SPEAKER BIOGRAPHIES

BORLAUG SUMMER INSTITUTE ON GLOBAL FOOD SECURITY

JUNE 7th – JUNE 20th, 2015

Phil Abbott

Dr. Philip Abbott is a professor in the Department of Agricultural Economics at Purdue University. His current research focuses on international trade and international agricultural development, and four of his students have won national awards for the quality of their dissertations. Professor Abbott has consulted for several domestic and foreign government agencies, including the United Nations Food and Agriculture Organization, commissions on food policy issues as well as private agencies. Professor Abbott served on the steering committees of the congressionally-mandated USDA study on Export Embargoes and Surplus Disposal of Agricultural Commodities, the International Agricultural Trade Research Consortium, regional research project NC-194--"Organization and Performance of World Food Systems," and the USDA-USTR Agricultural Technical Advisory Committee for Trade in Grains, Feeds and Oilseeds. He is now conducting research on cocoa for IITA's Small Tree Crops Program and has authored numerous publications.

Lecture: "Grand Challenge #4: Global Food Trade: Food Crisis Price Shocks and Developing Country Impacts"

Abstract: Prior to the 2007-08 food crisis "best practice polices" to stabilize domestic prices and ensure food security included open borders and liberal trade regimes. Domestic production variability has generally been more important than world price variability, and domestic markets are not perfectly integrated with trade. Food crisis world price shocks led to policy responses by many national governments to isolate domestic markets; nevertheless, import costs soared. Some governments are now reconsidering old institutions to control prices and trade. Price transmission analysis has been used to measure the extent of market integration and to assess policy response impacts.

Jay Akridge

Dr. Jay Akridge was appointed Dean of Agriculture in January 2009. He oversees academic programs in the College of Agriculture, the Indiana Agricultural Experiment Station, the Purdue Cooperative Extension Service and a number of state regulatory services, including the State Chemist's Office and the Animal Disease Diagnostic Laboratory. Dr. Akridge was the James and Lois Ackerman Professor of Agricultural Economics and served as director of the Center for Food and Agricultural Business and the MS-MBA in food and agribusiness management. He served as interim Vice Provost for Engagement at Purdue in 2007–08. His research has examined the buying behavior of commercial agricultural producers, innovations in marketing strategies by agribusiness firms, and adoption of new technology by agribusiness. He has worked with agribusiness managers in the areas of strategy and marketing in more than 20 countries including Lithuania, Hungary, Australia, Argentina, Cameroon, and China. Dr. Akridge received his doctorate in agricultural economics in 1986 from Purdue University specializing in marketing and finance. His master's degree is in agricultural economics with an emphasis in agribusiness management and finance is also from Purdue.

Lecture: "Purdue Agriculture"

SPEAKER BIOGRAPHIES

Suresh Babu

Dr. Babu was educated at agricultural universities in Tamil Nadu, India (B.S. Agriculture; M.S. Agriculture) and at Iowa State University, Ames, Iowa (M.S. Economics and PhD Economics). Before joining IFPRI in 1992 as a Research Fellow, Dr. Babu was a Research Economist at Cornell University, Ithaca, New York. Between 1989 and 1994 he spent 5 years in Malawi, Southern Africa on various capacities. He was Senior Food Policy Advisor to the Malawi Ministry of Agriculture on developing a national level Food and Nutrition Information System; an Evaluation Economist for the UNICEF-Malawi working on designing food and nutrition intervention programs; Coordinator of UNICEF/IFPRI food security program in Malawi; and a Senior Lecturer at the Bunda College of Agriculture, Malawi developing and teaching computer-based policy-oriented post graduate courses.

Lecture: "Global Food Security: Issues, Challenges and Capacity Options"

Abstract: This presentation will highlight the changing global food policy landscape in the context of achieving food and nutrition security. Developing countries are in various stages of agricultural transformation and several emerging issues such as climate change, increasing vulnerability and volatility of the global food system, pose both policy and capacity challenges. Innovations and sharing knowledge in technological, policy, and institutional developments are needed at all levels to address these emerging challenges. This further requires new capacity in terms of the process, organizational, and human resources. The presentation will then provide a set of global strategies to tackle global challenges facing development community.

Dieudonné Baributsa

Dr. Dieudonné Baributsa has more than 10 years of experience in international development. Currently, he is a Research Assistant Professor in the Department of Entomology at Purdue. He is also the Project Lead for the Project "Commercializing Hermetic Technologies for Grain Storage in Sub-Saharan Africa: Purdue Improved Cowpea Storage (PICS3), a project funded by the Bill and Melinda Gates Foundation. PICS bags help small-scale farmers reduce post-harvest losses and improve their income while addressing food safety issues due to misuse and overuse of insecticides. Dr. Baributsa's areas of interest include development, dissemination and commercialization of low-cost integrated pest management technologies. He has worked in Central Asia, Eastern Europe and Sub-Saharan Africa. Dr. Baributsa received his B.S. in Crop Production from Institut Facultaire des Sc. Agronomiques, Kisangani, D.R. Congo, his M.S. in Agronomy from Michigan State University, and his Ph.D. is Crop Systems/Agronomy also from MSU.

Lecture: "Challenges and Opportunities in Technology Transfer: PICS Market Development"

Lecture Abstract: Extension efforts encompassed building awareness about the existence of PICS bags and teaching farmers how to properly use them. These included village activities as well as media efforts. In each of the target countries, a partner organization is selected to lead and coordinate the extension activities. Extension activities help build the demand of the PICS bags among smallholder farmers and other users. Market building activities have proved that it is possible to reach millions of farmers in a relatively short time. For any commercialization of agricultural inputs to succeed, capacity building along the value chain is required. Market building must be implemented by service providers and the supply chain developed by the private sector.

