others and helping them become successful agri-business professionals. He has truly left his mark on thousands of learners with whom he has come in contact. From his Professorships at the University of Illinois and University of Wisconsin-River Falls, to CENEX/Land O'Lakes Agronomy Company and Pioneer Hi-Bred and now Winfield, he has remained the consummate teacher of his craft. Defining Dr. Beck's impact on the field of Agronomy spans both the academic world and industry. He has literally touched thousands of learners and continues as a lifelong learner in professional sales.

Bextine,Blake

University of Texas at Tyler

Dr. Blake Bextine is Professor of Biology and Assistant Vice President for Research and Technology Transfer at the University of Texas at Tyler. Prior to his arrival at UT Tyler, Dr. Bextine was a post-doctoral fellow in the Department of Entomology at the University of California, Riverside. He holds a Ph.D. from Oklahoma State University, M.S. in Entomology from Texas Tech University, and a B.A. in Biology from the University of Northern Iowa. Since his arrival at UT Tyler, the Bextine Molecular Biology Laboratory has become internationally recognized for work done in the area of agricultural entomology. Dr. Bextine's expertise is in plant pathogens transmitted by insect vectors, insect genomics, and environmental effects on insect symbiont competition. He has worked within several systems of high priority to US agriculture including Citrus Greening, Zebra Chip, and Pierce's disease with a focus on transformation of native viruses for the delivery of gene technologies to interrupt the transmission cycle, reducing environmental impacts of traditional agricultural production. His current research is funded by the United States Department of Agriculture, Texas Department of Agriculture, and private industry. Typically, Dr. Bextine employs 15-18 Master's and undergraduate students; paid through external research grants. Dr. Bextine's students have won 30 research presentation awards and 2 young researcher awards in the past few years. Dr. Bextine has published nearly 70 papers in peer reviewed journals, most of which involved student authors. He has also published over 100 papers or abstracts in meeting

proceedings, and presented nearly 250 research presentations since 2000. Dr. Bextine is a University of Texas System Regents' Outstanding Teaching Award Winner and has also won the UT Tyler President's Scholarly Achievement Award, White Fellowship for Teaching Excellence Award, and multiple Researcher of the Year Awards.

Bogdanove, Adam J.

Cornell University, College of Agriculture and Life Sciences

Dr. Adam Bogdanove is Professor and Director of Graduate Studies in Plant Pathology and Plant-Microbe Biology at Cornell University. He earned his bachelor's degree in biology at Yale University and his PhD in plant pathology at Cornell. Following postdoctoral work at Purdue and later the Boyce Thompson Institute for Plant Research, Bogdanove joined the faculty of Plant Pathology at Iowa State University, then in 2012, moved to Cornell. His research centers on diseases of rice and other crop plants caused by *Xanthomonas* spp., with a focus on transcription activator-like (TAL) effectors, pathogen-injected DNA-binding proteins that activate specific host genes. Bogdanove discovered the modular mechanism by which TAL effectors recognize target DNA sequences, established computational methods to predict TAL effector binding sites in complex genomes, and pioneered the use of TAL effectors as customizable tools for gene regulation and genome editing. Current efforts, funded by the NIH, the NSF, and industry, focus on characterizing TAL effectors and targets at the population level to develop durable plant disease resistance, optimizing TAL effectors for targeted gene regulation in plants, and genome editing to precisely mobilize natural genetic variation across crop varieties for improved stress tolerance, yield, and, nutrition. From 2009-2012, Bogdanove chaired the Scientific Advisory Panel to the California Department of Food and Agriculture Pierce's Disease Program, and he serves as Advisor on Agricultural Green Technology to the Rural Development Administration of South Korea. In 2013, Bogdanove served at the advisory thought leaders meeting, "Minding the Gaps" for the American Phytopathological Society. Bogdanove has co-organized several scientific conferences, including the 2013 Gordon Conference on Chemical and Biological Terrorism Defense, the 2014 National Agricultural Biotechnology Consortium Symposium on Genome Editing and Agriculture, and the 2015 US-Japan Seminar on Plant-Pathogen Interactions. Bogdanove is an associate editor for the Journal of General Plant Pathology.

Boyer, Elizabeth W.

Pennsylvania State University

Dr. Elizabeth W. Boyer is an Associate Professor of Water Resources in the Department of Ecosystem Science and Management at the Pennsylvania State University. She serves as Director of the Pennsylvania Water Resources Research Center, and as Assistant Director of Penn State Institutes of Energy and the Environment. Prior to her current position, Dr. Boyer served on the faculty at the State University of New York at Syracuse and at the University of California at Berkeley. She holds a B.S. degree in Geography from the Pennsylvania State University, and M.S. and Ph.D. degrees in Environmental Sciences from the University of Virginia. Dr. Boyer's work focuses on hydrological and ecological processes that affect water resources, and long-term monitoring and assessment of water quality. Her research explores the status and trends of water quality of streams, rivers, and estuaries in response to factors such as atmospheric deposition, climatic variability, land use, and watershed management. Dr. Boyer's recent research is funded by the Pennsylvania Department of Environmental Protection, the U.S. Geological Survey, the U.S. Environmental Protection Agency, and the U.S. National Science Foundation. Dr. Boyer serves on the Board of Directors of the Universities Council on Water Resources. She has chaired the American Geophysical Union's technical committee on Water Quality, and has chaired the international Gordon Research Conference on Catchment Science.

Bradman, Asa

UC Berkeley

Dr. Asa Bradman is an environmental health scientist and expert in exposure assessment and epidemiology focusing on occupational and environmental exposures to pregnant women and children living in agricultural communities. He co-founded the Center for Environmental Research and Children's Health (CERCH) in the UC Berkeley School of Public Health and directs an initiative to improve environmental quality in California child care facilities. Dr. Bradman leads complex studies focusing on pesticides, flame retardants, metals, emerging

pollutants, VOCs, indoor air quality, and other contaminants. He also participates in extensive community outreach and education and interfaces with other scientists, state and federal agencies, policy makers, and industry. He participates on several advisory bodies and was appointed by Governors Schwarzenegger and Brown to serve on the California Biomonitoring Scientific Guidance Panel.

Brown, Adell

Southern University and A&M System

Dr. Adell Brown is Professor of Agricultural Economics and Interim Chancellor and Vice Chancellor for Research at the Southern University Agricultural Research and Extension Center –Southern University A&M System. He received his BS in Agricultural Business and with a minor in Agricultural Engineering, MBA and a PhD. From Louisiana State University, Baton Rouge, Louisiana. His research focus (funded for the past two years by USDA-NIFA) on sustainable agriculture and community and economic development. He has examine agricultural policies, market structure and the level of participation in the various government programs on success and non-success of small and social disadvantaged farmers. He has also examine the factors/policies contributing the success urban-rural interfacing. Recently his research and educational efforts focuses on urban agriculture models (production, environment, social and economic) for improving food access in urban food deserts. As research director for the Southern University Ag Center, he received sustained funding for the United States Department of Agriculture. The research portfolio consist of research projects designed to enhance: agricultural productivity while protecting and improving the environment; achieve a healthier, more nourished population; economic opportunities and the quality of life for the people of Louisiana and society in general. . Dr. Brown has authored numerous peer-reviewed papers, book chapters and presented frequently at professional conferences. He teaches graduate level courses on principles of economics. Dr. Brown has served on a wide variety of review boards for scientific journals, government agencies, and academia and regularly reviews grants for USDA-NIFA. Currently, Brown serves on the Board for the Southern Rural Development Center, the Southern-Sustainable Agriculture Research and Education (SARE) Administrative Council and the Louisiana Environmental Education Commission.

Buser, Michael

Oklahoma State University

Dr. Michael Buser is an Associate Professor in the Biosystems and Agricultural Engineering Department at Oklahoma State University in the College of Engineering, Architecture and Technology and the Division of Agricultural Sciences and Natural Resources. He received his BS and MS in Biosystems Engineering from Oklahoma State University and his Ph.D. in Biological and Agricultural Engineering from Texas A&M University. Dr. Buser has 19 years of Agricultural Engineering experience. This experience includes two years as a Research Engineer with Oklahoma State University, eleven years as a Category I Scientist with USDA Agricultural Research Service, followed by his current 65% research and 35% extension appointment at Oklahoma State University. He has established national high-impact, stakeholder-driven research and extension programs. He works with forestry, specialty crop, nut, wheat, corn, forage, cotton, beef cattle, and poultry industries on projects ranging from air quality, bioenergy, machinery development, product traceability, safety, sustainability, and supply chain logistics. Dr. Buser's research and extension teams have received over \$21,000,000 in competitive grant, industry or special funding; funding sources for the past two years include: USDA (Sun Grant Initiative, NRCS CIG, NIFSI, AFRI, ARS, and BRDI) and Oklahoma State University. Dr. Buser has published 103 peer-reviewed journal articles; 4 book chapters; 68 industry technical reports; 281 technical reports for regulatory agencies; 173 conference papers or posters; and 38 extension videos. He has given 19 expert comments and 31 invited presentations. His work has been highlighted in over 100 popular press articles. He is actively involved technical committees and standards development related to his membership in the American Society of Agricultural and Biological Engineers and the National Cotton Ginners Association. Throughout his career he has received several awards including the USDA National Institute of Food and Agriculture's Partnership award for Mission Integration.

Camberato, Jim

Purdue University

Dr. James J. Camberato is Professor of Agronomy and Extension Specialist at Purdue University. Previously he held a similar position at Clemson University. He received a BS in Plant and Soil Science from the University of Massachusetts, and an MS and PhD in Soil Science from North Carolina State University. His current research is focused on the agronomic, economic, and environmental impacts of nutrient use in corn production systems in the Corn Belt. Prior research examined the efficient utilization of nitrogen, sulfur, and potassium in wheat and cotton. Most of his research is interdisciplinary with colleagues in plant pathology, weed science, and entomology. He chaired or co-chaired 12 graduate student committees and served on the committee of more than 40 others. He has published 48 refereed publications and 13 book chapters. His research is currently funded by the United States Department of Agriculture Conservation Initiative Grant program, the Indiana Corn Marketing Council, the Indiana Soybean Alliance, Pioneer Hi-Bred International, and Koch Agronomic Services. He has served as Associate Editor for the Agronomy Journal and the Soil Science Society of America Journal for a total of 9 years and on the Editorial Board of the Journal of Sustainable Agriculture for 7 years. He is incoming Chair-Elect of the Soil Fertility and Plant Nutrition Division of the Soil Science Society of America. He has written numerous timely and timeless Extension publications and delivers educational presentations to more than 2,000 agricultural advisors, Certified Crop Advisors, and farmers annually. He has extensive research, educational and practical experience in the recycling of nutrients from agricultural, municipal, and industrial by-products into agronomic systems. He has received several awards for Extension and educational materials related to nutrient utilization and crop production.

Cassman, Kenneth G.

University of Nebraska

Dr. Kenneth Cassman has worked on nearly all of the world's major agricultural systems and has served as field agronomist, university professor and administrator in both academia and at international research organizations. At the University of Nebraska, he was Head of the Agronomy and Horticulture Department Director of the Nebraska Energy Sciences Research Center, and currently Professor and Principal Investigator of the Global Yield Gap Atlas (www.yieldgap.org). Prior to Nebraska, Dr. Cassman was Head of the Agronomy, Plant Physiology and Agroecology Division at the International Rice Research Institute and was a faculty member in the Department of Agronomy and Range Science at the University of California, Davis. He received a PhD from University of Hawaii Tropical Agriculture College and was a field agronomist on agricultural development projects in Brazil and Egypt. From 2011-2013, he served as Chair of the Independent Science and Partnership Council for the consultative Group on International Agricultural Research (<http://www.sciencecouncil.cgiar.org/>), and since 2012 has been Editor-in-Chief of the Global Food Security (www.journals.elsevier.com/global-food-security/). Dr. Cassman's passion of the past 20 years has been on the challenge of meeting food demand while also reducing agriculture's environmental footprint and conserving natural resources. He is best known for his research on nitrogen- and water-use efficiency, ecological intensification, global food security, and as co-author of the textbook, Crop Ecology. Cassman has received a number of awards for his scientific contributions—most recently the 2012 President's Award from the Crop Science Society of America, and he is a Fellow of the American Association for the Advancement of Science. Since 2012 funding support for research on which Cassman is Principal Investigator has come from the Bill and Melinda Gates Foundation. Funding for smaller projects on which he is team member has come from USAID, the Nebraska Soybean Board and the Nebraska Corn Board.

Cherney, Jerome

Cornell University

Dr. Jerome H. Cherney is E.V. Baker Professor of Agriculture in the School of Integrative Plant Science at Cornell University, and his current position is forage crop management and utilization, including biofuels, with a research and extension appointment. He received a BS in Plant Pathology and an MS in Agronomy from the University of Wisconsin-Madison, and a PhD in Agronomy from the University of Minnesota. Dr. Cherney was born and raised on a central Wisconsin dairy farm, and his current position requires close contact with farmers, so he is keenly aware of the issues facing farmers. Dr. Cherney is a veteran, and served as a North Vietnamese Linguist for the

U.S. Army Security Agency. He has authored/co-authored 140 peer-reviewed journal articles and book chapters. He has conducted research in forage and grain crops, and has also conducted research on biomass conversion technologies, as well as soil/nutrient management studies and dairy cattle feeding studies. He has received both the American Society of Agronomy Agronomic Extension Education Award and the Crop Science Society of America Extension Education Award, and is a Fellow of both societies. He has served on editorial boards for the journals: Agronomy, Forage and Grazinglands, and Crop Science. Dr. Cherney was the sole North American member of the Scientific Evaluation Committee for the all-European Climate-Smart-Agriculture funding program in 2014, under the Joint Programming Initiative on Agriculture, Food Security and Climate Change. He is a keynote speaker at the 17th Australian Agronomy Conference in 2015, and the keynote speaker at the annual Quebec Agronomy Conference in 2015. He has received recent funding from the National Institute of Food and Agriculture, New York State Energy Research and Development Authority, New York Farm Viability Institute, Northern New York Agricultural Development Program, and Catskill Watershed Corporation.

Chorover, Jon

University of Arizona

Dr. Jon Chorover is Professor and Head, Department of Soil, Water and Environmental Science at the University of Arizona (UA). He received his B.S. (Environmental Science) from University of Michigan, and M.S. (Forest Science) and Ph.D. (Soil and Water Chemistry) from UC Berkeley, worked as an NSF postdoctoral fellow in Analytical Chemistry at University of Geneva, and was on the faculty of Penn State University before joining the faculty of University of Arizona. His research group explores the biogeochemistry of soil, sediment and water through laboratory and field-based experiments probed with advanced analytical chemistry techniques. Of particular interest is resolving how mineral-organic interactions influence the weathering of soils, the stabilization of organic carbon, and the speciation, mobility and bioaccessibility of pollutants. His research is funded by the National Science Foundation, the National Institute of Environmental Health Sciences, and the Department of Energy. He directs a core analytical chemistry facility, the Arizona Laboratory for Emerging Contaminants and serves as principal investigator of the Santa Catalina Mountains – Jemez River Basin Critical Zone Observatory (<http://criticalzone.org/catalina-jemez/>), funded by the National Science Foundation.

Collins, Janet E.

CropLife America

Dr. Janet E Collins is Senior Vice President of Science and Regulatory Affairs at CropLife America, Washington DC where she leads PhD scientists in human health and environmental/ecological risk assessment and pesticide registration. Janet obtained her BS and MS degrees in Experimental Foods and Nutrition at the University of Georgia. She is a registered dietitian; and, completed her PhD in Animal Science at the University of Wyoming. Dr. Collins was an associate professor (tenured University of Wyoming), and subsequently managed agriculture research and outreach (National Livestock Meat Board, National Dairy Promotion Research Board, American Meat Institute and Foundation, Monsanto Company, and E.I. du Pont). Dr. Collins has focused the last 18 years on outreach and advocacy for agricultural biotechnology global acceptance and risk-based regulatory assessment. A delegation to nine Codex Alimentarius Commission Committees and tasks force, she also served on the Business Industry Advisory Committee to Organization for Economic Cooperation and Development in Novel Foods, and Harmonization of Regulatory Oversight for Biotechnology. She directed industry position development in food chemistry; labeling including labeling for foods of biotechnology; fats and oils, pesticide residues (MRL); import and export certification standards; methods of analysis and detection; principles of traceability; and, nutrition and health issues such as endocrine disruption, health effects of food components and compositional of food in human risk assessment. Dr. Collins served a three year term on US Department of Commerce Industry Technical Advisory Committee #16. Dr. Collins gained national recognition when elected President of the Institute of Food Technologists, an 18000 plus member organization for food science and technology, where she recently is an elected fellow. She is President of Phi Tau Sigma, the national professional honor society in food science. Her broad scientific and technical interests and experience make her uniquely qualified to serve on the Committee.

Culpepper, Stanley

University of Georgia

Dr. Stanley Culpepper is a nationally and internationally recognized weed scientist with the University of Georgia (UGA). A native of North Carolina, he grew up on a bicentennial family farm. He received his BS in agronomy and MS and PhD in weed science from N. C. State. Dr. Culpepper's ultimate goal is to assist family farms with long-term sustainability by helping growers make wise production decisions using results generated from unbiased research. Recently, he has focused on mitigating impacts of herbicide-resistant weeds by developing integrated and diversified management programs that are effective and economical. He also focuses on developing scientific information to help growers eliminate off-target pesticide movement which is essential for agricultural sustainability. Because of his expertise, Dr. Culpepper has been invited to speak at 243 functions across 24 states and multiple countries, 514 county extension meetings, 103 field days, and 96 in-service extension trainings. He has authored or co-authored 90 refereed journal articles, four book chapters, 343 abstracts at professional meetings, and 370 extension publications. He has received 23 awards at UGA, the most significant being the Environmental Protection Agency's (EPA) Montreal Protocol Award for assisting in preservation of the ozone layer for which he was nominated by Senator's Chambliss and Isakson. Dr. Culpepper has also contributed to agriculture as an advisor for the Georgia Cotton Commission, Georgia Crop Production Alliance, Georgia Department of Agriculture, Georgia Vegetable Growers Association, Georgia Vegetable Commodity Commission, and United States Department of Agriculture's (USDA) Interregional Project #4. He is an active member of the Beltwide Cotton Conferences, the Southern Weed Science Society, and the Weed Science Society of America. His Extension program has been primarily supported by the Cotton Foundation, Cotton Incorporated, Georgia Cotton Commission, Georgia Department of Agriculture, Georgia Vegetable Commission, U.S. EPA, and numerous USDA programs.

Czapar, George

University of Illinois

Dr. George Czapar is Associate Dean and Director of University of Illinois Extension and an Associate Professor in the Department of Crop Sciences. He received his B.S. and M.S. in Agronomy from the University of Illinois, and his Ph.D. in Agronomy from Iowa State University. His research and Extension programs focused on interdisciplinary projects that address the environmental impacts of agriculture, especially related to water quality. He teaches Agriculture and the Environment for the Campus Honors Program and serves on their Honors Advisory Committee. He led a Strategic Research Initiative in water quality for the Illinois Council on Food and Agricultural Research and helped establish the Illinois Council on Best Management Practices. He previously was the Director of the Center for Watershed Science with the Illinois State Water Survey and served as Water Quality Coordinator for University of Illinois Extension. His research has been funded by the USDA-NIFA Integrated Water Quality Program and the Illinois EPA. He was part of a team that developed the science assessment for the Illinois Nutrient Loss Reduction Strategy. Dr. Czapar received the Campus Award for Excellence in Public Engagement and the College of Agricultural Consumer and Environmental Sciences Award for Excellence in Teaching and Outreach. In 2012, he received a Fulbright Specialist Award to work on water quality issues with the University of Buenos Aires in Argentina. He has served on numerous advisory committees, including the Governor's Groundwater Advisory Council, the Illinois Department of Agriculture-Nutrient Management Task Force, and the Lt. Governor's Science Advisory Committee for Illinois Rivers. He was an external reviewer for the University of Leeds interdisciplinary water program and he represents Illinois on the Southern Extension and Research Activities (SERA) committee 46, a partnership between Land Grant Universities and the Hypoxia Task Force.

David, Mark

University of Illinois

Mark B. David is a Professor in the Department of Natural Resources and Environmental Sciences at the University of Illinois at Urbana-Champaign, where he has been on the faculty since 1985. Dr. David earned his B.S. from the Pennsylvania State University, M.S. from the University of Maine, and his Ph.D. from the State University of New York, College of Environmental Science and Forestry. His current research areas include

nitrogen and phosphorus biogeochemistry in agricultural ecosystems, including transport to surface waters at scales ranging from fields to regions; fate and effects of nutrients in aquatic systems; and the use of nitrogen management, cover crops, bioreactors, managed drainage, and constructed wetlands to reduce agricultural nutrient losses to surface waters. He has been elected as a Fellow in the Soil Science Society of America, the American Society of Agronomy, and the American Association for the Advancement of Science, and recently received the American Society of Agronomy Environmental Quality Research Award. Dr. David has served as an associate editor for both the Soil Science Society of America Journal and for the Journal of Environmental Quality; has frequently served as a panel member for review of proposals for funding from the USDA, NSF, and USEPA; and has served on review teams to assess departmental and programmatic activities at several other universities. He is currently serving as an elected member of the Board of Directors of the American Society of Agronomy. He has taught a wide range of environmental science courses to freshman through Ph.D. students, and has had 26 graduate students complete their degrees, along with 8 postdoctoral students. Funding during the past 2 years has come from USDA NIFA, DOE, BP Energy Biosciences Institute, Illinois EPA, and the Illinois Nutrient Research & Education Council.

Doering,III,Otto

Purdue University

Dr. Otto C. Doering III is a professor of Agricultural Economics at Purdue University where he has teaching, research and engagement responsibilities. He is a public policy specialist in agricultural, resource, and environmental policy issues. He served the U.S. Department of Agriculture working on the 1977 and 1990 Farm Bills. He was a Principal Adviser to USDA's Natural Resource Conservation Service for implementing the 1996 Farm Bill and worked again in 2005 with NRCS on the design and implementation of conservation programs. In 1999, he was team leader for the economic analysis of the White House's National Hypoxia Assessment focused on the Gulf of Mexico. Dr. Doering has been President of the Agricultural and Applied Economics Association and Chair of the National Public Policy Education Committee. He was founding director of Indiana's State Utility Forecasting Group and director of Purdue's Energy Policy Research and Information Program. He serves on the U.S. Environmental Protection Agency's Science Advisory Board and chaired EPA's Integrated Nitrogen Committee. He was a member of the National Academies' Water Science and Technology Board and served on National Academy committees focused on protecting and restoring water quality in the Mississippi River. He served with the Intergovernmental Panel on Climate Change and currently directs Purdue's Climate Change Research Center. His climate work has focused on agricultural adaptation to climate change. His current research funding is from the U.S. Department of Agriculture. He has served in Southeast Asia with the Ford Foundation and the Governments of Malaysia and Indonesia. Dr. Doering received a B.A. in Government from Cornell, a M.Sc. (Econ) from the London School of Economics, and a Ph.D. in Agricultural economics from Cornell. In earlier incarnations he has been a legal investigator in the New York City Municipal Courts and a horse wrangler in the Canadian Rockies. His recent publications focus on agricultural and conservation policy, agricultural adaptation to climate change, improving water quality in the Mississippi River, and alternative approaches to controlling reactive nitrogen.

Dotray,Peter

Texas Tech University

Dr. Peter Dotray is a Professor and Extension Weed Specialist who holds a three-way joint appointment with Texas Tech University, Texas A&M AgriLife Research, and Texas A&M AgriLife Extension Service in Lubbock. He is a native of Minneapolis, Minnesota, and received his B.S. and Ph.D degrees in Agronomy from the University of Minnesota at St. Paul and his M.S. degree in Agronomy from Washington State University at Pullman. Peter conducts weed control research in several crops including cotton, peanut, grain sorghum, corn, and sesame. In addition to weed control responsibilities, Peter serves as an Extension Weed Specialist in District 2, which contains 20 counties (3.5 million acres of cotton) on the Texas Southern High Plains. Peter teaches an undergraduate course (Principles of Weed Science) and graduate level course (Mode and Mechanism of Herbicide) to on-campus students and online (Distance) students each year. Peter has served as the major advisor or co-advisor of 33 graduate students, has served 29 graduate committees, and has five graduate students in progress. He has authored or coauthored 373 abstracts and proceedings, 66 journal articles, 184 technical

publications and popular articles, seven book chapters, and has given 84 presentations at professional meetings and over 680 seminars and presentations at grower meetings. Dotray has received a number of awards Texas Tech University President's Excellence in Teaching Award and Academic Achievement Award, Outstanding Educator Award - Southern Weed Science Society, and the American Peanut Research and Education Society Dow AgroSciences Award for Excellence in Research and Excellence in Teaching. Dotray served on a number of local, state, and national boards President of the West Texas Agricultural Chemicals Institute, Board member of CAST and the American Peanut Research and Education Society, and currently serves as President-Elect of the Southern Weed Science Society of America.

Dunn, Barry

South Dakota State University

Dr. Barry H. Dunn, endowed Dean of the College of Agriculture and Biological Sciences and Director of SDSU Extension at South Dakota State University (SDSU), has a unique background which includes extensive experience in both production agriculture as an independent rancher/farmer as well as in academia. Dr. Dunn, an enrolled member of the Rosebud Sioux Tribe, has all three of his academic degrees from SDSU; a BS in Biology, and an MS and Ph.D. in Animal Science. He also successfully managed his family's cattle ranch on the Rosebud Indian Reservation in South Dakota for 17 years. The management of this large, diverse, operation included grassland management, cattle production, farming, irrigation, and marketing, as well as financial management. As dean, Dunn currently is responsible for the academics, research, and out-reach of the largest and fastest growing college at SDSU. As a faculty member at both SDSU and Texas A&M University-Kingsville (TAMUK), Dunn taught courses, conducted research, and provided outreach programs in the areas of range and pasture management, beef cattle production, ranch economics, and decision making impacting land use in the semi-arid environments. An author and co-author of papers and articles in a wide array of journals and proceedings, Dean Dunn has also made presentations to diverse audiences in over 30 states. Considered a national expert in ranching systems, he was the founding endowed executive director of the King Ranch Institute for Ranch Management at TAMUK. This unique, highly impactful, educational program that Dean Dunn developed is based on a systems approach to the sustainable management of our nation's rangelands. Dean Dunn has not conducted extramurally funded research in the last two years. He is a long-time member of both the American Society of Animal Science and the Society for Range Management. In 2014 he served on the governor of South Dakota's pheasant habitat advisory board.

Eaton, Touria

Lincoln University in Missouri

Dr. Touria E. Eaton is Assistant Professor of Horticulture at Cooperative Extension and Research at Lincoln University in Missouri, College of Agricultural and Natural Sciences. She holds a secondary appointment as State Extension Specialist of Horticulture. Dr. Eaton received a BS in Plant Sciences from the University Mohammed V in Morocco, MS and PhD in Plant and Soil Sciences from the University of Massachusetts, and completed post-doctoral training in Environmental Horticulture at the University of Massachusetts. Since 2010, she has served as officer of the board of directors at various environmental, community based organizations, and agricultural commissions, including Biochar Northeast Inc., Nuestras Raices, Inc., and the Agricultural Commission of the town of Amherst, Mass. Dr. Eaton has been continuously funded by the Risk Management Agency, for over a decade, to conduct Extension training programs to farmers on sustainable agricultural practices to limit crop losses and environmental contamination by nitrate and pesticides. She also runs a productive research laboratory engaging her students in studies of environmental risk factors of Horticulture, and the use of biochar as a soil amendment to reduce nitrate leaching and increase nitrogen use efficiency. Dr. Eaton has authored 23 peer-reviewed papers and book chapters. She teaches courses on Sustainable Horticulture and Organic Farming and Gardening, and has mentored 6 undergraduate students, and 2 PhD trainees. Dr. Eaton has served on a wide variety of editorial and review boards for scientific journals, government agencies, and academia, and regularly reviews manuscripts for the American Society of Horticultural Science and Scientia Agriculturae; and reviews grant proposals for the Beginner Farmer and Rancher Development Program and Sustainable Agriculture Research and Education.

Edstrom,Robert

Minnesota Department of Transportation

Dr. Robert Edstrom is the Minnesota Department of Transportation Chief Toxicologist. He holds a B.A. in Biology from St. Cloud State University, an M.S. in Environmental Chemistry from the College of William and Mary, and a Ph.D. in Chemical Oceanography from the School of Marine Science of the College of William and Mary. Dr. Edstrom specialized in the measurement of anthropogenic organic chemicals in environmental samples and evaluation of their fate, effects, and transport in the environment. As Chief Toxicologist, Dr. Edstrom's research interest areas support the Department through studying the fate, effects, and migration of organics and metals from products, beneficial reuse materials, and new processes associated with transportation infrastructure construction and maintenance activities. These material assessments include analysis of field monitoring data and using screening models to evaluate the environmental performance of chemical components in products and waste materials. Dr. Edstrom is currently a panel member of the Transportation Research Board, National Cooperative Highway Research Program (NCHRP) 20-83(7) panel for "Sustainable Transportation Systems and Sustainability as an Organizing Principle for Transportation Agencies". Dr. Edstrom has received no external research grants from either government agencies, private companies, or foundations.

Ellsworth,Peter

Univeristy of Arizona

Dr. Peter C. Ellsworth is Integrated Pest Management Specialist & Professor at the University of Arizona Department of Entomology and located at the Maricopa Agricultural Center, a 2100-acre laboratory, research and demonstration farm complex. He received degrees in entomology from the University of New Hampshire (BS), the University of Missouri (MS), and North Carolina State University (PhD). He founded and is Director of the Arizona Pest Management Center, a multi-disciplinary consortium of pest management scientists focused on research, outreach and implementation of IPM in Arizona, which in 2012 was awarded the US-EPA's PESP Gold Tier Shining Star award. He serves as State IPM Coordinator, State Pesticide Coordinator and Western IPM Center co-Director. He develops science-based IPM solutions through applied ecological investigations and organized outreach programs of Cooperative Extension with interests in the integration of chemical and biological controls, and landscape processes that govern pest and beneficial insect distributions with goals of reducing economic, environmental and human health risks. He received Pacific Branch and national Entomological Society of America recognitions for excellence in IPM and for distinguished achievement in Extension. He is currently funded by USDA's Agricultural Marketing Service (Specialty Crops Block Program) and National Institute of Food and Agriculture, Cotton Incorporated and the Monsanto Insect Knowledge Management Program. He has published over 200 research and outreach articles related to IPM and authored the successful US-EPA Section 18 Emergency Exemption that made two insect growth regulators available to Arizona cotton growers for whitefly control. Together with other IPM advances, the Arizona cotton industry has saved over \$451,000,000 (1996 – 2014) by practicing the IPM programs that Dr. Ellsworth helped to develop. In collaboration with others, he implemented innovative cross-commodity whitefly management programs that helped producers of cotton, melons and vegetables stabilize their IPM systems in Arizona.

Embertson,Nichole

Whatcom Conservation District

Dr. Nichole Embertson is a Nutrient Management and Air Quality Specialist with the Whatcom Conservation District and adjunct at Washington State University. She received her B.S. from Cal Poly, San Luis Obispo, M.S. from University of California at Davis, and Ph.D. from Colorado State University in Environmental Management of Livestock with a specialty in Air Quality. Dr. Embertson currently provides technical assistance on nutrient and environmental issues to farmers, agencies and industry professionals alike. She also conducts applied research focused on finding integrated solutions to nutrient management and resource conservation challenges. She is currently working on the development of an innovative manure application risk management system including a real-time manure advisory, decision support tool, and on-line nutrient management planning resources for producers. As of 2015, Dr. Embertson is also the Director of the new Discovery Farms Washington program which she championed to work with producers on discovering new and better land management practices for

protection of environmental resources. Her projects have been funded by the Environmental Protection Agency, Washington State Department of Agriculture, Washington State Conservation Commission, and the Natural Resource Conservation Service. Her vision, communication style and unique experience makes her very effective in developing useful programs and tools for producers, as well as providing science based input into state policy and programing. Dr. Embertson shares her knowledge and expertise through her participation on national science panels for USDA-Natural Resource Conservation Service and the USEPA, and in a leadership role for the Livestock and Poultry Environmental Learning Center. Her passion has also enrolled her in leading efforts on the WA Technical and Professional Development Workgroup to improve the professional capacity of Conservation District employees. She was awarded both the Northwest and Washington State Conservation District Employee of the year award in 2013 and the Washington State Dairy Federation President's Appreciation Award in 2014 for her outstanding work and partnership efforts.