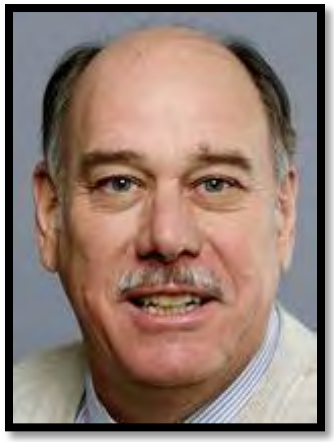
SPEAKER BIOGRAPHIES

Julie Borlaug

Julie Borlaug is the granddaughter of Dr. Norman E. Borlaug and the Assistant Director of Partnerships at the Borlaug Institute for International Agriculture at Texas A&M. Since the passing of her grandfather, Julie has worked to continue his legacy through developing agricultural partnerships between public, private and philanthropic groups to further the Borlaug legacy and expand upon his mission to feed the world's hungry. Julie received her B.A. from Texas A&M in International Studies and Political Science in 1997 and her M.B.A. in Nonprofit Management from the University of Dallas in 2004. She has spent her career in the nonprofit sector and has worked for organizations such as the Salvation Army and the American Cancer Society as Director of Development. She has recently transitioned into her new role as Assistant Director of Partnerships in order to champion her grandfather's legacy and lend a voice to his desire to see more successful collaborative partnerships between the public and private partnerships in order to ensure the continuation of breakthroughs in international agriculture.

Lecture: "Keeping the Norman Borlaug Dream Alive"

Vince Bralts



Vincent F. Bralts is a Professor of Agricultural and Biological Engineering at Purdue University. Dr. Bralts received his B.S. from Cornell University, M.S. from University of Hawaii and Ph.D. from Michigan State University. Since arriving at Purdue, he has served as the Head of Agricultural and Biological Engineering, the Interim Head of Nuclear Engineering and the Associate Dean for Resource Planning and Management in the College of Engineering. Dr. Bralts' research interests include water resources planning and management; irrigation performance; irrigation systems design and management; expert systems for environmental decision making; hydraulic network analysis; irrigation scheduling; and engineering education and administration. Dr. Bralts is internationally known for his expertise in the hydraulic design and field evaluation of micro irrigation systems. He has given seminars and short courses on micro irrigation in India, Mexico, Zimbabwe, Spain, and Puerto Rico as well as many of the states of the USA.

Lecture: "Grand Challenge #5: Water Resources and Food Security"

Lecture Abstract: Dr. Bralts will discuss the importance of water footprints, water resources and competing uses, water technology, and implications on societal issues. Irrigation and water resource issues domestically and abroad will also be examined, along with projected water scarcity, security, and potential solutions.

SPEAKER BIOGRAPHIES

Sylvie Brouder

Dr. Brouder is a Professor of Agronomy and her research addresses implications of converging U.S. biofuel and food security agendas by developing field-to-landscape analyses of the potential for dedicated energy crops to provide renewable fuel on marginal lands, while protecting natural resources and food or feed productivity. She directs Purdue's Water Quality Field Station and is responsible for developing and promoting agro-ecology programming campus-wide. A core theme of Brouder's research and the field station's research portfolio is quantitative assessment of synergies and tradeoffs among productivity and environmental objectives to inform development of policy that promotes agricultural sustainability. Dr. Brouder specializes in crop mineral nutrition with an emphasis on crop ecology, water quality and agro-ecosystem nutrient balances and losses. In her research, she concentrates on nitrogen, carbon and potassium, evaluating the practicality of systems and management practices, and ecological viability and sustainability, including influences on water quality and greenhouse gas emissions from agricultural soils. Brouder earned a doctorate in ecology from the University of California, Davis, and a bachelor's degree in biology from Harvard University.

Moderator for the Panel: "Perspectives on Ecosystem Services and the R4D Context

Lecture: "Grand Challenge #1: Ecosystem Sustainability and Food Security"

Lecture Abstract: Dr. Brouder's lecture will examine the trade-offs of ecosystem health and agricultural production, focusing on the barriers in modern agriculture and its implications on soil, air, water, and biodiversity. Dr. Brouder will closely examine and discuss ecosystem service, conservation agriculture, and agronomic principles necessary for sustainable intensification for the food insecure.

Andrea Burniske

Andrea Burniske works for International Programs in Agriculture as the International Extension Coordinator. In this position, she promotes international opportunities for Purdue extension educators and faculty, supports project design and proposal writing, and helps to implement programming. She is also a Purdue Delegate for the Extension Disaster Education Network (EDEN); and serves as a member of the College of Agriculture Diversity Committee. Her background includes 20 years' experience working overseas and in Washington DC for international development organizations. She has designed and led projects while living in Tajikistan, Colombia, Bulgaria, Peru, and Russia. Her sectoral experience and main interests comprise disaster risk reduction and disaster response (as a member of the Latin American Response Team for Mercy Corps); gender assessment; child protection; environmentally sustainable development; social enterprise development; and climate change adaptation. Andrea has a BA from UC Berkeley in Slavic Languages; an MA from University of Oregon in Journalism and Communication (thesis research on communication for development); and an MBA+ Certificate in Entrepreneurial Leadership from Portland State University.

Lecture: "Gender in International Development"

Lecture Abstract: Andrea Burniske will discuss why gender is not just about women, and not just a socio-cultural issue. Gender roles and norms impact human rights and development in ways that have very tangible impacts on agriculture and natural resources.

SPEAKER BIOGRAPHIES

Gary Burniske

Gary Burniske is Managing Director of Purdue's Center for Global Food Security. He is responsible for managing the Center and collaborates with Purdue's faculty and scientists to take a multi-disciplinary approach to tackling global challenges affecting food security. Fluent in five languages, he has 35 years of experience in international development covering 50 countries in Africa, Asia, Latin America and the Former Soviet Union. Holding senior level technical and managerial positions with humanitarian organizations and international public institutions, he served as Country Director for Colombia, Tajikistan, and Russia. He worked as Regional Technical Advisor in Agriculture and Natural Resources with CARE covering 25 countries in Asia and Latin America. He headed the International Tropical Timber Organization's conservation efforts globally, and was Principal Technical Advisor to the Nicaraguan Forest Service with a leading role drafting forest policies and legislation. He also served as the Executive Director of Rainforest Foundation International, promoting indigenous rights and ownership to tropical forests in Latin America, Africa and Asia. Burniske's recent accomplishments include the design and management of Mercy Corp's regional flagship program for Latin America utilizing alternative dispute resolution to resolve land conflicts on 2 million acres of Afro-descendent and indigenous communal land in the Darien Gap region of Colombia. In Tajikistan, he led the transformation of a small Tajik NGO, the National Association of Business Women into the largest microcredit provider in the country. Burniske holds a BS in Natural Resources and an MS in Forest Economics - both from the University of Massachusetts.