Faulkner, William Brock

Texas A&M university

Dr. William Brock Faulkner is an Assistant Professor in the Department of Biological and Agricultural Engineering at Texas A&M University. He holds a BS in Agricultural Engineering and an MS and PhD in Biological and Agricultural Engineering from Texas A&M University. Dr. Faulkner's research activities have included characterization and abatement of particulate matter and gaseous emissions from multiple agricultural sources, including a variety of animal and crop production systems and agricultural processing operations, and development and assessment of post-harvest processing operations. Dr. Faulkner has extensive understanding of air pollutant emission, sampling, fate, and transport. He operates two wind tunnels for evaluating the performance of ambient aerosol samplers and has developed novel and well-accepted air pollutant abatement strategies for multiple agricultural sources throughout the US. His research has been funded by USDA, NIH, Cotton Incorporated, the Cotton Foundation, Southwest Agriculture, and Tisch Environmental. Dr. Faulkner's teaching responsibilities include courses on agricultural processing and safety. He has received multiple awards for research, service, and teaching, including the Outstanding Achievement Award for Early Career Research from the Texas A&M College of Agriculture and Life Sciences, the Holloway Professional Development Award from the American Society of Agricultural and Biological Engineers (ASABE), and a Colorado Environmental Leadership Program Bronze Award as part of a multidisciplinary team that developed an "Early Warning System" to reduce nitrogen deposition from agricultural sources in Rocky Mountain National Park. Dr. Faulkner has a national reputation as a leader in agricultural air quality, serving on both the USDA Agricultural Air Quality Task Force and the EPA Science Advisory Board Animal Feeding Operation Emission Review Panel. He also serves on the ASABE editorial board, chairs the Environmental Air Quality committee and Texas Section, and serves as past-chair for the Cotton Engineering committee.

Foley, Greg

Kansas Department of Agriculture

Mr. Greg Foley is Executive Director of the Division of Conservation in the Kansas Department of Agriculture. The Division of Conservation was created in 2012 by combining two state agencies into one to gain efficiencies; the State Conservation Commission into the Kansas Department of Agriculture. Prior to the consolidation, Greg was the Executive Director of the State Conservation Commission from 2004 through 2012. Greg also served Kansas as the Deputy Secretary of Agriculture from October 2000 through July of 2004. Greg served as Acting Secretary of Agriculture in January and February, 2003 and was re-appointed as Deputy Secretary by Governor Kathleen Sebelius in February, 2003. Executive Director Foley brings extensive experience in agriculture policy through implementation of voluntary and regulatory programs. He worked with the State Conservation Commission from 1989 to 1997 working with conservation districts developing the nonpoint source pollution control program and implementing multiple voluntary incentive based programs. Following that, Greg assumed duties implementing as the section chief of the livestock waste management program. Those duties involved administration of the regulatory Nation Pollutant Discharge Elimination Permits for confined livestock feeding facilities (CAFO's) with the Kansas Department of Health and Environment. A native of eastern Kansas, Greg was born and currently resides on a small family farm near Lawrence. He enjoys team roping, hunting, fishing, and training horses. Greg earned an undergraduate degree in agriculture with a focus on Agricultural Economics

and Animal Science from Kansas State University.

Genereux, David

N.C. State University

Dr. Genereux is a Professor in the Department of Marine, Earth, and Atmospheric Sciences at N.C. State University. He holds a bachelor's degree in geology and chemistry from the University of Delaware and graduate degrees (M.S. in civil engineering and Ph.D. in hydrology) from the Department of Civil and Environmental Engineering (CEE) at the Massachusetts Institute of Technology (MIT). After a post-doctoral appointment in CEE at MIT, Dr. Genereux began his faculty career at Florida International University (FIU) in Miami. At FIU he held joint appointments between the Department of Geology and two research centers: the Drinking Water Research Center (1992-1997) and the Southeast Environmental Research Center (1997-2000). Since 2000 Dr. Genereux has been on the faculty at N.C. State University, where he carries out research and teaches courses in hydrology. His research focuses on the interaction of groundwater and surface water, watershed hydrology, and chemical/isotope hydrology, including research on the movement of agricultural nutrients through groundwater systems and into streams and rivers. His work has been funded by the National Science Foundation, U.S. Department of Agriculture, U.S. Department of Energy, and other sources. His former graduate students hold positions in the Agricultural Research Service of the U.S. Department of Agriculture, the U.S. Geological Survey, and a variety of environmental and geoscience consulting firms in the private sector. From 2009-2014 he was Associate Director for Research in the Water Resources Research Institute of the University of North Carolina. He has been an associate editor for scientific journals (Water Resources Research and the Journal of Contaminant Hydrology), has served on grant program panels at the National Science Foundation, U.S. Environmental Protection Agency, and U.S. Department of Agriculture, and has served as both a member and chair of the Water Quality Technical Committee of the American Geophysical Union.

Germane, Matthew

Germane Environmental Consulting, LLC

Matthew Germane, PE is the principal at Germane Environmental Consulting, LLC. He holds a B.S. in Environmental Science Engineering from the University of Michigan. Matthew has expertise in agricultural, civil, and environmental engineering for permitted and non-permitted livestock producers and wastewater treatment for food processing businesses. Matthew has over 35 years professional experience as a licensed professional engineer providing environmental services to such firms as Smithfield, ConAgra, Campbell Soup Company, Wal-Mart, JBS, Ford Motor Company Agricultural Equipment division, and design and permitting services for many very large livestock producers (CAFOs) raising hogs, dairy, and beef animals throughout the Midwest. Livestock design services include facility layout, waste storage structures design, manure management and treatment, Comprehensive Nutrient Management Plans, odor control, anaerobic digesters, and geotechnical investigations.

Gray, Tommy

Georgia Department of Agriculture

Mr. Tommy Gray is Director of the Georgia Department of Agriculture's Plant Industry Division. Mr. Gray oversees three regulatory programs; the Agricultural Inputs Section, the Plant Protection Section, and the Structural Pest Control Section. These programs encompass a broad spectrum of agricultural activities including pesticide application and pesticide product registration; the registration of feed, seed, fertilizer and liming materials; the monitoring of live plants that are in intrastate and interstate commerce; and the regulation of commercial pest control companies. He is the primary contact for a Pesticide Performance Partnership Grant with the U.S. Environmental Protection Agency. He actively works with the department's legislative office on potential state law changes and has written state rules and regulations. Mr. Gray receives no funding for research purposes. Prior to becoming director, Mr. Gray was manager of the department's Pesticide Program. In that position, he oversaw the pesticide enforcement program, the commercial and private pesticide applicator certification program and the pesticide registration program. He was responsible for implementing the EPA's Worker Protection Standard. He is currently addressing how new herbicide tolerant cropping systems will be regulated in Georgia. As part of this process, he has regular discussions with research weed scientists, pesticide registrants and many of Georgia's commodity associations. Mr. Gray provides guidance to the department and the regulated community

on how Georgia's State Pollinator Protection Plan will be implemented. Additionally, he represents Georgia as a member of the Association of American Pesticide Control Officials and the Association of Structural Pest Control Regulatory Officials. He is currently serving as president of the Southern Association of Feed, Fertilizer and Pesticide Control Officials. Prior to his employment with the Department he held a position with a farm service organization where he worked directly with farmers in meeting their production needs. Mr. Gray received his Bachelor of Science Degree from the University of Georgia in Agriculture Economics.

Gunasekara,Amrith

California Department of Food and Agriculture

Dr. Amrith (Ami) Gunasekara is Science Advisor to the Secretary and Manager of Environmental Programs at the California Department of Food and Agriculture. He received his BS in Environmental Sciences, BA in Anthropology and MS in Plant and Soil Sciences from the University of Massachusetts, Amherst. Dr. Gunasekara received his Ph.D. from the University of California, Davis, in Agricultural and Environmental Chemistry. He is responsible for finding practical incentive-based solutions to numerous environmental issues at the interface of agriculture. Focused topics of study include nitrates from nitrogen fertilizers, mitigation of greenhouse gas emissions from agriculture, water efficiency in California agriculture, agricultural adaptation to climate change, environmental fate of pesticides, improved soil health to ensure food security and climate change resilience and ecosystem services in agriculture. He oversees several incentive based programs as Manager of the Office of Environmental Farming and Innovation at CDFA. The office is home to several incentive-based programs such as the State Water Efficiency and Enhancement Program and the California Dairy Digester Research and Development Programs and service-based programs such as the Office of Pesticide Consultation and Analysis. Dr. Gunasekara is liaison to the CDFA Environmental Farming Act Science Advisory Panel. The panel advises the Secretary on science related issues and is responsible for reviewing and documenting agriculture's positive impacts to the environment including defining ecosystem services in agriculture. Dr. Gunasekara has published numerous journal articles and co-edited a book on greenhouse gases from agriculture. He has made presentations and testified as a subject matter expert for the California Department of Food and Agriculture at all levels of state government. He is closely engaged with scientists in the University of California and other California academic institutions as well as works closely with numerous federal agency partners to identify practical solutions to agricultural issues in California.

Hardy,Margaret

The University of Queensland

Dr Margaret Hardy is a Senior Postdoctoral Research Fellow at The University of Queensland Institute for Molecular Bioscience in Australia, who is internationally recognized for her work in sustainable agriculture and insecticide toxicology. She is a research-focused academic who is an expert entomologist and agricultural chemist. Dr Hardy earned her MSc in Entomology from the University of Hawai'i, where her work focused on the toxicity of boron compounds in subterranean termites. Dr Hardy earned her PhD in Chemistry and Structural Biology from The University of Queensland, where her research program centers on the discovery of novel, environmentally friendly, orally active insecticides from the venom of native Australian spiders. Her research program has expanded to include insecticidal compounds from other natural sources, including essential oils. Dr Hardy has actively published at the intersection of insecticides and biological control; invasive species and the conservation of biodiversity; and, sustainability and insecticide discovery. She has received funding from The University of Queensland and UniQuest Pty Ltd, and has authored patents protecting her work. Dr Hardy is President-Elect for the International Branch of the Entomological Society of America, the world's largest professional organisation serving entomologists, and is on the organizing committee for the 2015 Australian Entomological Society Annual Meeting. Dr Hardy regularly reviews manuscripts for a variety of scientific journals. She is passionate about science engagement and equity in science. In 2013 she was selected as a member of the Australian Early- and Mid-Career Researchers Forum, an initiative of the Australian Academy of Science that is focused on science policy, and in 2014 she was named one of the Analytical Scientist's Top 40 Under 40.

Hay, Christopher

South Dakota State University

Dr. Christopher H. Hay is an Assistant Professor and Extension Water Management Engineer in the South Dakota State University Department of Agricultural and Biosystems Engineering. He received BS and MS degrees in Bioresource and Agricultural Engineering from Colorado State University and a PhD in Engineering with a specialization in Agricultural and Biological Systems Engineer. His research interests are in agricultural hydrology and water management. His current work is examining the impacts of subsurface drainage (tiling) on water quantity and quality. Research has been funded the South Dakota Corn Utilization Council, U.S. Department of Agriculture, Minnesota Corn Research and Promotion Council, and the Soybean and Research Promotion. He is currently the chairman of the Drainage Group of the American Society of Agricultural and Biological Engineers. He teaches an undergraduate course on Natural Resources Engineering and contributes to graduate courses on irrigation, groundwater, and subsurface drainage.

Helmets, Matt

Iowa State University

Dr. Matt Helmets is the Dean's Professor in the College of Agriculture and Life Sciences and a Professor in the Department of Agricultural and Biosystems Engineering at Iowa State University. Dr. Helmets holds a B.S. in civil engineering from Iowa State University, an M.S. in civil engineering from Virginia Tech and a Ph.D. in agricultural and Biosystems engineering from the University of Nebraska-Lincoln. He spent two years as an Eisenhower graduate research fellow at Virginia Tech, two years as a staff engineer for URS Greiner Woodward-Clyde of Santa Ana, CA and four years as a USDA National Needs Graduate Fellow at the University of Nebraska-Lincoln before joining the faculty at Iowa State University in 2003 with a research and extension appointment. Dr. Helmets studies the impacts of land, nutrient, and water management practices on water quality and water flow from agricultural lands. He has specific expertise in nutrient and water export from lands with subsurface drainage and the performance of buffer systems for mitigating sediment and nutrient export. Dr. Helmets was the Nitrogen Science team lead on the Iowa Nutrient Reduction Strategy: Nonpoint Source Nutrient Reduction Science Assessment. He is a member of The Fertilizer Institute 4R Research Fund Technical Advisory Group, the Cedar River Watershed Technical Team, the HUD Watershed Demonstration Pilot Project Advisory Committee, the 4-Mile Creek Watershed Technical Team, and the Agricultural Drainage Management Systems Task Force. He is the recipient of the ASABE Gunlogson Countryside Engineering Award in 2014 and a member of the team receiving the College of Agriculture and Life Sciences Dean's Citation for Extraordinary Contributions in 2013. Dr. Helmets has a diverse portfolio of recent funding sources which includes the USDA National Institute of Food and Agriculture, USDA Natural Resources Conservation Service, USDA Farm Services Agency, US EPA, Iowa Department of Agriculture and Land Stewardship, Iowa Department of Natural Resources, Iowa Corn Promotion Board, United Soybean Board, Iowa Soybean Association, McKnight Foundation, Walter Family Foundation, 4R Research Fund, and the Leopold Center for Sustainable Agriculture.

Hill, Jason

University of Minnesota

Dr. Jason Hill is Associate Professor in the Department of Bioproducts and Biosystems Engineering at the University of Minnesota. He received his A.B. from Harvard University and his Ph.D. from the University of Minnesota. His research focuses on improving the sustainability of our world's food, energy, and natural resource systems by examining them from a life cycle perspective. Much of his research lies at their intersection, where he explores the environmental and economic effects of the emerging bioeconomy. His current work includes estimating the air quality and climate change impacts of current and alternative agricultural practices, crop rotations, herbaceous and woody biomass production systems, dietary compositions, and transportation options. He currently teaches courses in life cycle assessment, food sustainability, and natural resources. His research is funded by the U.S. Department of Agriculture, the U.S. Department of Energy, and the State of Minnesota Renewable Energy Development Fund. His awards include University of Minnesota McKnight Land-Grant Professor for 2012–2014, Resident Fellow of the Institute on the Environment for 2009–2015, and Oliver Smithies Visiting Lecturer at Balliol College at the University of Oxford in 2014. Dr. Hill recently served on the National

Research Council's Committee on the Economic and Environmental Impacts of Increasing Biofuels Production and its Committee on Expanding Biofuel Production: Sustainability and the Transition to Advanced Biofuels. He currently serves on the U.S. Environmental Protection Agency Science Advisory Board's Biogenic Carbon Advisory Panel. Dr. Hill is on the editorial board of Environmental Research Letters.

Hodges,Donald

University of Tennessee

Dr. Donald G. Hodges is the James R. Cox Professor of Forest Resource Economics and Policy in the Department of Forestry, Wildlife and Fisheries and Director of the Natural Resource Policy Center at the University of Tennessee. He received a BS in forestry from the University of Tennessee and his MS and PhD degrees in forest economics and policy from the University of Georgia. He also completed post-doctoral training in forest economics and law with the U.S. Forest Service Southern Research Station in New Orleans, Louisiana. His research is focused on assessing management opportunities and markets for ecosystem services in the United States, Slovenia, and Thailand; forest industry and trade; and private landowner management behavior. Dr. Hodges has authored more than 100 peer-reviewed papers, books, and book chapters. He teaches undergraduate and graduate level courses in forest resource economics and management, econometrics, and international environmental issues, and has served as advisor to more than 45 MS, PhD, and post-doctoral trainees. His current research is funded by the U.S. Joint Fire Science Program, U.S. Forest Service, National Institute of Food and Agriculture, U.S. Geological Survey, University of Tennessee Water Resources Research Center, Slovenian Forestry Institute, and Slovenian Research Agency. He was a Fulbright Scholar for Slovenia in 2011, where he lectured and conducted research on forest ecosystem services. Dr. Hodges has served on a wide variety of editorial and review boards for scientific journals, government agencies, and academic institutions. He currently serves on the American Forest Foundation Forest-Climat Working Group Policy Incentives Committee and as Coordinator for the International Union of Forest Research Organizations Managerial Economics Working Party. He also currently serves on the editorial boards of four journals.

Hoffmann,Michael

Cornell University

Dr. Michael Hoffmann is currently the director of the Cornell University Agricultural Experiment Station and Associate Dean of Cornell's College of Agriculture and Life Sciences. As Director, he is responsible for the allocation of federal capacity funds as well as the College's multiple farms and plant growth facilities. His major interests include sustainability, climate change, and the fostering of professional development and leadership among faculty. Under his leadership the Agricultural Experiment Station has adopted a culture of sustainability focused on reducing costs and its carbon footprint. In 2013, he founded the Cornell Institute for Climate Change and Agriculture of which he will become the executive director, September 1, 2015. He recently co-chaired a Cornell working group charged to achieve carbon neutrality by 2035. From 2012-2013 he was Chair of the Experiment Station Committee on Policy and Organization during which time he initiated, and now chairs, a futuring initiative intended to help the Land Grant System stay apace with a rapidly changing world. Additional advisory/leadership roles include serving on the NE Sun Grant Initiative [biofuel] Executive Committee, NE Integrated Pest Management (IPM) Center Advisory Committee, New York Sea Grant Board of Governors, and liaison to the NY Farm Viability Institute. Prior to his current position he was associate director of Cornell Cooperative Extension and director of the New York State IPM Program. He is a professor of Entomology and maintains a research program focused on integrated pest management strategies. Funding for his research comes from the USDA NIFA Organic Research and Extension Initiative, federal capacity funds, and the Towards Sustainability Foundation. His publication record includes ca. 100 refereed journal articles, nine book chapters and many Extension and technical publications. He received his B.S. degree from the University Wisconsin, M.S. from the University of Arizona and Ph.D. from the University of California, Davis.

Isenhardt,Thomas

Iowa State University

Dr. Thomas Isenhardt is a professor in the Department of Natural Resource Ecology and Management at Iowa State University. He received his B.S. in Botany and Environmental Studies, and his MS and Ph.D. in Water Resources

from Iowa State University. His research focuses on watershed ecology and nutrient biogeochemistry within agricultural landscapes. He has examined methods to reduce nutrient and sediment export from watersheds; targeted use of conservation practices in improving water quality; methods for the assessment of stream corridors and watersheds to target practice implementation; and the impacts of land use change on soil quality, greenhouse gas emissions and carbon sequestration. His collaborative research on conservation buffers has received several national designations, including being named a National Restoration Demonstration Watershed by the United States Environmental Protection Agency and a National Riparian Buffer Research and Demonstration Area by the United States Department of Agriculture. He was the first Coordinator of the Iowa Conservation Reserve Enhancement Program which was awarded the Gulf Guardian Award by the United States Environmental Protection Agency's Gulf of Mexico Program. His was also a co-leader of interdisciplinary research team that was awarded the Cooperative Conservation Award by the White House Conference on Cooperative Conservation. His research is currently funded by the United States Department of Agriculture National Institute of Food and Agriculture, United States Department of Agriculture Hatch Multistate Research Funds, and the Iowa Nutrient Reduction Center. He was a co-chair of the Science Assessment Team for the Iowa Nutrient Reduction Strategy, a science and technology-based framework to assess and reduce nutrients to Iowa waters and the Gulf of Mexico. He serves on the Stream Aquatic Life Nutrient Criteria Technical Advisory Committee for the Iowa Department of Natural Resources and is the Iowa State Representative to the State Advisory Committee for the Iowa Water Center.

Johnson, Kristen

Washington State University

Dr. Kristen A. Johnson is a professor in the Department of Animal Sciences at Washington State University. She received her Ph.D. from Michigan State University. Her research focuses on sustainable livestock systems with emphasis on mitigating the environmental impact of livestock systems. She has developed innovative techniques to measure greenhouse and other trace gases from animal production systems including real time ammonia and enteric methane measurements. She and her colleagues developed the sulfur hexafluoride tracer technique that is used worldwide to develop CH₄ emissions inventories and to examine nutritional mitigation strategies. Current projects include the development of a smart system to measure trace gas emissions to allow producers to evaluate mitigation strategies and the development of management alternatives to minimize resource (land, water and energy) use by livestock. Her research has been funded by multiple sources; USDA AFRI and NIFA, NSF, EPA, BARD, USDA FAS, and private industry. She is actively engaged in science policy and training students to communicate effectively with the public and policy makers. She trains graduate students to work on interdisciplinary teams to solve complex problems through WSU's NSF IGERT, Nitrogen Systems: Policy Oriented Integrated Research and Education. Her teaching responsibilities include graduate and undergraduate courses in animal nutrition and production. She has won awards for teaching and advising including the R.M Wade Award for Excellence in Teaching (2003); Distinguished Teacher Award, Western Section -American Society of Animal Sciences (2013); Outstanding Graduate Advisor (2014); Outstanding Advisor (2015); and the Sahlin Award for Instruction (2015), WSU's highest teaching award. She has also served as Director of WSU's Center for Environmental Research Education and Outreach, Associate Dean of the Graduate School, as a member of the NRC Committee on Animal Nutrition, the editorial board of the Journal of Animal Sciences and as a reviewer for IPCC and many professional journals.

Kalin, Latif

Auburn University

Dr. Latif Kalin is a professor at Auburn University School of Forestry and Wildlife Sciences and the Acting Director of Center for Environmental Studies at the Urban-Rural Interface. He is also adjunct professor in Biosystems Engineering. Dr. Kalin has been at Auburn University since 2006 and teaches courses on forest hydrology, watershed management, and nonpoint source pollution modeling. He received his Ph.D. from Purdue University in Civil Engineering in 2002 and worked at U.S EPA as a post-doc from 2002 to 2006. His current research, in general, is on water quality/quantity modeling at various scales with special interest in nutrient cycling in natural and constructed wetlands, urbanization and climate change/variability impacts on water quality/quantity, non-point source pollution control. With a USEPA funded grant his group developed a wetland water quality

model for nitrogen, phosphorus, carbon and sediment cycles and is currently coupling it with a watershed model to study aggregate impacts of wetlands on water quality improvement and is currently expanding this work to riparian areas. Dr. Kalin has authored or co-authored 47 peer reviewed journal articles and 11 book chapters and has given invited talks in international conferences and chaired an international conference. He mentored several international visiting scientists, 3 post-docs, 2 PhD and 6 MS students over the past 9 years. Dr. Kalin served on the editorial board of Journal of the American Water Resources Association (JAWRA) from 2012 to 2015, and serves on the board of Journal of Water Quality, Exposure and Health (WQEH) since 2011. He is currently serving as the guest editor of a special issue in Journal of Hydrologic Engineering. Dr. Kalin was the chair of the Wetland Hydrology Technical Committee of the Environmental and Water Resources Institute (EWRI) from 2010 to 2013. Dr. Kalin received U.S. EPA Scientific and Technological Achievement Award in 2009 and 2012, and the Journal of Hydrologic engineering Best Reviewer Award in 2010 and 2011. Most recently he received the 2015 EWRI Outstanding Achievement Award. Dr. Kalin recently served on the Science Advisory Board of EPA to review the draft report on “Connectivity of Streams and Wetlands to Downstream Waters, and the Proposed Rule on “Definition of ‘Waters of the United States’ Under the Clean Water Act”. He is regularly invited to NSF and EPA grant panels. Dr. Kalin is also on the Mobile Bay National Estuary Program’s Science Advisory Board. Dr. Kalin’s research over the past two years has been funded by EPA, US Forest Service, Mississippi-Alabama Sea Grant, NOAA and Mobile Bay National Estuary Program.

Karthikeyan, K.G.

University of Wisconsin

Dr. Krishnapuram (KG) Karthikeyan is a Professor (Water Quality Engineering) in the Department of Biological Systems Engineering at University of Wisconsin, Madison, WI. He has affiliate faculty appointments in Civil & Environmental Engineering (CEE), Environmental Chemistry & Technology, and the Interdisciplinary Nelson Institute of Environmental Studies (all at UW-Madison) and CEE at Carnegie Mellon University, Pittsburgh, PA. His B.S. degree is in Agricultural Engineering (India), M.S. and Ph.D. in Agricultural & Biological Engineering from Penn State (University Park, PA). His research has focused on the development and assessment of management practices to minimize water quality impacts of agricultural/animal production activities (especially manure management) and of municipal waste water disposal. His primary contributions are in four independent but complementary categories: (i) environmental fate of nutrients/contaminants after land application of animal manure and biosolids, (ii) identification and quantification of sediment/nutrient source areas, (iii) development of innovative manure treatment technologies, and (iv) application of hydrological and geochemical models. Karthikeyan’s research has been continuously funded by a variety of sources: federal (U.S. Department of Agriculture, U.S. Geological Survey, U.S.-Israel Binational Agricultural Research & Development Fund, U.S. Environmental Protection Agency), state agencies (Groundwater Council, Fertilizer Council), international (Qatar Foundation), and industry. Karthikeyan has published 48 articles and received over \$5 million in competitive grants funding. He teaches courses on soil & water conservation, on-site wastewater treatment, watershed hydrology, and agricultural non-point source pollution. Karthikeyan has directly advised 24 graduate students (11 PhDs) and 7 post-doctoral researchers. He has served on editorial boards (Journal of Environmental Quality) and review committees for scientific journals, USDA grant review panels (4), academia (Divisional Executive Committee making tenure decisions, Departmental Review, College Research Advisory Committee, Faculty Senate), and professional societies (American Society of Agricultural and Biological Engineers). He spent 2.5 years as a Visiting Professor abroad (Carnegie Mellon-Qatar), which presented opportunities to work as a consultant for the Qatar Environment & Energy Research Institute and the Qatar National Food Security Program.

Kling, Catherine

Iowa State University

Dr. Catherine L. Kling is a Charles F. Curtis Distinguished Professor of Economics and Director of the Center for Agricultural and Rural Development at Iowa State University. She received a bachelor's degree in business and economics from the University of Iowa and a doctorate in economics from the University of Maryland. Dr. Kling’s research has contributed to the theory and practice of nonmarket valuation, the design of environmental programs to cost effectively achieve environmental improvement in water quality, air quality, greenhouse gas emissions, and other ecosystem services. She leads an interdisciplinary research group focusing on water quality

problems associated with agricultural sources of nutrients and has studied cost effective approaches for achieving reductions in the annually recurring size of the hypoxic zone in the Gulf of Mexico. Her research has been funded by the National Science Foundation, the U.S. Department of Agriculture, the Iowa Department of Natural Resources, and the U.S. Environmental Protection Agency. Dr. Kling's engagement in the policy process includes over ten years of service as a member of EPA's Science Advisory Board, membership on the Water Science and Technology Board of the National Research Council and a member of five National Research Council studies. She served as president of the Association of Environmental and Resource Economists, has held editorial positions at ten economics journals, and has received seven awards from professional associations for her research including the Bruce Gardner Memorial Prize for Applied Policy Analysis by the Agricultural and Applied Economics Association. She is a Fellow of the Association of Environmental and Resources Economists, the Agricultural & Applied Economics Association, a University Fellow at Resources for the Future, and was elected to the National Academy of Sciences in 2015.

Kniss, Andrew

University of Wyoming

Dr. Andrew Kniss is an Associate Professor of Weed Ecology & Management at the University of Wyoming. He holds a B.S. in Agroecology from the University of Wyoming, M.S. in Agronomy from the University of Nebraska, and a PhD in Agronomy with a minor in Statistics from the University of Wyoming. Dr. Kniss grew up on a small irrigated farm in Nebraska. Dr. Kniss teaches courses including Ecology of Plant Protection, Applied Dose Response Analysis, and Weed Science & Technology. Dr. Kniss's research focuses on developing sustainable weed management programs in agronomic crops. His research ranges from basic aspects of crop-weed interactions to applied weed management. Dr. Kniss has published 29 peer-reviewed articles and 2 book chapters. Funding for Dr. Kniss's research and educational activities comes from a variety of sources, including competitive grants from the United States Department of Agriculture, Wyoming Agricultural Experiment Station, and Wyoming Department of Agriculture. He also receives funding from industry sources such as Western Sugar Cooperative, Monsanto, Syngenta, and DuPont. Dr. Kniss currently serves as elected Member at Large on the Board of Directors of the Weed Science Society of America, as well as Herbicide Resistant Plants and Strategic Planning committees within that society. He previously served on the board of the Western Society of Weed Science as Research Section Chair. Other advisory roles have included: Board of Directors for the North Central Weed Science Society (Wyoming State Director); Board of Directors for the Rocky Mountain Certified Crop Adviser program; University of Wyoming Research Advisory Committee; and the University of Wyoming Sustainable Agriculture Research & Extension Center Advisory Committee. Dr. Kniss has received the Early Career Outstanding Weed Scientist award from the Western Society of Weed Science (2013) and the Lawrence Meeboer Agricultural Classroom Teaching Award from the University of Wyoming (2013).

Leonard, B. Rogers

LSU AgCenter Administration

Dr. B. Rogers Leonard is the Louisiana State University Agricultural Center's Associate Vice President for plant, soil, and agricultural water research and extension programs. In this position, he has oversight for scientists working in the disciplines of agricultural chemistry, agronomy, horticulture, environmental sciences, crop protection, agricultural economics, and renewable and natural resources. He interfaces with State, regional, and National plant commodity organizations; agricultural and environmental resource agencies; and USDA programs. Dr. Leonard also holds an appointment as Professor in the Department of Entomology and continues to work with students. He received a BS in Agronomy, MS in Entomology, and PhD in Entomology from Louisiana State University. Dr. Leonard maintained multidisciplinary research and extension programs at Research Centers and also in the Department of Entomology for nearly 25 years. His focus areas included sustainable crop production and integrated pest management strategies. He also worked in the areas of pesticide toxicology, arthropod resistance management, pesticide safety, and agricultural biotechnology. During the past two years, Dr. Leonard has operated predominately in an administrative capacity with oversight for Federal (USDA-NIFA) and State-funded projects and he has not received any external funding for his research efforts. Dr. Leonard has served on editorial boards or as reviewer for a variety of scientific journals and on grant review boards for public and private agencies. He has authored or co-authored over 960 scientific, technical and outreach articles and mentored 62

graduate students during his career. In 2006, he was named to the Jack Hamilton Regents Chair in Cotton Production. Dr. Leonard has served the Entomological Society of America at both regional and national levels and represented the Plant Insect-Ecosystems (P-IE) Section as President in 2012.

Li,Lingjuan

North Carolina State University

Dr. Lingjuan Wang Li is an Associate Professor in the Department of Biological and Agricultural Engineering at North Carolina State University. She earned a M.S. and a Ph.D. from Texas A&M University in Biological and Agricultural Engineering, and a B.S. in Cotton Engineering in China. She specializes in air quality and animal housing environmental engineering. Much of her research addresses emissions, fate and transport of air emissions from animal feeding operations (AFOs). Dr. Li has authored 41 peer-reviewed papers/ book chapter, and 78 conference papers. Her research is currently funded by the National Science Foundation (NSF), U. S. Department of Agriculture (USDA), and Animal Production Industry. Dr. Li's teaching responsibilities include undergraduate and graduate courses in animal housing environmental control / management and air quality engineering. She was selected to serve on the USDA Agricultural Air Quality Task Force (AAQTF) from 2003-2015; she was a recipient of a 2010 National Science Foundation Career Award in Environmental Engineering. Dr. Li is a member of Association of Environmental Engineering & Science Professors (AEESP); American Society of Agricultural & Biological Engineers (ASABE), Air & Waste Management Association (AWMA), International Commission of Agricultural and Biosystem Engineering (CIGR). She has served on the editorial boards of several agriculture engineering Journals and is currently division editor of International Journal of Agricultural and Biological Engineering (IJAB) and associate editor of the transaction of the ASABE. She has also served on review panels for the USEPA and NSF. She was the President (2009-2010) of Association of Overseas Chinese Agricultural, Biological and Food Engineers (AOCABFE); Chair (2007-2008) of S1025 USDA Multi-State Air Quality Research Committee: "Systems for Controlling Air Pollutant Emissions and Indoor Environments of Poultry, Swine, and Dairy Facilities".