Lecture: "Summer Institute Goals and Introduction of Group Project"

Nick Carpita

Cell biologist and biochemist Dr. Nicholas Carpita has advanced analytical capabilities to determine the linkage and sequence structure of cell wall polysaccharides, with particular emphasis on the unique cell walls of grasses. He received his B.Sc. at Purdue University and his Ph.D. at Colorado State University. He is one of but a few who has successfully synthesized cell wall polysaccharides in vitro with isolated Golgi membranes, and has established the function of several plant cell wall glycosyltransferases. He is currently working with Purdue's Structural Biology group to crystallize the catalytic domain of cellulose synthase. His models illustrating the differences in molecular architectures of cell walls of grasses and dicots are widely cited in journal articles and textbooks. He directed a multi-institutional consortium funded by the NSF Plant Genome Research program to establish the maize and Arabidopsis cell wall gene networks.

Panelist: "Biofuels"

SPEAKER BIOGRAPHIES

Clara Cohen

Dr. Clara Cohen serves as senior science policy adviser with USAID's Bureau for Food Security, Office of Agricultural Research and Policy. She leads Office activities focusing on human and institutional capacity development and has contributed to the design and launch of several new programs emphasizing research and education system strengthening. Previously, she worked as a Research Scholar for the Health and Global Change Unit at the International Institute for Applied Systems Analysis (IIASA), in Vienna, Austria and at the US National Academy of Sciences, where she designed and implemented the Bill and Melinda Gates Foundation-funded African Science Academy Development Initiative, a 10-year effort to strengthen the capability of African science academies to inform national health policy. She also directed studies on agricultural research, including a Congressionally mandated review of the four research agencies under USDA's Research, Education, and Economics Mission Area (ERS, ARS, CSREES, and NASS). She served as an AAAS Diplomacy Fellow in USAID's Center for Economic Growth and Agricultural Development, Office of Agriculture and Food Security, from 1998–2000. She has conducted research on leguminous cover crops at the Rodale Institute Research Center and served as a Peace Corps aquaculture volunteer in Guatemala. She holds a BA in biology from Swarthmore College and a PhD in plant physiology, with minors in molecular biology and soil science, from Cornell University.

Lecture: "Innovation for Food Security: USAID's Feed the Future Research, Policy & Capacity Development Programs"

Lecture Abstract: Dr. Cohen will present some background on Feed the Future, followed by the portfolio of agricultural research, policy, and capacity development investments. Specific opportunities for students, faculty and administrators as partners will also be presented.

Mitchell E. Daniels

Mitchell E. Daniels, Jr. was unanimously selected by the Purdue Board of Trustees on Thursday, June 21, 2012, to be the university's 12th president. Daniels assumed that role in January 2013, at the conclusion of his term as Governor of the State of Indiana. He was elected as the 49th governor of Indiana in 2004, in his first bid for any elected office. He was re-elected in 2008 to a second and final term, receiving more votes than any candidate for any public office in the state's history. President Daniels came from a successful career in business and government, holding numerous top management positions in both the private and public sectors. His work as CEO of the Hudson Institute and President of Eli Lilly and Company's North American Pharmaceutical Operations taught him the business skills he brought to state government. He also served as Chief of Staff to Senator Richard Lugar, Senior Advisor to President Ronald Reagan and Director of the Office of Management and Budget under President George W. Bush. Daniels, who is also the author of the best-selling book "Keeping the Republic: Saving America by Trusting Americans," earned a bachelor's degree from the Woodrow Wilson School of Public and International Affairs at Princeton University in 1971, and his law degree from Georgetown University in 1979.

Lecture: "Opening Address"

SPEAKER BIOGRAPHIES

Otto Doering

Dr. Otto Doering is a Professor of Agricultural Economics at Purdue University. His broader university responsibilities include undergraduate and graduate teaching, research, and public service on policy issues relating to agriculture, resources, and the environment. His experience with climate issues includes work assessing the impacts of climate change and climate variability on agriculture and service on national and international climate change assessments. He was director of Purdue University's Energy Policy Research and Information Program, directed Indiana's State Utility Forecasting Group, and works with the National Science Foundation's Power Systems Engineering Research Center. He serves on the National Academies' Water Science and Technology Board, the U.S. Environmental Protection Agency's Science Advisory Board, and he is Chair of EPA's Integrated Nitrogen Committee. He has held advisory positions with the U.S. Department of Agriculture for the '77, '90, and '96 farm bills, and works with the Natural Resources Conservation Service on the design and assessment of conservation programs. Dr. Doering has degrees from Cornell University and the London School of Economics. In previous lives he has been a wrangler in the Canadian Rockies, prepared cases in the New York City Municipal Courts, and worked in Southeast Asia for the Ford Foundation.

Lecture: "Cultural, Social, Economic, and Policy Dimensions of Technology Development and Transfer"

Lecture Abstract: Technology Transfer and Development are truly 'wicked' problems not solvable independently by experts and requiring many disciplines and stakeholder involvement to bring about improvement. These kinds of problems require increased attention to the softer human and social dimensions in an integrated framework if they are to be dealt with adequately. The cultural, social and other dimensions of the problem reflect the nature and definition of a wicked problem. These critical wicked problem and soft science linkages and, the indispensable role of the soft sciences, provide the basis for a discussion of the consequences and trade-offs from our actions.