Lloyd,Sarah

Wisconsin Farmers Union

Dr. Sarah E. Lloyd farms with her husband Nels Nelson and his family on the 400-cow Nelson dairy farm outside of Wisconsin Dells, WI. Sarah works off-farm as the Special Projects Coordinator for the Wisconsin Farmers Union (WFU). In this position she helps organize the Midwest CSA Conference and also WFU's solar initiatives. In addition she is the Director of Development of the Wisconsin Food Hub Cooperative (WFHC), a farmer-led co-op owned by the farmers and the Wisconsin Farmers Union. Sarah is the Secretary of the co-op Board, and helped facilitate the incorporation and 2013 business launch of the co-op. The WFHC has 35 farmer members and ships Wisconsin produce into local and regional wholesale markets. Dr. Lloyd has a PhD in Rural Sociology from the University of Wisconsin-Madison and teaches the Rural Social and Economic Issues course in the UW Farm Industry Short Course, covering social, economic, and ecological issues of agriculture. Her dissertation and doctoral research examined structures and framings of agricultural sustainability in rural community. Sarah has a Masters in Rural Development from the Swedish University of Agricultural Sciences and a BA in Environmental Studies from Brown University. She has not received research funding in the last two years. Dr. Lloyd is a member of the governing Council of the Rural Sociological Society. She is a member of the Advisory Board for the University of Wisconsin-Stevens Point College of Natural Resources and the Citizens Advisory Committee for the University of Wisconsin-Madison Center for Integrated Agricultural Systems. She represents the dairy farmers of Wisconsin on the National Dairy Board and served 6 years in an elected position on the Wisconsin Milk Marketing Board. Sarah Lloyd also serves as Treasurer of Board of the Wormfarm Institute, a Reedsburg, WI organization that works at the intersection of culture and agriculture, featured in the annual Fermentation Fest and Farm/Art Dtour.

Mallory-Smith, Carol

Oregon State University

Dr. Carol Mallory-Smith is a Professor of Weed Science at Oregon State University in the Department of Crop and Soil Science with responsibilities for teaching and research in agronomic crops. She received a BS in Plant Protection and a PhD in Plant Science from the University of Idaho. Mallory-Smith's main areas of research are gene flow and hybridization between crops and weeds, including both genetically engineered and conventionally bred, herbicide resistance, weed management in agronomic crops, and weed biology. Her research has been funded by public funding agencies including USDA, the Oregon State Legislature, and private industry including commodity commissions and agrochemical companies. She has coauthored more than 100 journal articles. Mallory-Smith visited Australia and Korea as an invited expert on gene flow and other weed issues. She also has been an invited speaker in Australia, France, Korea and Thailand to address the potential risk of introducing genetically engineered crops. She is serving on the National Research Council Committee on the "Science Based Look at Genetically Engineered Crops". She is a Fellow of the Western Society of Weed Science and the Weed Science Society of America, served as President and Treasurer of the Weed Science Society of America and Secretary-Treasurer for the International Weed Science Society. She received the Alumni Achievement Award from the University of Idaho's College of Agriculture in 2007, the Excellence in Graduate Mentoring Award from Oregon State University and the Western Society of Weed Science Outstanding Weed Scientist in 2009, Oregon Department of Agriculture Award for Individual Contribution to the Agricultural Industry in 2014, and the Western Society of Weed Science Presidential Award of Merit in 2015.

Marshall, Kellen

UIC-Chicago

Kellen Marshall is currently a doctoral candidate in Ecology and Evolutionary Biology at the University of Illinois at Chicago where she studies relationships between urban ambient environments and the productivity and nutrient quality of agricultural crops in cities utilizing stable isotopes. She received her bachelors from Chicago State University in Environmental Biology with dual minors in geography and chemistry. Her work is extremely interdisciplinary and merges the fields of urban ecology and environmental justice as it pertains to sustainable cities, food systems and climate change. Recent funding sources have come from Global Midwest Grant Humanities Without Walls Consortium for studying the socio-ecological issues around water in Chicago and the Great Lakes as a whole with an interest in agricultural use of urban water. She currently also serve as a policy liaison for a section within Ecological Society of America and am an active board member of Sacred Keepers Sustainability Lab and the Educational Council for the DuSable Museum. Previously she has sat upon the board of Blacks In Green, and served on the Environmental Justice Advisory Council for the Illinois Environmental Protection Agency as well as a former working group member of Vital Lands Illinois. She is also a founding member of Chicago's first environmental conference for communities of color the Urban Resolutions for Bridging African Americans to Natural Environments (URBAANE) and previous director of research at Eden Place Nature Center in Chicago, Illinois.

Matlock, Marty

University of Arkansas

Dr. Marty Matlock is Executive Director of the University of Arkansas Office for Sustainability and Professor of Ecological Engineering in the Biological and Agricultural Engineering Department. He received his Ph.D. in Biosystems Engineering from Oklahoma State University, is a registered professional engineer, a Board Certified Environmental Engineer, and a Certified Ecosystem Designer. Dr. Matlock has co-authored three books and more than 50 peer-reviewed manuscripts. The focus of Dr. Matlock's research is development of technologies and processes to increase the resilience and effectiveness of human-dominated ecosystems. He works in urban, agricultural, and rural systems to solve complex problems associated with land use, water quality, and ecosystem services. He works with ecologists, engineers, architects, social and political scientists, agricultural scientists, economists, and business leaders to create new understanding and framing of vexing ecosystem challenges. His interdisciplinary work has been recognized by the leading organizations in architecture, landscape architecture, and sustainable design with over 25 national and international awards. He coordinates academic, research,

outreach, and facilities efforts in sustainable systems across the University of Arkansas campus. He has led numerous agricultural sustainability initiatives, from local to international in scope. He serves on the US Secretary of Agriculture's Committee for the 21st Century, Chairman of the Cherokee Nation Environmental Protection Commission, the Arkansas-Oklahoma Governor's Commission for the Illinois River, and as sustainability science advisor for 12 food and agricultural product companies.

McConnell, Laura

Bayer CropScience

Dr. Laura L. McConnell is Senior Scientist and Environmental Fate Coordinator in the Environmental Safety Department of Bayer CropScience. She provides environmental chemistry expertise and interacts with scientists in the environmental fate laboratory, modelling group, ecotoxicology, and regulatory groups in the development of Bayer Crop Protection products. She also has a Senior Research Scientist appointment in the Department of Civil and Environmental Engineering at the University of Maryland College Park. She received a BS in chemistry from the College of Charleston and Ph.D. in chemistry from the University of South Carolina. From 1992 to 2013, she was a research chemist in the United States Department of Agriculture – Agricultural Research Service where she specialized in the investigation of the chemical and physical processes controlling the environmental fate of agriculturally-relevant pollutants. A primary focus of her research was the development of improved conservation practices to mitigate pollutant transport and to provide ecosystem services; innovative approaches to assess and reduce the bioavailability of pollutants in soil and water; development of sustainable farming systems to address challenges at the agriculture-urban interface. She has authored more than 90 peer-reviewed journal articles, served as principal investigator or co-principal investigator on \$3.9 million in outside research funding (no funding since 2013); and mentored 10 graduate students and 3 post-doctoral/visiting scientists. She has served on science-related advisory panels for the US EPA and the European Food Safety Authority, and she is a member of the American Chemical Society, Committee for Environmental Improvement. Dr. McConnell is the current President of the Chemistry and the Environment Division of the International Union of Pure and Applied Chemistry. She has received awards for her research including the Presidential Early Career Award for Scientists and Engineers, and she was recently selected as a Fellow of the American Chemical Society.

Meyer, Deanne

University of California - Davis

Dr. Deanne Meyer is the Livestock Waste Management Specialist and a research scientist for the University of California, Davis (UCD) and is the Environmental Stewardship Module coordinator for the California Dairy Quality Assurance Program. She received an Animal Science BS (UCD), Dairy Science MS and Animal Science PhD (University of Florida). Dr. Meyer's research analyzes production, collection, storage, transportation, and utilization of manure management waste stream(s) on livestock facilities, emphasis dairies, addressing: nutrient flows into, through and out of operations including, content of manure solids and liquids, water use, analyses of treatment technologies, nutrient distribution during land applications, and ammonia volatilization and PM10 emissions. She has been continuously funded by the California Dairy Research Foundation for 17 years and has received funding from California and United States Departments of Agriculture. Dr. Meyer worked with colleagues to reformat Table D384.1 Manure Characteristics Standard for the American Society of Agricultural and Biological Engineers. These landmark modifications (2005) more precisely estimate manure and nutrient excretion based on biological input (dietary parameters). This was the first major revision to the Table D384.1 since its inception. She works directly with staff from six Regional Water Quality Control Boards, San Joaquin Air Pollution Control District, as well as State and Federal Environmental Protection Agencies to provide scientific information during policy development. She serves on or provides input to numerous policy committees in California/United States related to Short Lived Climate Pollutants, development of mitigation measures (San Joaquin Air District; Particulate Matter and Volatile Organic Compounds), Central Valley Regional Water Quality Control Board (nitrate and salt management; use of pharmaceuticals), and California Air Resources Board. She currently serves on US EPA Scientific Advisory Board Animal Feeding Operation Emissions Panel and maintains an active outreach program to educate dairy operators and professionals in water and air regulatory compliance requirements.

Miller, Glenn C.

University of Nevada

Glenn C. Miller is a Professor of Natural Resources and Environmental Science at the University of Nevada, Reno. He has a B.S. in Chemistry from the University of California, Santa Barbara and a Ph.D. in Agricultural and Environmental Chemistry from the University of California at Davis. Following graduate studies, he spent a year of postdoctoral study at the EPA's Environmental Research Laboratory in Athens, Georgia and has been at UNR since 1978. Between 2008-2009 he took a leave of absence and worked for a year at Valent, USA, an agrochemicals subsidiary of Sumitomo, and was the Manager of the Environmental Exposure Assessment group. He was the Director of the Graduate Program in Environmental Sciences and Health at UNR for 8 years, until 2005, and then from 2010 to 2014. Current areas of research include the fate of agricultural chemicals in the environment, arid lands biofuels and acid mine remediation using anaerobic sulfate reducing systems. He also has emerging interests in hydraulic fracturing and the effect of methane leakage on the chemistry and microbiology of drinking water aquifers. He is presently funded by the USDA NIFA program on arid lands biofuels, and also has funded research on composting of biosolids and a policy related project on reducing conflict in the mining industry. He has authored or co-authored over 90 research articles, and has served on national and regional advisory committees for the U.S. Environmental Protection Agency, the National Research Council and a variety of ad hoc committees related to the environment. He also serves on the board of directors for several non-governmental organizations interested in supplying technical support for communities on environmental issues, particularly hard rock mining. He teaches undergraduate and graduate courses in environmental toxicology, risk assessment and environmental chemistry.

Miller, Joseph

Rose Acre Farms

Joseph A. Miller is General Counsel of Rose Acre Farms, Inc., a family owned and operated egg producing company with farms in six states and headquarters in Seymour, Indiana. Mr. Miller grew up on a diversified dairy and crop farm in Indiana. He obtained a B.S. degree in Agronomy with emphasis in animal science from Brigham Young University. He obtained an M.S. degree from the University of California, Davis in International Agricultural Development with emphasis on crop production and agricultural economics. He then obtained a Juris Doctorate degree from the University of Arkansas, Little Rock. Before becoming General Counsel he was the Executive Director of the North American Meat Processors Association, Senior Director of Regulatory Relations and Livestock Policy Specialist for the American Farm Bureau and Director of Agricultural Development/Natural Resources for the Indiana Farm Bureau as well as an Area Extension Specialist for the University of Missouri Extension Service. Mr. Miller was appointed to the Governor's Task Force on Ethanol and also on the Governor's Task Force on Livestock Management. He has served on the Board of Directors for the National Institute for Animal Agriculture and the Purdue University Animal Disease Diagnostic & Disease Lab and the Indiana State Chemist Advisory Committee. Additionally he was legal advisor to the Indiana Grain Indemnity Fund as well as personal legal advisor to the Indiana Commissioner of Agriculture. With a background in agronomy, animal science, agricultural economics and law Mr. Miller's expertise is with environmental laws and regulations as they apply to agriculture, both crops and livestock. Mr. Miller is a member of the American Agricultural Law Association, American Bar Association, Indiana Bar, Missouri Bar and the Washington, D.C. bar.

Mitloehner, Frank

University of California

Dr. Frank Mitloehner is a Professor and Air Quality Specialist in Cooperative Extension in the Department of Animal Science at the University of California, Davis. He received his MS degree in Animal Science and Agricultural Engineering from the University of Leipzig, Germany, and his PhD degree in Animal Science from Texas Technical University. Dr. Mitloehner is an expert for agricultural air quality, livestock housing and husbandry, and agricultural engineering. Overall, he conducts research that is directly relevant to understanding and mitigating of air emissions from livestock operations, as well as the implications of these emissions for the health and safety of farm workers and neighboring communities. The bulk of Dr. Mitloehner's research centers around the quantity, source, fate and biochemical nature of air emissions (e.g., ammonia, volatile organic

compounds, hydrogen sulfide, and greenhouse gases) emanating from concentrated animal feeding operations. A second area of Dr. Mitloehner's research emphasis is on the health and safety of workers exposed to livestock facility-generated air pollutants, work providing critical information for setting regulatory limits for exposures and for developing effective mitigation strategies. Since appointment at UC Davis in 2002, he published 85 refereed journal articles in a wide range of high-quality environmental, engineering, applied science journals. Over the past two years, he secured and/or maintained as principal investigator active research grants totaling \$5 million, including funding from the California Energy Commission, Center for Food Integrity, California Air Resources Board, and Ely Lilly – ELANCO." Dr. Mitloehner has served as chairman of a global United Nations Food and Agriculture Organization (FAO) partnership project to benchmark the environmental footprint of livestock production. He served as workgroup member on the President's Council of Advisors on Science and Technology (PCAST) and as member on the National Academies of Science Institute of Medicine (IOM) committee on "A Framework for Assessing the Health, Environmental, and Social Effects of the Food System".

Neher, Deborah

University of Vermont

Dr. Deborah A. Neher is Professor of Soil Ecology and Head of Plant and Soil Science at University of Vermont. Previously, she held faculty positions in biology and environmental science at University of Toledo, and plant pathology at North Carolina State University. She earned a BS in environmental science at McPherson College, MS in plant biology at University of Illinois-Urbana and PhD in plant pathology at University of California-Davis. Dr. Neher's primary research interest is developing biological indicators for environmental monitoring of agricultural, forest, and wetland soils. Her expertise is sampling design and quantitative approaches to link community composition with ecosystem function. Over the past two decades, her research has been funded by the US Department of Agriculture, National Science Foundation, Department of Energy, and US Environmental Protection Agency. Dr. Neher has authored 94 peer-reviewed papers and book chapters, and mentored 18 MS, PhD and Postdoctoral trainees. She has taught graduate and undergraduate level courses in soil ecology, applied biostatistics, general ecology, general biology, and plant biology. She was a member of the Agricultural Lands group of the Environmental Monitoring and Assessment Program, and Farmlands Work Group for the State of the Nation's Ecosystem reports coordinated by the H. John Heinz III Center for Science, Economics and the Environment. Within the past five year, Dr. Neher has been an ad-hoc reviewer for 37 peer-reviewed journals, member of grant panels for U.S. Department of Agriculture, National Science Foundation, and Department of Energy. She was the 2010 recipient of the HW Vogelmann Award for Excellence in Research and Scholarship at University of Vermont, and the Ecological Society of America recently established the Deborah A. Neher Career Award in Soil Ecology recognizing her as the founding chair of the Soil Ecology section.

Nguyen, Quang

Abengoa

Mr. Nguyen is Scientist General Manager at Abengoa. He received his B.A.Sc., M.A.Sc. (Chemical Engineering) and M.B.A. from the University of Ottawa, Canada. He is a professional engineer registered in Colorado and Ontario. He has over 35 years of experience in research and development in biomass conversion to biofuels, chemicals and feed. His research was partly funded by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy. He designed and commissioned four pilot plants, one commercial demonstration plant, and one commercial plant for the conversion of lignocellulosic biomass to ethanol. Mr. Nguyen authored and co-authored over 25 distinctive patents and patent applications, one book chapter, over 50 papers, reports and presentations all related to biomass conversion to fuels, chemicals, food and feed. He has participated in many workshops on biomass feedstock logistics sponsored by the U.S. Department of Energy's Bioenergy Technology Office. He has served as advisor and reviewer for many biomass conversion research projects carried out by several universities.

Niles, Meredith

University of Vermont

Dr. Meredith T. Niles is an Assistant Professor of Food Policy in the Department of Nutrition and Food Sciences with affiliation in the Food Systems Initiative at the University of Vermont. She holds a B.A. in political science

with honors in environmental studies from The Catholic University of America and a PhD in Ecology from the University of California, Davis. She was a Giorgio Ruffolo Post-doctoral Research Fellow in Sustainability Science at Harvard University. Dr. Niles is a multidisciplinary scientist with research expertise on farmer perceptions of environmental issues and policies, farmer adoption of practices with environmental benefits (climate adaptation and mitigation, energy efficiency, water use efficiency, and biodiversity), and agricultural knowledge networks. Dr. Niles has received funding support from the National Science Foundation (NSF), Harvard University, and the Switzer Foundation. She has received multiple prestigious fellowships including a NSF Graduate Research Fellowship, a NSF Interdisciplinary Graduate Education and Research Traineeship, and a Switzer Foundation Fellowship for Environmental Leadership. Dr. Niles has served on several non-profit and academic boards and workgroups including currently on the Board of Directors for the Public Library of Science (PLOS), an academic, open-access non-profit publisher. She previously served as the Director of Legislative Affairs on the Board of Directors for the National Association of Graduate-Professional Students (NAGPS), on the External Board for the UC Davis Agricultural Sustainability Institute, and on the Nitrogen Management Project Protocol Workgroup with the Climate Action Reserve. She received the 2014 Next Generation Leadership Award from the Right to Research Coalition, 2013 Board Member of the Year from NAGPS, and the 2010 Emerging Public Policy Leadership Award from the American Institute of Biological Sciences. Dr. Niles has a diverse professional background previously working for the US State Department, environmental non-profit organizations, and consulting experience with environmental organizations, agricultural and farmer organizations.

Oerther, Daniel

Missouri University of Science and Technology

Dr. Daniel Oerther is the Mathes Chair of Environmental Health Engineering at the Missouri University of Science and Technology. A licensed Professional Engineer, he is Board Certified in Environmental Engineering. He is the author of more than 300 scientific publications. His scholarship includes environmental biotechnologies to quantify microbes in sewage treatment, watershed protection, and health settings. Dr. Oerther employs social entrepreneurship using information technologies to improve citizen-science and promote global development as part of the United Nations Sustainable Development Goals post 2015. He has developed award-winning graduate and practitioner educational materials in environmental biotechnology, and he leads university wide development of sustainability curricula and experiential student learning. The quality of his work has been recognized by the National Science Foundation (through the CAREER award), the Department of State (through three Fulbright fellowships, and the Jefferson Science Fellowship), the American Academy of Environmental Engineers and Scientists (through the Excellence in Environmental Engineering University Research Honor Award, and the Excellence in Environmental Engineering Educator Award), and Sigma Theta Tau the International Honor Society of Nursing (through induction as a lifetime honorary member, and appointment to the Presidential Task Force on the UN). He has won teaching awards from the Association of Environmental Engineering and Science Professors, the American Society for Engineering Education, and the National Academy of Engineering. Dr. Oerther received his B.A. in Biochemistry and his B.S. in Environmental Engineering, both from Northwestern University. His M.S. And Ph.D. degrees in Environmental Engineering were awarded from the University of Illinois, Urbana. He has completed graduate training in microbial ecology (at the Marine Biology Laboratory), public health (at The Johns Hopkins University), and public administration (at Indiana University, Bloomington). He has held tenured faculty appointments at the University of Cincinnati and the Missouri S&T, and visiting faculty appointments at the Indian Institute of Science, Manipal University, and Sardar Patel University (all within India); as well as at the Federal University of Western Para (in Brazil). Dr. Oerther's research is supported by the EPA (for tracking infectious and emerging microbes), the National Science Foundation (for development of bio detection in sewage treatment), the US Geological Survey (for environmental monitoring of watersheds), and the National Institutes of Health (for new techniques to identify viable micro organisms). His research in social entrepreneurship and development has been funded through public-private partnerships including domestic and international governmental and non-governmental organizations.

Orlov, Alexander

Stony Brook University

Dr. Alexander Orlov is an Associate Professor of Materials Science and Engineering at State University of New York, Stony Brook, USA. He is also a faculty member of the Consortium for Interdisciplinary Environmental Research, Chemistry Department and the Institute for Advanced Computational Science. In addition Dr. Orlov is the European Research Council (EU) and National Science Foundation (US) funded Visiting Professor of Chemistry at the University of Cambridge. Dr. Orlov has already a substantial experience on providing advice to policy makers on environmental and agricultural matters. From 2007 till 2014 Dr. Orlov held the UK Secretary of State appointment at the UK Department of Environmental Food and Rural Affairs (under 2 consecutive UK Governments) to advice the Government on such issues as hazardous substances, sustainability, environmental health and environmental impact of nanotechnology. Several of his current projects are focused on development of sustainable packaging from agricultural waste and forest products, conversion of agricultural waste to biofuels, and development of soil additives. For the previous 2 years Dr. Orlov's research was supported by the National Science Foundation (NSF), the State of New York and the US Department of Transportation (via Regional Center). He was awarded the National Science Foundation CAREER Award, National Endowment for Science Technology and Arts CRUCIBLE award (UK), Fellowship of the Royal Society of Chemistry (UK), the National Academy of Engineering (US) Frontiers of Engineering award and the National Academy of Sciences Kavli Fellowship. Dr. Orlov has 5 degrees from various European and the US institutions, including: Doctoral and Master's degrees in Physical and Environmental Chemistry from the University of Cambridge (UK) and Master's degree in Environmental Engineering from the University of Michigan (US). He also holds Diploma in Economics from the London School of Economics. Among his current activities Dr. Orlov is contributing to work of the United Nations Environmental Program (Lead Author for the GEO report and reviewer of various UN reports). He also chairs the American Institute of Chemical Engineering Committee on Research and New Technologies, and participates in the Executive Committee of the American Chemical Society Environmental Division.

Osmond, Deanna

NC State University

Dr. Deanna Osmond is Professor and Extension Leader in the Department of Soil Science at North Carolina State University, Raleigh, NC. She received a BS in agronomy and anthropology from Kansas State University, a MS in soil science from NC State University, and a PhD in crop, soil, and atmospheric sciences from Cornell University. Since 1991, Dr. Osmond has worked at the interface of nutrient management, conservation practice adoption, and water quality, first with the Water Quality Group and then in the Soils Department, both at NC State University. She has mentored over 20 graduate students and produced over 65 refereed journal proceedings. Dr. Osmond's funding is diverse, ranging from the United States Department of Agriculture (USDA)-National Institute of Food and Agriculture, USDA-Natural Resources Conservation Service, Environmental Defense Fund, Koch Industries, Small Grain Association of North Carolina, and Soybean Growers Association of North Carolina. Dr. Osmond has received numerous federal, state, and professional awards, and is a Fellow of both the American Society of Agronomy and the Soil Science Society of America. She has served on review panels for the U.S. Department of Agriculture and has been invited to several national-level EPA water quality meetings. She currently serves as chair of multiple state-level agricultural committees that focus on the intersection of water quality and agriculture and was also appointed to serve on the nutrient criteria panel for the state of North Carolina. She has served as either chair or president of several professional organizations, including the Southern Extension and Research Activity (SERA)-17, American Society of Agronomy, and Soil Science Society of North Carolina.

Patrick, Pamela

Patrick Family Veterinary Clinic

Pam Patrick presently manages her 600 acres of farmland, a veterinary clinic, a public use airport that she built, and operates an equine rescue. Pam attended Purdue University as a science major and worked in immunological research for Dr. Edward Golub. Pam's name was included when Dr. Golub published his research. Pam then attended DePauw University receiving a Bachelor of liberal arts in medical technology. She also participated in a 2 year study with Indiana Agricultural Leadership. Pam served a 12 month internship at Methodist Hospital. She

was interviewed for & published in 2 books; one on the study of women in agriculture concentrating on female farmers that farmed with heavy equipment, the second published by the Women's Ambassador of Agriculture from Malaysia. Pam was appointed by Indiana Governor O'Bannon to the state pesticide and herbicide board. Mrs. Patrick was president of Morgan County Farm Bureau for 8 years. She currently serves as a board member for the Indiana Farmers Union. Pam belongs to the following list of organizations: Indiana Farm Bureau, Indiana Farmers Union, Indiana Horse Council, Indiana Veterinary Medical Association Auxiliary, American Society of Clinical Pathologists, Mounted Civil War Re-enactors, Aircraft Owners & Pilot's Association, & the Indiana Agricultural Leadership. Her expertise is in agriculture and veterinary medicine. Pam believes that her education and life experiences in Agriculture will add to this advisory board. She is a 7th generation family farmer and greatly appreciates this opportunity.

Pepper, Ian

University of Arizona

Dr. Ian L. Pepper is Professor of Environmental Microbiology and Co-Director of the new Water & Energy Sustainable Technology Center (WEST), both at the University of Arizona. He received a BSc in Chemistry from the University of Birmingham, Great Britain, and an MS in Soil Biochemistry and PhD in Soil Microbiology from Ohio State University. He has worked primarily at the interface of human health, and soil, water, and municipal wastes or biosolids. For example, he has studied the chemical and microbial hazards associated with land application of biosolids for over 25 years, and is recognized as a worldwide authority on this topic. From a pragmatic point of view his landmark studies validated land application of biosolids as a safe, environmentally sustainable practice. Dr. Pepper has also documented the influence of soil on human health, and vice versa. This resulted in the recently published paper: "The Soil Health: Human Health Nexus" which has advanced the concept that soil is not just important for agriculture, but critical to human health and welfare. Overall Dr. Pepper's research has resulted in 246 peer reviewed journal articles and chapters. He was the recipient of the 2010 American Society of Agronomy National Environmental Quality Research Award. He is a Fellow of the Soil Science Society of America; the American Society of Agronomy; the American Society of Microbiology and the American Association for the Advancement of Science. Dr. Pepper has served two terms (6 years) on the National Academy of Sciences Committee: the U.S. National Committee for Soil Science (USNCSS). In addition he has served on four other National Academy Committees involving earth and water impacts on public health. More recently, he has served as Chair of a Division within the International Union of Soil Science (IUSS): Soils, Food Security and Human Health.

Pierzynski, Gary

Kansas State University

Dr. Gary Pierzynski is a university distinguished professor of soil and environmental chemistry and currently serves on the faculty and as head of the Department of Agronomy at Kansas State University. He received his BS and MS in Crop and Soil Sciences from Michigan State University and his PhD in soil chemistry from The Ohio State University. His research areas include water quality as impacted by agricultural inputs, remediation of heavy-metal contaminated sites and soils, risk assessment, and the evaluation of food-chain transfer of soil contaminants in urban gardening scenarios. He is a Co-PI on the US Agency for International Development Feed the Future Sustainable Intensification Innovation Lab at Kansas State University and is also currently funded through an EPA Brownfields Training, Research and Technical Assistance Grant and the Kansas Fertilizer Research Fund. He has published more than 80 refereed papers and three books, including the successful textbook "Soils and Environmental Quality", served as the Editor for the Journal of Environmental Quality, served as President of the Soil Science Society of America, is a Fellow of the American Society of Agronomy and the Soil Science Society of America, has received national awards for teaching and research, and has given more than 50 invited presentations around the world. He was recently appointed by the Food and Agriculture Organization to the Intergovernmental Technical Panel on Soils as part of the Global Soil Partnership. Service duties include membership on the Kansas Grain Sorghum Commission, Kansas Crop Improvement Association Board of Directors, Kansas Soybean Association, and the Crop Improvement Committee for the United Sorghum Checkoff Program Board.

Powers-Schilling, Wendy

Michigan State University

Dr. Wendy Powers is Professor of Animal Science and Biosystems & Agricultural Engineering at Michigan State University. As Director of Environmental Stewardship for Animal Agriculture, Dr. Powers coordinates environmental activities related to animal agriculture for the College of Agriculture and Natural Resources. Dr. Powers has integrated research discovery with outreach and implementation to provide the livestock industries with information and tools essential to their decision-making related to minimizing environmental impact while sustaining competitiveness and meeting challenges of growing demand for animal protein production coupled with changing and variable climate and natural resource limitations. Dr. Powers' research areas include studying the impact of dietary strategies on nutrient excretions and air emissions, development of a comprehensive model to assess management practices and resulting impacts on environmental, economic and social sustainability, and quantifying impact of manure management practices on air emissions. Dr. Powers' knowledge, leadership, translational research program and effective communication with multiple stakeholder groups for the livestock industry has been instrumental in forming multidisciplinary teams that provide timely cutting-edge information to sustain the competitiveness of the livestock industry while reducing environmental impact. Dr. Powers has received consistent funding throughout her career from USDA competitive grants programs, commodity groups, and industry sources, including recent funding to conduct pivotal, clinical studies. She has authored or co-authored 8 book chapters and over 60 peer-reviewed articles and received in excess of \$10 million in funding with approximately half as lead investigator. She has served as major professor for 10 graduate students and 5 post-doctoral research associates. Dr. Powers served 2 terms as a member of the USDA Agriculture Air Quality Task Force. Recognition of her accomplishments include awards from the American Dairy Science Association, American Society of Agriculture and Biological Engineers, American Society of Animal Science and the Iowa Academy of Science.

Pritchett, James

Colorado State University

Dr. James Pritchett is the Assistant Vice President for Engagement at Colorado State University. In this role, Pritchett focuses his efforts on enhancing resilient, entrepreneurial food systems with the goal of providing healthy, affordable food for Colorado's highly diverse populations. He seeks to facilitate collaboration and economic opportunities associated with consumer demand for health, wellness, environmental and other values. In his professional experience, Pritchett has served as an agriculture economist, teacher, extension professional and applied researcher examining issues important to production agriculture and rural economic development. Recent work includes examining agricultural water resource issues including effective use of water on farms and ranches, alternative approaches to 'buy and dry' water transfers, and the economic activity generated by irrigated cropping and agriculture water recreation in rural areas. Pritchett has also researched the complex interactions of the management of Western rangelands on ecosystem services, the economics of animal disease, barriers to adoption of ammonia reducing livestock handling practices, the relative "friendliness" of state policies toward agribusiness, risk management approaches in dryland and irrigated cropping, and creating business plans for small and medium sized businesses. His research has been supported by the National Science Foundation, USDA's National Research Initiative competitive grants program, Coca-Cola, the Colorado Water Resources Research Institute, the USDA Agricultural Research Service, the USDA Natural Resources Conservation Service, the San Luis Council of Governments and Colorado's Agriculture Experiment Station. He received his doctorate in Agricultural and Applied Economics from the University of Minnesota. He holds a faculty appointment as Professor in the Department of Agricultural and Resource Economics in the College of Agricultural Sciences at Colorado State University and previously served as a faculty member at Purdue University. Pritchett is a well-regarded teacher and academic adviser as evidenced by outstanding teaching awards at the college, university and western region levels. Pritchett has also received research team awards and best article awards.

Puls,Robert

University of Oklahoma

Dr. Robert Puls recently retired as Director of the Oklahoma Water Survey and Associate Professor in the College of Atmospheric and Geographic Sciences at the University of Oklahoma. As Director, his research interests included ground water protection from nonpoint sources, water resource protection related to oil and gas operations, and wastewater reuse strategies. He received his Ph.D. in Soil and Water Science from the University of Arizona. He received his Masters in Forest Resources from the University of Washington and his B.S. in Natural Resources from the University of Wisconsin-Madison. Before coming to the University of Oklahoma, he worked for 25 years at the U.S Environmental Protection Agency (EPA) in the Ground Water and Ecosystems Restoration Division in Ada, Oklahoma. He was the Agency's technical lead for the National Hydraulic Fracturing and Drinking Water Study prior to his retirement from the Agency. He has previously held positions with EPA as Senior Soil Scientist, Division Director and Director of Research of the Ground Water and Ecosystems Restoration Division. His research has focused on use of passive systems to restore groundwater from nonpoint source contamination (e.g. nitrate), baseline water monitoring for oil and gas operations, and the transport, fate and remediation of inorganic contaminants in ground-water systems. He received funding over the last two years from the National Science Foundation. He has served on Advisory Boards and Committees with the USGS, USEPA, USDOE, National Research Council, the Nature Conservancy, the Ground Water Protection Council (GWPC), and private industry. Dr. Puls currently serves on the Editorial Board of the Land Contamination and Reclamation Journal and is on the Ground Water Education and Research Foundation of GWPC. Dr. Puls has authored / co-authored more than 150 research articles on the above topics, and served on numerous interagency work groups and ASTM committees.