SPEAKER BIOGRAPHIES

Gebisa Ejeta

Dr. Gebisa Ejeta is Distinguished Professor of Plant Breeding & Genetics and International Agriculture and serves as Executive Director of the Center for Global Food Security at Purdue University. Professor Ejeta has been a member of the faculty of Purdue University since 1984. His career has been devoted to education, research, and international development with contributions in human and institutional capacity building as well as in advocacy for science-based global development. Professor Ejeta has served in advisory roles to several global development organizations including the USAID, the Rockefeller Foundation, the Bill & Melinda Gates Foundation, the Food & Agricultural Organization of the UN, and the International Agricultural Research Centers (CGIAR). He currently serves on the boards of the Chicago Council for Global Affairs' Global Agricultural Development Initiative (GADI), the National Academy of Sciences Board on Agriculture and Natural Resources (BANR), and the Global Crop Diversity Trust (GCDT). Gebisa Ejeta is the 2009 World Food Prize Laureate and the recipient of a national medal of honor in science from the President of Ethiopia. He is a Fellow of the American Society of Agronomy, Fellow of the Crop Science Society of America, Fellow of the American Association for the Advancement of Sciences, and Fellow of the African Academy of Science. Professor Ejeta has served the United States government in several capacities, as Science Envoy of the U.S. State Department, as Special Advisor to the USAID Administrator Dr. Rajiv Shah, before being appointed by President Obama as member of the Board for International Food and Agricultural Development (BIFAD) in 2010. More recently, Professor Ejeta was appointed by Secretary General Ban Ki Moon to the first U.N. Scientific Advisory Board.

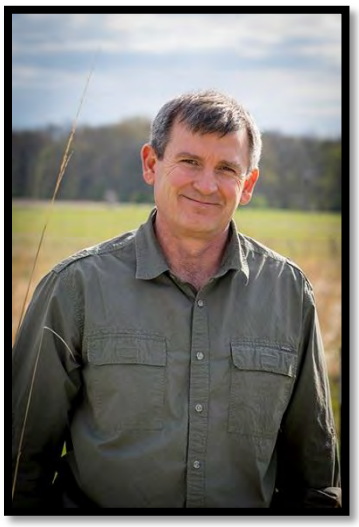
Lecture 1: "Global Food Security: Humanity's Foremost Challenge"

Lecture Abstract: Global food security has become an important agenda for humanity in the 21st century. Advances made in science & technology in the 20th century have resulted in a fast growing global population that has generated growing demand and pressure on our supply of food, water, energy, and associated natural resources. This has raised serious doubt and uncertainty on whether we can continue to support a growing population with an increasing demand for natural resources. This presentation will highlight the growing list of challenges, the magnitude and complexity of the problem, and suggest possible avenues on how the global community may work together towards achieving global food security and conservation of our natural resources.

Lecture 2: "Advancing Research for Impact"

Lecture Abstract: Agricultural research is essential for generating new knowledge and information that can meet societal needs. New knowledge may provide a better understanding of the physical and biological environment around us. Research information can also help generate products and innovations that could transform human livelihoods at all levels of our society. It is essential, therefore, for scientists to query the potential application and utility of their research findings. This is particularly true in a developing country, where even in a more globalized world, where the linkages and pathways for development impact are not often clearly delineated. This presentation would attempt to show why a developing country research scientist needs to be a lot more thoughtful, resourceful, and more deliberate in finding avenues for their research impact.

SPEAKER BIOGRAPHIES



Kevin Gibson

Dr. Gibson's research is focused on the development of weed management systems that increase the competitive ability of crops, reduce the need for herbicide inputs, and provide sustainable weed control in agronomic and vegetable crops. He is currently assessing alternative control strategies such as cover crops and intercropping to limit seed rain and reduce the need for herbicide use in vegetable crops. His lab is studying the population dynamics of wild rice in Indiana and the impacts of invasive plants on forest communities. Gibson majored in biology at San Diego State, where studying wetlands sparked interested in aquatic systems, specifically rice. He earned his Ph.D. in Ecology from the University of California-Davis. Currently, he leads Purdue's participation in the Sloan Indigenous Graduate program, a partnership of five universities that help American Indiana and Alaska Native students succeed in graduate study in the STEM disciplines.

Panelist: "Perspectives on Ecosystem Services and the R4D Context"

Ben Gramig

Dr. Gramig is Associate Professor in the Department of Agricultural Economics at Purdue University. He works on interdisciplinary teams of social scientists, engineers, and climate and natural scientists to address agricultural, environmental and natural resource issues. He uses survey-based methods and secondary data to understand human-environment interactions and behavioral responses to public policy and market-based incentives. Gramig also work with process-based crop simulation and biophysical models to find cost-effective pollution control strategies at the watershed of landscape scale. He is engaged in integrated research and extension efforts to inform land-use decision making that is influenced by weather and climate variability at the farm and watershed scales. He attended the Universities of Louisville and Kentucky, receiving his Bachelor's degree in natural resource conservation and management and his Master's degree in agricultural economics from the UK College of Agriculture. Gramig received his Doctorate in agricultural and resource economics from Michigan State University. He joined the faculty at Purdue University in 2008.

Panelist: "Perspectives on Ecosystem Services and the R4D Context"

SPEAKER BIOGRAPHIES

Jonathan Gressel

Dr. Jonathan Gressel received his M.Sc. and Ph.D. from the University of Wisconsin-Madison and has since been at the Weizmann Institute of Science, and is now an emeritus professor. He also co-founded and was Chief Scientist of Trans Algae, Ltd., a company devoted to transgenically domesticating microalgae as a source of high protein animal feed and biofuel, cultivated using seawater and industrial carbon dioxide. His interests are to see how plant sciences can contribute to world food and fuel securities, with collaborations throughout the developing world. He studied metabolic controls, especially by anti-metabolites and pesticides, using genetic engineering biosafety measures he developed to mitigate transgene movement. He authored more than 320 scientific papers and book chapters and is author, or editor, of eight books dealing with these issues. His latest book is Genetic Glass Ceilings – Transgenics for Crop Biodiversity (Johns Hopkins Press). He was awarded the 2010 "Israel Prize for Agricultural Research", the highest accolade given by the Israeli Government.