Richard, Tom

Penn State University

Dr. Tom L. Richard is a Professor of Agricultural and Biological Engineering at Penn State University, where he also serves as Director of Penn State's Institutes for Energy and the Environment, coordinating a network of almost 500 faculty engaged in innovative interdisciplinary research. He received a B.S. in political economy of natural resources from the University of California at Berkeley, and completed his graduate studies at Cornell University where he received an M.S. in agricultural engineering and a Ph.D. in biological engineering. His research and teaching focuses on the intersection of agriculture and the environment, and investigates crop, livestock and biomass energy systems with respect to carbon and nutrient cycling, water quality, and greenhouse gas emissions. Dr. Richard's research is currently funded by the National Science Foundation, the U.S. Environmental Protection Agency, the U.S. Department of Agriculture and the U.S. Department of Energy (DOE), where he serves as the deputy technical director for the DOE's National Risk Assessment Partnership for carbon sequestration. Dr. Richard is the author or co-author of over 140 research and technical publications and serves on the editorial boards of three professional journals. In addition to advising 24 graduate students he has mentored over 90 undergraduate researchers, primarily women and minorities. Dr. Richard is a member of the judging committee for the International Genetically Engineered Machines competition where he served as head judge for five years. He is an active member of the American Society of Agricultural and Biological Engineers (ASABE) and is a Fellow and Past President of the Institute of Biological Engineering (IBE). He has received several awards for his research, outreach and science communications, including from ASABE, IBE, the Korean Rural Development Administration, and the American Association of the Advancement of Science.

Richardson, James

Texas A&M University

Dr. James W. Richardson is Regents Professor of Agricultural Economics, Texas A&M AgriLife Research Senior Faculty Fellow, and Co-Director and founder of the Agricultural and Food Policy Center (AFPC). He received a BS in Agricultural Economics at New Mexico State University and an M.S. and Ph.D. in agricultural economics at Oklahoma State University. His primary research activities have focused on quantitatively analyzing the impacts of policy changes on the economic viability of crop, livestock, and dairy farms across the United States. His analyses of farm program options have aided the House and Senate Agriculture Committees in writing each farm

bill since 1985, primarily because he delivers policy analyses as alternatives and consequences rather than recommendations. He has provided analyses to Congress on the economic consequences of alternative income taxes, carbon sequestration, and renewable fuel policies on representative farms in principal production regions. His ability to analyze the consequences of policy impacts on farmers is based on experience gained from developing and maintaining the AFPC database of 100 representative farms in principal production regions across the United States. Economic benefits of technology adoption for farmers in the US and abroad is an integral part of his research. Also he is known for analyzing the economic feasibility of producing renewable fuels from alternative feed stocks, such as: algae, corn, cellulose, sorghum, wheat, sugarcane, and oilseeds. He is a fellow in both the Western and Southern Agricultural Economics Associations, past president of the Western Agricultural Economics Association, and served on committees for the American Agricultural Economics Association. He serves on the editorial council for two journals and several others in the past. Recent research funding came from United States Department of Agriculture Office of Chief Economist and Farm Service Agency, United States Agency for International Development, Bill and Melinda Gates Foundation, and Cotton Incorporated.

Robb, Thomas

Abengoa Bioenergy

Dr. Robb, is manager of Institutional Relations for Abengoa Bioenergy Corporation. From 1981 to 1984, Dr. Robb served as Assistant Professor with North Carolina State University and was stationed in Brazil as the leader of a collaborative research program. In 1985, Dr. Robb joined IMC Corporation in its animal health division as International Technical Service Manager. He subsequently became Project Manager in Research and Development and then Business Unit Manager for all North American cow/calf products. Dr. Robb joined Ivy Animal Health in 1999 where he led business development and acquisitions activities until 2000. In 2000, Dr. Robb joined a small start-up company (ImmTech) to lead bovine sales, marketing and technical services and joined Abengoa Bioenergy in 2004. Dr. Robb is a graduate of the University of Missouri (M.S. Animal Husbandry 1977) and University of Kentucky (Ph.D. in Ruminant Nutrition, 1980). Dr. Robb's current research interests lie in the area of biomass logistics including the interface with producers and alternative biomass storage methodologies. His funding is derived from Abengoa Bioenergy corp. He also serves as an advisor to Idaho National Labs on various biomass logistics programs.

Robson, Mark

Rutgers, The State University of New Jersey

Dr. Mark Gregory Robson is the Dean of Agricultural and Urban Programs and Professor of Entomology at Rutgers University-School of Environmental and Biological Sciences and Professor of Environmental and Occupational Health the University of Medicine and Dentistry of New Jersey School of Public Health-School of Public Health. Dr. Robson graduated with a B.S. with High Honors from Rutgers University - Cook College in Agricultural Science and an M.S. and Ph.D. from Rutgers University - Graduate School New Brunswick in Plant Science. He has an M.P.H. from the University of Medicine and Dentistry of New Jersey - School of Public Health in Environmental and Occupational Health. Dr. Robson also has an Honorary Doctoral Degree in Public Health (DrPH) from Chulalongkorn University. He was elected a Fellow in the Academy of Toxicological Sciences in 2002. Dr. Robson's research focus is on exposures to pesticides and agricultural chemicals. Dr. Robson is currently the Principal Investigator on a National Institutes of Health (NIH)-funded Fogarty International Training and Research In Environmental and Occupational Health Center in Bangkok. Dr. Robson is the Editor in Chief of Entomology, Ornithology & Herpetology and a contributing editor for Public Health Reports, and he is on the editorial boards for the Journal of Environmental Health, and New Solutions and the Chulalongkorn Journal of Health Research. Dr. Robson and Dr. William Toscano are the editors of the textbook Environmental Health Risk Assessment for Public Health (Jossey Bass 2007). In 2011 Dr. Robson was the recipient of the International Society of Exposure Science Mehlman Award for Exposure Assessment Research. His recent sources of grants include NIH and the EPA.

Rohlman, Diane

University of Iowa

Dr. Diane Rohlman is an Associate Professor in the Department of Occupational and Environmental Health in the University of Iowa College of Public Health. She received her Ph.D. from Bowling Green State University. Dr. Rohlman is the Director of the graduate training program in agricultural safety and health and Director of the Healthier Workforce Center, a National Institute for Occupational Safety and Health Total Worker Health Center of Excellence. Throughout her career Dr. Rohlman has engaged in both basic and applied research to identify, characterize, and prevent occupational and environmental illness and injury in high-risk populations. Much of this work has been with agricultural populations. Dr. Rohlman has led national and international research projects and has successfully secured funding from both the National Institutes of Health and the Centers for Disease Control and Prevention to support these activities. A large part of this research has examined the impact of occupational exposures on the health and wellbeing of adolescent and adult farmworkers and their families and to develop interventions to reduce occupational injuries and illnesses. Dr. Rohlman has led projects examining the impact of environmental exposures among children living in agricultural communities in the United States and has also collaborated with researchers in Brazil, Thailand, and the Philippines. She is currently leading a project evaluating exposure and health effects across the application season in adolescent pesticide workers in Egypt. Dr. Rohlman has participated as a reviewer and co-chair in grant proposal review meetings for both the National Institutes of Health and the National Institute for Occupational Safety and Health, served on editorial and review boards and as a member of national advisory boards, she has also been part of planning committees for national and international conferences.

Samuelson, Lisa

Auburn University

Dr. Lisa Samuelson is the Dwain G. Luce Endowed Professor of Forestry in the School of Forestry and Wildlife Sciences, Auburn University Alumni Professor, and the Director of Center for Longleaf Pine Ecosystems. She received her B.S. and M.S. in Forestry from the School of Forest Resources at the University of Georgia, and her Ph.D. in Forestry in 1992 from Virginia Tech. Dr. Samuelson joined the Auburn University faculty in 1994 following a position with the Tennessee Valley Authority studying air pollution effects on forests. Her general research interests focus on tree and forest physiological responses to environmental and silvicultural influences. Her current research projects are examining climate change response and carbon cycling in southern pine forests. She is also studying genetic variation in ecophysiological traits of longleaf pine to improve future deployment of different seed sources in longleaf pine ecosystem restoration. Dr. Samuelson has authored over 50 peer-reviewed publications on tree physiology, three tree identification texts and the Trees of Alabama web site. She has served on EPA, NSF and DOE grant review panels and international program panels. Her teaching responsibilities include undergraduate and graduate courses in tree physiology. She was awarded the School of Forestry and Wildlife Sciences Forestry Club Teacher of the Year, the Harold E. Christian Award for service to teaching, and an Author Recognition Award by Auburn University for her books.

Santerre, Charles R.

Purdue University

Dr. Charles R. Santerre is Professor of Food Toxicology in Nutrition Sciences in the College of Health and Human Sciences at Purdue University where he has served as the Interim Head of the School of Health Sciences (2013). His research and engagement has focused on developing evidence based guidance for sensitive populations regarding consumption of seafood so they can minimize the risks from environmental pollutants while maximizing the nutritional benefits. In 2014-15, he was a National Academy of Sciences, Jefferson Science Fellow and hosted by the U.S. Department of State. He was appointed to the Food and Drug Administration, Center for Food Safety and Applied Nutrition's Food Advisory Committee (2014-18). In 2010-11, he was an American Association for the Advancement of Science, Science & Policy Technology Fellow and sponsored by the U.S. Department of Agriculture, Food Safety Inspection Service, Office of Public Health Science, Risk Assessment Division where he developed a vision for identifying and measuring emerging chemical contaminants in meat, poultry, and egg products. He serves or has served as a food safety expert for the Food and Agriculture Organization (FAO), the

International Life Sciences Institute of North America, and for the International Food Information Council. He is a member of the Society of Toxicology and the Institute of Food Technologists. Prior to joining Purdue University in 1998, he was an Adjunct Associate Professor in the Environmental Sciences Program at The Ohio State University and an Assistant Professor in the Environmental Health Science Program and the Interdepartmental Toxicology Program at the University of Georgia. His research has received funding from USDA, National Institute for Food Agriculture in the past 2 years. He holds degrees in Human Nutrition (BS), and Environmental Toxicology & Food Science (PhD), both from Michigan State University.

Scharf, Peter

University of Missouri

Dr. Peter Scharf is a Professor and Extension Nutrient Management Specialist at the University of Missouri. He has a Ph.D. in Crop and Soil Environmental Sciences from Virginia Tech, and a B.S. in Biochemistry and Genetics from the University of Wisconsin. His research and Extension programs focus on management of agricultural nitrogen and phosphorus, including prediction of optimal rates, effects of application timing, and management to minimize escape to the environment. Recent research funding for Dr. Scharf's program has come from the National Institute of Food & Agriculture, the Missouri Fertilizer & Ag Lime Council, and the Natural Resources Conservation Service. He currently serves as Past Chair of the Soil Fertility and Plant Nutrition Division of the Soil Science Society of America, and is on the Science Advisory Board of the Soil Health Partnership.

Schlenker, H. Oscar

Glacial Lakes Energy

H. Oscar Schlenker, is the retired V. P. and Division Manager, V. P. of Engineering and Engineering Manager of Hub City Inc. Aberdeen, South Dakota, a division of Regal Beloit Corporation. Hub City is a nationally and internationally recognized manufacturer and supplier of enclosed gear drives and gears to the agriculture, industrial, transportation, solar energy and aviation industries. He holds a Bachelor of Science degree in Mechanical Engineering from North Dakota State University, with additional training in management and engineering disciplines at the University of Wisconsin, University of Minnesota, and University of Ohio. He is a registered Professional Engineer in the state of South Dakota. Schlenker is a nationally recognized expert in enclosed gear drives and gearing. His working career includes design engineer, tractor design division, Caterpillar, Peoria, Illinois and design engineer, The Bob Cat Company, Gwinner, North Dakota. He has extensively traveled throughout the world, China, Japan, South Korea, South Africa, England, Germany and Sweden, working enclosed gear drive and gearing applications. Schlenker is a forty plus year member of the American Society of Mechanical Engineers, American Society of Agricultural and Biological Engineers, and Society of Automotive Engineers. He was a company member of the American Gear Manufacturers Association and served on and wrote design standards as part of the Standards Committee. He holds four patents and one pending patent. Schlenker has served as a technical and academic advisor at Northern States University, North Dakota State School of Science and Watertown Technical Institute. He is currently on the Board of Directors of Glacial Lakes Energy, a two million Gallon per year ethanol manufacturing company and has previously served on the Board of Directors of Advanced Bio-Energy, formally Heartland Gain Fuels, an ethanol manufacturing Company. He has served ten year terms on the board of directors of, The Aberdeen Development Corporation and Aberdeen Planning Board, two year terms on the Aberdeen Zoning board and Aberdeen City Government Review Committee. Schlenker comes from a family agriculture and farming background.

Schulz, Thomas

Evergreen Lane Farm

Thomas R Schulz is the owner and operator of Evergreen Lane Farm near Sebeka MN. He holds Faculty Emeritus status from Central Lakes College Staples where he taught Farm Business Management. He holds a BS with High Distinction from the University of Minnesota in Agricultural Economics and a Masters of Education from North Dakota State University. During his tenure at Central Lakes College he served on the Minnesota Farm Financial Standards task force hosted by the Center for Farm Financial Management at the University of Minnesota. He also conducted a college sponsored study that created a model using the crop equivalency rating of soils to guide

farmers planting decisions on marginal cropland. In 2013 Governor Mark Dayton appointed Tom to the Minnesota Board of Soil and Water Resources as a representative of the state's soil and water conservation districts. The Board is the state soil and water conservation agency, and it administers programs that prevent sediment and nutrients from entering lakes, rivers, and streams; enhance fish and wildlife habitat; and protect wetlands. He has served as an elected official on the Wadena Soil and Water Conservation District board for 40 years. He is well versed in farm management, agricultural economics, risk management, nutrient and manure management, irrigation and water management, pesticide application as well as conventional and short rotation forestry, livestock and crop production in combination of academic work and hands on experience. His expertise is understanding the interests and motivations of local agricultural producers and connecting those producers with government agencies. Tom has not been part of any funded research in the past two years. He also serves on a wide variety of public and agricultural committees and organizations. including the Minnesota Forestry Association, the Minnesota Association of Soil and Water Conservation Districts and the Minnesota Farmers Union.

Schwab,A. Paul

Texas A&M University

Dr. Paul Schwab is a professor of Soil Environmental Chemistry in the Soil and Crop Sciences Department at Texas A&M University in College Station. He received a BS in Mineral Engineering – Chemistry from Colorado School of Mines and a PhD in Soil Chemistry from Colorado State University. His area of research is the remediation of contaminated soil and water, and tracing the fate and transport of agricultural and industrial chemicals through soil and ground water. His current research is funded by US AID and AgriLife Research (Texas A&M) and focuses on prevention of pollution of soil by petroleum and heavy metals, remediation of polluted and disturbed soil, bioavailability of potentially toxic elements, geochemical modeling of contaminant transitions in soil and water, and the application of advanced spectroscopic techniques to the real-time monitoring of soil and water. Dr. Schwab's current teaching responsibilities include Analysis of Environmental Systems, Environmental Soil and Water Science, and Advanced Soil Chemistry. His awards include University Mentor of the Year Award, Fellow of American Society of Agronomy, and Fellow of Soil Science Society of America. He has served as associate editor of Soil Science Society of America Journal and Journal Environmental Quality. Dr. Schwab currently serves as a member of the American Association for the Advancement of Science Research Competitiveness Service Review Board, National Institute of Environmental Health Sciences (NIEHS) Superfund Basic Research and Training Program Review, and recently served as an ad hoc member of the U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act, Scientific Advisory Panel. He was director of Purdue University's Natural Resources and Environmental Science undergraduate degree program, and has mentored over 30 PhD and MS graduate students.

Sharpley,Andrew N.