Lecture: "Biotechnologies Essential for Food Security"

Lecture Abstract: The first link in food security is farmers having appropriate material for cultivation, yet many of the needs are not being met due to constraints that are intractable to conventional breeding. Examples of such constraints, how they affect health, welfare and gender equality, and how modern biotechnology can contribute to overcoming these constraints will be discussed. Unfortunately, there is insufficient realization in the entrepreneurial sector, that these constraints must be overcome for post-harvest technologies to flourish when the first link is unreliable.

Tom Hertel

Dr. Thomas Hertel is a Distinguished Professor of Agricultural Economics, whose research and teaching focus is on international trade, food and environmental security. Dr. Hertel is a Fellow, and Past-President, of the Agricultural and Applied Economics Association (AAEA). He is also the founder and Executive Director of the Global Trade Analysis Project (GTAP) which now encompasses more than 11,000 researchers in 160 countries around the world (https://www.gtap.agecon.purdue.edu/). This Project maintains a global economic data base and an applied general equilibrium modeling framework which are documented in the book: *Global Trade Analysis: Modeling and Applications*, edited by Dr. Hertel, and published by Cambridge University Press. He has supervised more than three dozen PhD students and published more than 100 peer reviewed journal articles, along with numerous book chapters and books. Professor Hertel is the inaugural recipient of the Purdue University Research and Scholarship Distinction Award. He has also received a number of national awards including: Quality of Communication (AAEA), Distinguished Policy Contribution and Outstanding Journal Article (both AAEA), as well as Outstanding Journal Article in the Australian Journal of Agricultural and Resource Economics.

Lecture: "Grand Challenge #3: The Long Run Global Supply and Demand for Agricultural Land"

Lecture Abstract: Dr. Hertel will examine the historical evolution of land use, analytical framework of the global land use and the global crop market, and factors shaping demand and supply of land. Critical emerging issues such as urbanization, water, food waste, and carbon sequestration will be analyzed under a land-use lens.

SPEAKER BIOGRAPHIES

Jeffrey Holland

Dr. Holland is an Associate Professor in the Dept. of Entomology and has been at Purdue University since 2004. He receieved both his B. Sc. and Ph.D. from Carleton University in Canada. Dr. Holland's research examines the impacts of land use at different spatial scales on insect populations and movements, and on overall arthropod biodiversity. The main goal of his research is to understand how to best configure landscapes at a range of spatial scales to balance human land use needs with the conservation of biodiversity. Understanding how to encourage native biodiversity, while limiting the spread of invasive exotic species is another major goal. Most of the work done in his lab uses extensive field work on various arthropod species, and digital maps and air photographs in geographical information systems (GIS) to measure land use characteristics.

Panelist: "Perspectives on Ecosystem Services and the R4D Context"

Matt Huber

Dr. Matthew Huber is a Professor of Climatology, Climate Dynamics, and Impacts Prediction at the University of New Hampshire under the Institute for the Study of Earth, Oceans, and Space of Earth and Atmospheric Science. Previously, he was a co-founder and director of the Purdue Climate Change Research Center. He was previously the head of the Climate Dynamics Prediction Laboratory. His research is focused on past, present and future climate, the mechanisms that govern climate, the different forms that climates can take on Earth, and the relationship between climate change and life. Major research areas include the radiative and dynamical processes generating tropical 'thermostats', and polar amplification of warming, as well as the ecological and evolutionary implications of these processes and patterns. He earned his Ph.D. in Earth Sciences at University of California Santa Cruz.

Lecture: "Grand Challenge #2: Climate Change & Food Security"

Lecture Abstract: Climate change poses a large threat to food secure populations around the world, dependent upon society's carbon emissions and understanding of greenhouse gas emissions. Dr. Huber will speak to the projected climate change impacts on extreme temperatures, human health, sea levels, security, and agricultural production.

SPEAKER BIOGRAPHIES

Mike Ladisch

Dr. Michael R. Ladisch, is Director of the Laboratory of Renewable Resources Engineering and Distinguished Professor of Agricultural and Biological Engineering with a joint appointment in Biomedical Engineering at Purdue University and courtesy appointment in Food Science. He earned his BS from Drexel University and MS and PhD degrees from Purdue University, all in chemical engineering. He has a broad background in bioscience and bioengineering, and has authored numerous journal papers, as well as a textbook. His research addresses fundamental topics in bioprocess engineering as it applies to bioproducts, biorecovery, and bio-nanotechnology. His research has resulted in new industrial bioenergy processes, and systematic approaches and correlations for scaling-up laboratory chromatographic purification techniques to process-scale manufacturing systems. He is currently investigating the scale-down of bioseparations and the rapid prototyping of microfluidic biochips for the rapid detection of pathogenic microorganisms. His discovery and learning activities engage bioproducts, biopharmaceutical, and biotechnology industries on a national basis, as well as industries and stakeholders in the State of Indiana.

Panelist: "Biofuels"

Lecture: "Grand Challenge #7 Meeting the Energy Demands of Our Growing Global Food System"

Lecture Abstract: How will fossil and bio-energy supply and demand change if the world were to experience a leveling off of birthrates, a decreasing demand for petroleum, and an increasing demand for food, feed, fiber, and bio-products accompanied by global climate change? This open-ended presentation will discuss possible roles of technology, societal changes, water availability, and economics in allocating resources for sustainable production of food and energy, and for achieving a higher standard of living on a global basis.

Vic Lechtenberg

Dr. Victor Lechtenberg served as Vice Provost for Engagement from 2004 to 2011, Interim Provost at Purdue from 2007-08, and Interim Vice President for Governmental Relations from 2008-09. He joined the Purdue faculty as a Professor of Agronomy in 1971 where he taught crop science and conducted research on forage and biomass crops until 1982. He served as Associate Director of Agricultural Research Programs and as the Executive Associate Dean of Agriculture from 1982-93, and was Dean of Agriculture from 1993-04. Since 2004, as Vice Provost for Engagement, he has led Purdue's engagement and outreach efforts to governmental agencies, corporate leaders, schools and community leaders across Indiana and beyond. He has written nearly 200 technical papers, abstracts, and book chapters. He served 6 years as chair of the U.S. Department of Agriculture's national Agricultural Research, Extension, Education and Economics Advisory Board.

Lecture: "Cultural, Social, Economic, and Policy Dimensions of Technology Transfer and Development"

Lecture Abstract: U.S. Land Grant Universities came into being at a time when science, especially science applied to food and agriculture, was nearly non-existent in the curriculum of the nation's universities. These institutions have evolved into the premier agriculture, engineering, and science universities of the world. They were created specifically to provide practical and useful education for working class people. Land Grant Universities are built on three interlinked missions: learning/teaching, discovery/research, and outreach/engagement to the people.

SPEAKER BIOGRAPHIES

Jess Lowenberg-DeBoer

Dr. Jess Lowenberg-DeBoer is Professor in the Department of Agricultural Economics, the Associate Dean and Director of International Programs in Agriculture (IPIA) at Purdue University. His research focuses on agricultural production economics, including soil fertility management, cropping systems, technology adoption, risk management and financing. Since 1997 he has been West Africa facilitator for the USAID Bean/Cowpea Collaborative Research Support Program (CRSP) working to build multidisciplinary teams and supervising CRSP social science research. Lowenberg-DeBoer has a master's degree in Agricultural Economics from Cornell University, Ithaca, New York, and a Ph.D. in Economics from Iowa State University, Ames. He joined the Purdue faculty in 1985, dividing his time between the West Lafayette campus and Purdue activities in West Africa. He returned in 1992 from a four year tour of duty in the Republic of Niger, West Africa, where he served as an economist and team leader for a Purdue University project.

Lecture: "Challenges and Opportunities in Technology Transfer: PICS Supply Change"

Lecture Abstract: Improving food security and rural incomes in developing countries requires improved technology in the hands of famers, traders, food processors and other rural entrepreneurs. The two essential components of that technology improvement process are: 1) upgrading the knowledge and skills of farmers and other entrepreneurs to enable them to use the new technology, and 2) developing profitable business models for the agricultural input and output supply chains. In business terms, component #1 is developing the market demand for the new technology and component #2 is supplying the inputs for and marketing the outputs from that new technology.

Maureen McCann

Dr. Maureen McCann is the Director of Purdue's Energy Center, part of the Global Sustainability Institute in Discovery Park. She joined Purdue in January 2003, where she is currently a Professor in the Department of Biological Sciences. The goal of her research is to understand how the molecular machinery of the plant cell wall contributes to cell growth and specialization, and thus to the final stature and form of plants. Plant cell walls are the source of lignocellulosic biomass, an untapped and sustainable resource for biofuels production with the potential to reduce oil dependence, improve national security, and boost rural economies. She is also the Director of the Center for Direct Catalytic Conversion of Biomass to Biofuels (C3Bio), an interdisciplinary team of biologists, chemists and chemical engineers in an Energy Frontier Research Center funded by the US Department of Energy's Office of Science. She obtained her undergraduate degree in Natural Sciences from the University of Cambridge, UK, in 1987, and then a PhD in Botany at the John Innes Centre, Norwich UK, a government-funded research institute for plant and microbial sciences. She stayed at the John Innes Centre for a post-doctoral, partly funded by Unilever, and then as a project leader with her own group from 1995, funded by The Royal Society.

Moderator for the Panel: "Biofuels"

SPEAKER BIOGRAPHIES

Paul McNamara

Dr. Paul McNamara is an Associate Professor in the Department of Agricultural Economics and in the Division of Nutritional Sciences and the Department of Family Medicine. He has been involved in international development and international research and work since 1982. He has experience in the Philippines, Mexico, The Gambia, Honduras, Indonesia, India, Uganda, Slovakia, and Sierra Leone. Paul completed his Masters in Public Policy at the Harvard Kennedy School and his PhD is from the University of Minnesota. He works on economic and public policy work related to health economics, nutrition, and economic development.

Lecture: "The Imperative of Strengthening Agricultural Extension Systems in Developing Countries and Some Ways Forward"

Lecture Abstract: Reaching farmers with improved technologies and linking farmers to markets are critical dimensions of programs to improve agricultural productivity and reduce rural poverty in developing countries. Extension programs fulfill this role in agricultural development. Despite the importance of extension, in many countries extension systems are essentially broken. Based on the work of the Modernizing Extension and Advisory Services Project and three related programs in developing countries, this presentation will survey the current extension situation and discuss ways to strengthen extension in developing countries.

Shannon Mesenhowski

Dr. Mesenhowski is a Global Health Fellows Program II (GHFP II) Fellow at USAID working as the Livestock Advisor for the Office of US Foreign Disaster Assistance (OFDA) in the Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA). Her job is to advise on livestock health, husbandry, and nutrition during disasters. In addition she provides advice on veterinary pharmaceuticals, direction on vaccines, equipment, supplies and training to livestock holders and community-based animal health programs in disaster response. To keep up with her clinical veterinary skills she also does relief veterinary work at Union Veterinary Hospital in Washington D.C. Prior to joining OFDA she was an American Association for the Advancement of Science (AAAS) Fellow working at USAID in the Bureau for Food Security on the President's Feed the Future Initiative Policy Team. Before transitioning to government she worked in private clinical veterinary practice doing both large and small animal work in Minneapolis, Minnesota and Myrtle Point, Oregon. She earned her Doctorate of Veterinary Medicine (D.V.M.) and Master of Public Health (M.P.H.) degrees from the University of Minnesota. Shannon is interested in the intersection of animal health, human health and the environment, as well as the impacts of livestock animal welfare on sustainability, profitability, and health in development.

Lecture: "Livestock's Role in Resilient Food Security"

Lecture Abstract: Globally, it is estimated that approximately 70% of the world's rural poor depend on livestock. How can the challenges in global food security - including land use, natural resources, gender, nutrition, and wise animal management - be addressed by engaging these populations? Through the development and humanitarian side of the United States Agency for International Development (USAID) as well as numerous international and national Non-Government Organizations (NGOs), we will explore current activity and discuss opportunities for your involvement in sustainable impacts around livestock in food security.