University of Arkansas

Dr. Andrew Sharpley is Distinguished Professor, Department of Crop, Soil and Environmental Sciences, University of Arkansas, Fayetteville, and is Director of the Arkansas Discovery Farms Program. He received BSc and PhD degrees in Soil Science and Water Sciences from the University of North Wales and Massey University, New Zealand, respectively. His research investigates the cycling of phosphorus in soil-plant-water systems in relation to soil productivity and water quality and includes the management of animal manures, fertilizers, and crop residues. He evaluates the role of stream and river sediments in modifying phosphorus transport and response of receiving lakes and reservoirs. He developed widely accepted decision-making tools for agricultural field staff to identify sensitive areas of the landscape and target management alternatives and remedial measures that have reduced the risk of nutrient loss from farms. He works closely with producers, farmers, and action agencies, stressing the dissemination and application of his research findings. His research is funded by National Science Foundation, Walton Family Foundation, Natural Resources Conservation Service, and Arkansas State Legislature. He is the Editor-in-Chief of the Soil Science Society of America, a Fellow of the American Society of Agronomy and Soil Science Society of America and received their Applied Soil Science, and Environmental Quality Research Awards. He is President-Elect of the Soil Science Society of America. In 2008 was inducted into the U.S. Department of Agriculture-Agricultural Research Service Hall of Fame and in 2012 received the Christopher

Columbus Foundation Agriscience Award. Dr. Sharpley served on National Academy of Science's Committee on "Causes and Management of Coastal Eutrophication" and Environmental Protection Agency's Scientific Advisory Boards "Hypoxia in the Northern Gulf of Mexico," "Review of Empirical Approaches for Nutrient Criteria Derivation," and "Review of Approaches for Deriving Numeric Nutrient Criteria for Florida's Estuaries, Coastal Waters, and Southern Inland Flowing Waters."

Shaw, Bryan

Texas Commission on Environmental Quality

Dr. Bryan W. Shaw was appointed by former Texas Governor Rick Perry to serve as a Commissioner of the Texas Commission on Environmental Quality on November 1, 2007 and appointed Chairman on September 10, 2009. In this role he is one of three commissioners who establish agency direction and policy and make final determinations on contested permitting and enforcement matters. In this role, he has received no research funding for the past two years. Dr. Shaw received a bachelor's and master's degree in agricultural engineering from Texas A&M University and a doctorate degree in agricultural engineering from the University of Illinois at Urbana-Champaign. For over twenty years, he has conducted research on agricultural air quality issues, thirteen of those years on the faculty at Texas A&M University. He has advised graduate research on measurement, modeling, and control of emissions from agricultural operations. He taught undergraduate courses which included design and operation of air pollution abatement systems. Dr. Shaw spent approximately fourteen months working with USDA on agricultural air quality issues. He served two months as Acting Lead Scientist for Air Quality and twelve months as Special Assistant to the Chief – Air Quality. Dr. Shaw currently serves on the USDA Agricultural Air Quality Task Force (AAQTF) to ensure that resources which are available to address agricultural air quality issues are utilized where they provide the most environmental benefit. As a member of the AAQTF, Dr. Shaw assumed a leadership role in evaluating and calling attention to opportunities for science based voluntary compliance and voluntary environmental improvement within the agricultural industry. He was appointed to serve on the EPA Science Advisory Board (SAB), Environmental Engineering Committee. In this capacity, he assisted with evaluating the scientific and environmental aspects of EPA programs and policies. They conducted a holistic in-depth evaluation of EPA programs' impact on the nitrogen cycle related to agriculture and air quality.

Shortle, James

Pennsylvania State University

Dr. James Shortle is Distinguished Professor of Agricultural and Environmental Economics, Director of the Environment and Natural Resources Institute, and Director of the Center for Nutrient Pollution Solutions at Penn State University, University Park. He received his Ph.D. in Economics from the Iowa State University. His research focuses on the economics of agri-environmental policies, incentives for water quality management, and climate change impacts on agriculture and water resources. Recent work has examined innovative watershed based planning strategies for improving the cost-effectiveness of federal and state policies for nutrient pollution management from agriculture and other sources, the design and use of water quality trading and other economics incentives for water pollution control, the design of auctions for habitat protection, and innovations in water allocation institutions to facilitate adaptation to climate change. His research in the past two years has been funded by Johns Hopkins University, Stanford University, the US Environmental Protection Agency, the US Department of Agriculture Agricultural Research Service, the US Department of Agriculture Office of the Chief Economist, and the Pennsylvania Department of Environmental Protection. He has received awards for outstanding published research from the American Water Resources Association, the Agricultural Economics Society, and the Northeast Association of Agricultural and Resource Economists. He has served on peer review and advisory panels for federal and state agencies, including recent membership on the National Research Council Committee on Science for EPA's Future, and the Environmental Economics Advisory Committee to the EPA Science Advisory Board. He has served on the editorial boards of several agricultural and environmental economics journals, and in various elected positions of the Northeast Agriculture and Resource Economics Association.

Steen,Darrick

Barr Engineering Company

Darrick Steen is an environmental consultant with the Barr Engineering Company, an engineering and environmental consulting firm with offices in the upper midwest and Canada. At Barr, Darrick practices environmental consulting within the agricultural sector in the areas of environmental quality and sustainability, waste management, permitting, compliance and management. Darrick routinely interfaces with local, state and national agriculture groups and representatives, as well as universities, environmental resource managers, technical experts and federal, state, and local government agencies. Recently, Darrick worked with the state's agricultural sector and the Missouri Department of Natural Resources (MDNR) helping co-develop Missouri's Nutrient Loss Reduction Strategy. Darrick often interfaces between agricultural groups and the MDNR. Prior to his position at Barr, Darrick was on staff for nine years at the MDNR serving in technical, permitting and policy positions. While at MDNR, Darrick oversaw nearly all aspects of environmental quality and permitting, as well as technical and engineering reviews of projects and issues for the agricultural sector. Darrick authored and oversaw the promulgation of environmental regulations and technical publications, including but not limited to Missouri's Concentrated Animal Feeding Operation (CAFO) and agri-chemical containment regulations. He was the environmental quality subject matter expert on agricultural issues, including contested cases and litigation, at public hearings, conferences, workshops and other official state and national meetings and committees including the EPA Gulf Hypoxia Task Force, Heartland Regional Water Coordination Initiative, MDNR Watershed Advisory Committee, and Missouri's Agricultural Interagency Technical Working Group. Darrick provided training, assistance and advice to industry representatives, environmental consultants, state and federal agencies, government officials, and the general public on regulatory and environmental design standards for agricultural operations. Darrick has not conducted academic research and has not received research funding. Darrick received a BS in Agricultural Engineering from the University of Missouri-Columbia and is a licensed professional engineer.

Stokes,Bryce

CNJV

Dr. Bryce Stokes is currently a Senior Advisor to the Bioenergy Technologies Office in the Department of Energy after retiring from a 33-year forestry research career in federal and industrial service. He provides counsel and analyses on a range of topics such as biomass feedstock availability, costs, and production; feedstock assessments and logistics; land-use change; carbon accounting and LCA; sustainability, and various issues relevant to bioenergy and the environment. He was the co-lead on the update of the Billion Ton Assessment. Dr. Stokes has a BS in Biological Engineering and a MS in Agricultural/Forest Engineering from Mississippi State University and a Ph.D in Forestry from Auburn University. Dr. Stokes retired after 30 years of experience as a Research Engineer, Project Leader, and National Program Leader with the U.S. Forest Service in Auburn, AL and Washington, DC. Dr. Stokes has published over 180 articles. He conducted research and led a research program in various aspects of forest operations including forest systems development and modeling, environmental impacts assessments and mitigation techniques and technologies, biomass recovery and utilization, and energy crops development. He led forest operations and co-led biomass utilization, climate change and carbon management, and forest productivity programs at the national level. As part of his duties, he provided support to the USDA Climate Change Program Office and was the recipient of two group Secretary Awards for those efforts. He served on three interagency teams with the Climate Change Science Program including the Carbon Cycle and Ecological Working Groups. He served as co-chair of the latter. Dr. Stokes had several leadership positions in the International Energy Agency tasks for over 20 years, in the International Union of Forest Research Organizations, and has served on many national and international working groups on various topics. He is involved in three professional societies where he has held local and national leadership positions. Dr. Stokes is the recipient of the International Forest Engineering Lifetime Achievement Award. He also has three years of industrial service as a harvesting engineer with a timber company. His unique education, skills, and experience provides various perspectives on the intersections of ecological, biological, engineering, and social systems in natural resource management.

Tom, Kip

Tom Farms

Kip Tom is the Managing Member of Tom Farms. His educational background is an associate Degree in Agriculture Management, from Texas A&M, Executive Master of Business Administration Courses from Harvard, and Purdue University. He is also a member and past President of the Agriculture Producer Executive Association that is comprised of some of the most successful agricultural production operations in the US and Canada. He received the Ernst and Young Entrepreneur of the Year Award for Small Business for the innovation he lead in farm business structures and the direct application of science on their farm business operations. He serves on boards of the Indiana Economic Development Corporation, Elevate Ventures, Agrinovus-Indiana, and Board Member of the Indiana Department of Agriculture and is a National Trustee of 4-H and Future Farmers of America. He leads a farm business that independently researches a wide variety of crop care products across multiple crops in Indiana while collaborating with other independent producers across the Midwest in sharing knowledge and data. His business is a leader with university and industry support in the analytical review of most all products used on their farms reviewing efficacy, plant metabolism resistance, and environmental impacts to toxicology. The majority of the applied knowledge that the candidate holds is from actual field experience utilizing the latest in technologies across their substantial acreage over the last 42 years of work in the field.

Turco, Ronald

Purdue University

As a faculty member in the College Agriculture for 30 years, Dr. Ronald F. Turco Jr. has developed a research and teaching (80R/20T) position based on the application of basic science to solve problems facing Indiana and the nation. Turco's earliest efforts at Purdue led him to realize the significance that a microbiologist could play by developing an applied research program to understand and deliver information on the biological components of environmental stewardship, ecosystem sustainability and farming operations. His research program now stresses water quality and soil health, emphasizing the importance of understanding the behavior of environmental microorganisms as well as understanding the impact of humans on the soil microbiome. Microbiology affects all aspects of our lives; most encounters are neutral, but an ingestion of contaminated water or food can have devastating effects on people and animals. Turco's early efforts were significant in that he realized the role a microbiologist could play by developing an applied research program to understand and deliver information about the microbiology of environmental processes. His program has stressed work on how microorganisms control critical soil processes related to N transformations, the buildup of soil carbon reserves, and the decomposition of plant and waste residues. His work has also stressed that certain microorganisms can produce disease in humans and animals, create water contamination or create the greenhouse gases CH₄ and N₂O that pose potential harmful effects. Over the last few years Turco has taken on a number of administrative responsibilities including serving as the founding Director of Purdue's Environmental Sciences and Engineering Institute (ESEI) now the Center for the Environment, service on the board of directors for the Purdue Climate Change Research Center (PCCRC), the Directorship of the Indiana Water Resources Research Center (IWRR) and most recently he have served as the director of the Purdue Water Community, and now is the Director of the Global Sustainability Institute and an Assistant Dean in the College of Agriculture.

Tuxhorn, Gary

United Suppliers, Inc.

Dr. Gary Tuxhorn is Principal Scientist, United Suppliers, Inc. He received his Ph.D. in Soil Science from Washington State University, and received his M.S. degree in Weed Science and B.S. in Agricultural Honors from the University of Nebraska. United Suppliers, Inc. supplies crop protection chemicals and plant nutrition products to agricultural retailers in the United States and Canada. Dr. Tuxhorn provides mentoring to other technical specialists, scientific support to both upper management and field staff, and supports a robust R&D effort in agronomy. Previous experience includes R&D and Technical Service work with American Cyanamid, ADAMA, and Monsanto. Dr. Tuxhorn has worked on committees/groups on the national, regional, and state level with ARA (Agricultural Retailers Association), Agribusiness Association of Iowa, CCA (Certified Crop Advisors), WSWS (Western Society of Weed Science), NCWSS (North Central Weed Science Society), and ASTM-E35 (American

Society Testing Materials). Dr. Tuxhorn is in high demand as a speaker/trainer for technical transfer of agronomic technology. Dr. Tuxhorn is involved in research in agronomy, including soil fertility and fertilizers, biostimulants, pesticide adjuvants and pesticide formulation efficacy. Research is funded from United Suppliers, Inc. Dr. Tuxhorn writes protocols for contract research and interprets results, and also consults with Ag Precision Formulators, a United Suppliers subsidiary. Dr. Tuxhorn also consults with agricultural retailers conducting on-farm trials. Dr. Tuxhorn grew up on a diversified farm in Nebraska, and continues to be involved with the family farm.

West, Tristram

University of Maryland

Dr. Tristram O. West is Scientist IV at the Joint Global Change Research Institute. He holds a secondary position as Associate Research Scientist at the University of Maryland Earth System Science Interdisciplinary Center, and is currently on temporary assignment to the White House Council on Environmental Quality. He received a BS in Natural Resources Conservation and Management from the University of Kentucky and a MS in Natural Resources and PhD in Agronomy from the Ohio State University. His post-doctoral training was on agricultural systems, biogeochemical cycles, and carbon sequestration at Oak Ridge National Laboratory (ORNL). Dr. West worked at ORNL for 10 years conducting research and analyses on energy efficiency, conservation practices, and emissions mitigation strategies in agricultural systems as part of the Department of Energy's Carbon Sequestration in Terrestrial Ecosystems program. While at ORNL, he was the recipient of the Stanley I. Auerbach Award for Excellence in Environmental Science which is the highest achievable award in the Environmental Sciences Division at ORNL. He subsequently conducted similar research at the global scale for use in Earth system models, Integrated Assessment models, and international policy analyses at the Pacific Northwest National Laboratory's Joint Global Change Research Institute. He has received continual funding from NASA and other funding agencies for agricultural-related research since 2004. His research has guided the development and use of mitigation practices, greenhouse gas accounting, indirect land-use change, and sustainable climate-smart agriculture. Dr. West has authored numerous papers, book chapters, and technical reports on energy, emissions, and productivity associated with agricultural systems. One of his early papers was awarded the highest cited paper in the Soil Science Society of America Journal. He has contributed to the development of accounting methods used in the US Greenhouse Gas Emissions Inventory, the USDA guidance for entity-scale emissions reporting, and to mitigation strategies implemented under the US Climate Action Plan. Dr. West has served on scientific journal editorial boards, agency review panels for research grants, and science advisory panels for USDA, NASA, and EPA.

Womac, Alvin

University of Tennessee

Dr. Womac is Professor of Biosystems Engineering at the University of Tennessee. His research includes agricultural equipment systems for reduced environmental impact, including reduced drift of pesticides and efficient biomass logistics. He teaches courses in mechanical systems engineering, agricultural and construction equipment, and co-instructs engineering practicum. He directs a spray application technology grant for control of herbicide-resistant weeds. He directed a high tonnage logistics project that integrated efficient processing into supply logistics for bulk-format switchgrass. Recent grant sources include a biomass logistics company, a spray nozzle manufacturer, and a full-line manufacturer of agricultural equipment. Dr. Womac coordinated the American Society of Agricultural and Biological Engineers (ASABE) effort to standardize pesticide spray nozzle classification and served on the United States (U.S.) Environmental Protection Agency's stakeholder technical panel for generic verification protocol for testing pesticide application spray drift reduction technologies for row and field crops. He has 34 career total number of funded grants in excess of \$6.6 million, 74 refereed journal articles of which he or a supervised staff/student are lead author on 54 articles, two patents, 110 other published papers, 137 presentations outside the department, and 27 professional awards and recognition. Dr. Womac is active in the ASABE where he has chaired and serves on numerous technical committees related to pesticide application, biomass utilization, forage harvesting, and related International Standards Organization consensus standard activities. Dr. Womac has Bachelor of Science, Master of Science, and Doctor of Philosophy degrees in agricultural engineering from the University of Tennessee, and served as research agricultural engineer with the

U.S. Department of Agriculture.

Wright, Kent

Northwest Farmers Union

Kent Wright is the President of the Northwest Farmers Union; including Washington, Idaho and Oregon. He is also Co-Owner of Wright Way Angus an Angus based cattle ranch as well as the Director of International Scouting for the Doosan Bears, a Korean professional baseball team. Kent holds four degrees including a Master's of Biology from Western Kentucky University. He is a dynamic speaker and writer who has presented and written for a wide range of publications on issues ranging from athletics to agriculture. Kent's focused research interest continues to be on grazing practices and sustainability, which is utilized on his Angus cattle ranch. Being a true student of life Kent also pursues other research as time allows. Service on a number of boards rounds out Kent's experiences including the National Farmers Union, Experience Works and U.S. Cattleman's as well as numerous local boards and governing bodies.