SPEAKER BIOGRAPHIES

Lisa Eakman Moon

Lisa Eakman Moon is the vice president for The Chicago Council on Global Affairs' global agriculture and food portfolio. Since 2006, The Chicago Council has undertaken studies on U.S. agriculture and food policy, global food security, the role of women and girls in developing country agriculture, and the nexus between agriculture and health. Prior to joining the Council in 2007, she worked with the Department of the Air Force's General Counsel Dispute Resolution division and the Center for Strategic and International Studies in Washington, D.C. Lisa holds a MA in Security Policy Studies from George Washington University and a BA in international studies, political science, and Spanish from Bradley University. She is on the community board of the Chicago High School for Agricultural Sciences; is a member of the Farm Foundation Round Table; and is currently a David Rockefeller Fellow of the Trilateral Commission.

Lecture: "Healthy Food for a Healthy World"

Lecture Abstract: This lecture lays out four key actions that can be taken by the US government—in partnership with researchers, business, and civil society—to leverage the agriculture and food sectors to improve nutrition and global health.

Susan Owens

Susan Owens is Acting Director of the Office of Agricultural Research and Policy in the USAID Bureau for Food Security and is the Executive Director of the USAID Board for International Food and Agricultural Development (BIFAD). Prior to joining USAID in 2010, Ms. Owens worked for nearly 10 years in the U.S. Department of Agriculture Foreign Agricultural Service as Director of the Foreign Agricultural Service (FAS) Trade and Scientific Capacity Building Division, bringing together government and university partners to resolve issues related to two-agricultural trade. She also served as Director and Deputy Director of the FAS Research and Scientific Exchanges Division, overseeing collaborative agricultural research, exchange and scientific capacity building programs with US universities and international partners. Ms. Owens has held other government positions at the Peace Corps, Department of State and previously at USAID. She worked five years with SRI International on international science and technology policy issues, and taught at Sophia University in Tokyo, Japan. Ms. Owens lived eight years overseas in Japan, France and West Africa, serving as a Peace Corps Volunteer in the Ivory Coast. She holds an M.A. degree in Political Science from Northeastern University in Boston, MA and completed three years of Ph.D. work in economic development and science and technology policy at George Washington University. She did graduate studies in international economics and political science at Trinity University in Hartford, CT. Ms. Owens holds a B.A. degree in sociology from Albertus Magnus College in New Haven, CT.

Lecture: "Keynote – Feed the Future Initiative: Research and Capacity Development Priorities"

SPEAKER BIOGRAPHIES

Karen Plaut

Dr. Karen Plaut joined Purdue University as Associate Dean and Director of Ag Research in the College of Agriculture on June 1, 2010. She is responsible for leadership of research programs in agriculture, food and natural resources including fiscal management, and a number of regulatory functions assigned by the Indiana State Legislature. She oversees the research budget, grants and contracts, eight regional Purdue Agricultural Centers, research farms, campus-based research facilities, and a number of research centers. She also coordinates agricultural research with the College of Health and Human Sciences and College of Veterinary Medicine, and assures effective linkage with other campus research communities and Cooperative Extension. She holds a B.S. in animal science from UVM, an M.S. in animal nutrition from Pennsylvania State University and a Ph.D. in animal science from Cornell University and completed her postdoctoral studies at the National Cancer Institute at the NIH.

Lecture: "The Purdue Plant Science Research and Education Pipeline"

Ambassador Kenneth M. Quinn

Dr. Kenneth M. Quinn, former U.S. Ambassador to the Kingdom of Cambodia, assumed the leadership of the World Food Prize Foundation on January 1, 2000, following his retirement from the State Department after a 32 year career in the Foreign Service. Inspired by the vision of Dr. Norman E. Borlaug, the founder of the World Food Prize, Ambassador Quinn has endeavored to build this annual $250,000 award into "the Nobel Prize for Food and Agriculture." Held each October in Des Moines on or around World Food Day (October 16), the World Food Prize Laureate Award Ceremony, "Borlaug Dialogue" international symposium and Global Youth Institute have grown in size and stature under his direction. A fluent speaker of Vietnamese, Dr. Quinn acted as interpreter for President Gerald Ford at the White House and personally negotiated the first ever entry by U.S. personnel into a Vietnamese prison to search for U.S. POW/MIAs. He was also a member of the first U.S. team to gain entry to a former Soviet prison in Russia. Ambassador Quinn, a graduate of Loras College in Dubuque, Iowa, has a M.A. in Political Science from Marquette University and a Ph.D. in International Relations from the University of Maryland.

Lecture: "Closing Remarks"

SPEAKER BIOGRAPHIES

Arvind Raman

Arvind Raman joined Purdue University in 2000 as an Assistant Professor following a PhD in Mechanical Engineering from the University of California at Berkeley (1999), an MS in Mechanical Engineering from Purdue University (1993), and a B. Tech in Mechanical Engineering from the Indian Institute of Technology, Delhi (1991). He was promoted to Associate Professor (2005), full Professor (2009) and named the Robert V. Adams Professor of Mechanical Engineering at Purdue University (2013). His research focuses on applications of nonlinear dynamics, vibrations, and fluid-structure interactions. His group has significantly advanced the understanding of complex dynamics in nanotechnology applications such as Atomic Force Microscopy (AFM) and micro- and nano-electromechanical systems (MEMS/NEMS), in gyroscopic systems for data storage and manufacturing, in electronics cooling, and in biomechanics. He has mentored sixteen PhD students, co-authored more than a hundred and twenty peer-reviewed journal articles, held visiting positions at the Universidad Autonoma de Madrid (Spain), University of Oxford (UK), and Darmstadt University of Technology (Germany), and secured funding from the NSF, NIH, NASA, NNSA, and several national and international industrial sponsors. At Purdue he has pioneered the use of cyber-infrastructure in the AFM community for research and education through advanced simulation tools and online classes which are used by thousands around the world and led College of Engineering strategic initiatives for global engagement in Latin America.

Lecture: "Role of Engineering in International Development – A Purdue Perspective"

Farzad Taheripour

Dr. Farzad Taheripour is a Research Assistant Professor in the Department of Agricultural Economics at Purdue University and associate of the Center for Global Trade Analysis (GTAP). Dr. Taheripour research interests are in the area of energy, natural resource, macro and micro economic modeling, and econometrics. He has published several papers and chapter books in these areas in recent years. His current research focuses on developing macro and microeconomic models to analyze and quantify economic and environmental consequences of biofuel production and policy. He is a key person in developing GTAP-BIO model and its database which have been frequently used by independent researchers, governmental agencies, and international organizations to evaluate the economic and environmental impacts of biofuels. He has received several research grants form national and international organization. He received his B.A. in Economics at Shiraz University and M.Sc. in Economic Systems Planning at Isfahan University of Technology, both in Iran. He received his Ph.D. degree in Agricultural Economics from the University of Illinois at Urbana-Champaign in 2006.

Panelist: "Biofuels"

SPEAKER BIOGRAPHIES

Ronald F. Turco

Dr. Ronald F. Turco is a Professor in the Department of Agronomy, Assistant Dean of Agricultural and Environmental Research, Director of Purdue's Global Sustainability Institute, and the Director of the Indiana Water Resources Research Center and the Purdue Water Community. He has B.S. degrees from the University of Idaho in Bacteriology and Soil Science and a Ph. D. from Washington State University in Soil Microbiology. His research program is divided over four areas: understanding the fate of introduced E. coli in soil and water and the role these processes play in such things as water and food contamination, developing a better predictive capacity to understand the environmental fate of manufactured nanomaterials (fullerenes, single wall carbon nanotubes and nanometals) in soil and water, defining the unintended consequences of using our soils resources for biofuel production and a long-term interest in the fate and degradation of organic materials and metals introduced to soil, the subsurface and water. He has authored many articles and reports and has delivered numerous invited and volunteered presentations. He has also managed numerous large projects from USDA, NSF and EPA. Dr. Turco teaches two graduate level courses: Soil Microbiology and a course titled Biotransformation of Anthropogenic Molecules. He also teaches an undergraduate course on Soil Ecology.

Lecture: "Writing Fundable Proposal"

Lecture Abstract: Dr. Turco will discuss the importance of grant writing, different institutions providing funding, timeline of writing a proposal, the review process and defining characteristics of a successful proposal.

Elizabeth Trybula

Elizabeth is currently a Ph.D. student at Purdue University. She has been studying Ecological Sciences and Engineering through the Agronomy Department and is planning to graduate in December 2015. Her work focuses on the water and nutrient use efficiencies of cropping systems. Elizabeth was awarded a Borlaug Fellowship in 2013 and was able to study crop water productivity response to conservation agriculture in South Africa. Prior to her studies at Purdue, Elizabeth completed her B.A. in Biology and French from Anderson University. Her training there included coursework through Au Sable Institute of Ecological Studies, specifically in Agroecology and Large Mammal Conservation in Kenya. She obtained her M.S. in Agricultural and Biological Engineering from Purdue University. Her thesis focused on the transitional impacts of perennial cropping systems on subsurface drainage and water quality. Her long-term profession goals include developing technical skills to apply environmental systems resources into agricultural landscapes for improved air, soil, and water quality.

Panelist: "Perspectives on Ecosystem Services and the R4D Context"

SPEAKER BIOGRAPHIES

Connie Weaver

In 2013, Dr. Weaver was bestowed the honor of the Spirit of the Land Grant Award. In 2012 she was selected as the Herbert Newby McCoy recipient. This award is the most prestigious research honor given by Purdue University. In 2010 she was elected to membership in the Institute of Medicine of The National Academies, of which she is a member of the Food and Nutrition Board. Also, in 2010 the Women's Global Health Institute (WGHI) was formed at Purdue University. As founder and director, Dr. Weaver oversees the mission of improving the health of women globally through research and training by proactively identifying the causes and prevention of diseases related to women. In 2008, she became Deputy Director of the National Institutes of Health funded Indiana Clinical and Translational Science Institute. From 2000 to 2010, she was Director of the NIH Purdue-UAB Botanical Research Center to study dietary supplements containing polyphenolics for age-related diseases. Her research interests include mineral bioavailability, calcium metabolism, and bone health. Dr. Weaver was appointed to the 2005 Dietary Guidelines Advisory Committee for Americans. She has published over 260 research articles.

Lecture: "Grand Challenge #6: Nutrition and Food Security"

Lecture Abstract: Dr. Weaver will present a thorough understanding of the double burden of disease for under nutrition and over nutrition all over the world. Common diseases that arise from poor diets, current programs to combat poor nutritional security, and steps forward to feed the world and meet nutritional needs will be discussed. Micronutrient inadequacies can be met by altering diet patterns (i.e. meeting dietary guidelines.), through fortification and enrichment of foods, or through dietary supplements. Processed foods are particularly controversial at this time, but processing is necessary to feed the world. Processing makes food available all year, reduces waste, makes food safe, and can improve nutrition.

Terry Wollen

Originally from Kansas, he graduated from Kansas State University, College of Veterinary Medicine in 1972. Following two years in the United States Army Veterinary Corps, stationed at the Port of Embarkation in New Orleans, he then joined a food animal practice in Nampa, Idaho, where he developed skills in beef, dairy and equine medicine. Terry then joined Bayer, Animal Health Division, as a Technical Services veterinarian that merged into pharmaceutical clinical development, working on very interesting products, such as the fluoroquinolone enrofloxacin for cattle and the hyaluronic acid product for horses. After 20 years at Bayer, Terry and his wife went into the international NGO field where he served as the Head of Mission for the international NGO *UMCOR* in Armenia. After four years there, they joined *Heifer International*, working initially in four of Heifer's Asia country offices and finishing 10 years at the headquarters in Little Rock. To wrap up his working career, Terry signed on to a three year Global Health Fellows program in the Office of US Foreign Disaster Assistance (OFDA), which is the disaster response arm of USAID. In OFDA, Terry served as the Livestock and Animal Health Advisor in disaster response programs, primarily in Africa. Terry continues to serve on short term assignments to strengthen livestock practices in developing countries.

Lecture: "Livestock's Role in Resilient Food Security"

Lecture Abstract: ***See Shannon Mesenhowski's Lecture Abstract***