



NATIONAL CONFERENCE ON COVER CROPS & SOIL HEALTH

SPEAKERS

PLENARY PRESENTERS



David Montgomery is a MacArthur Fellow and professor of geomorphology at the University of Washington. He is an internationally recognized geologist who studies landscape evolution and the effects of geological processes on ecological systems and human societies. An author of award-winning popular-science books (*Dirt: The Erosion of Civilizations*, *The Rocks Don't Lie*, and *The Hidden Half of Nature*), he has been featured in documentary films, network and cable news, and on a wide variety of TV and radio programs, including NOVA, PBS NewsHour, Fox and Friends, and All Things Considered. When not writing or doing geology, he plays in the band Big Dirt. He lives in Seattle with his wife Anne Biklé and their black lab guide-dog dropout Loki.



Dan DeSutter farms 4,500 acres in west-central Indiana with his wife and three sons. Formerly a financial analyst and commodity broker, Dan uses no-till, cover crops, and manure to improve soil quality while maintaining high levels of crop production. In 2013, he was selected National No-Till Innovator of the year. A partner in Hoosier Grassfed Beef, Dan is active in his community and has served as president of the Attica School Board and the Attica Community Foundation. He is also an avid pilot and skier.



Jimmy Emmons is a third generation family farmer and rancher. He and his wife Ginger operate 2,000 acres of farmland and about 7,000 acres of rangeland. They have been no-tilling since 1995 and cover cropping with a soil health system for the last six years. The system includes a diverse rotation of crops as well as Adaptive Multi-Paddock (AMP) grazing of covers and native range management. The range management includes rotational grazing as well as intensive grazing or AMP grazing on target areas or paddocks.



Trey Hill is a fourth generation grain farmer from Rock Hall, Maryland, who tills corn, wheat, and soybeans. Trey holds a degree in farm management and economics from Purdue University. He currently sits on the board of the Sassafras River Association and the Hughes Center for Agroecology. Trey has been committed to improving agriculture sustainability and is leading the way in responsible agriculture and bridging the gap between environmentalists and agriculturalists. He believes that with the right farming practices, farmers can improve the quality of life, land, and waterways.



Rob Myers is Regional Director of Extension Programs for the USDA North Central Region Sustainable Agriculture Research and Education (SARE) program. He oversees a number of projects related to cover crops and soil health both regionally and nationally for the SARE program. He also holds an appointment as an adjunct faculty member in the Plant Sciences Division at University of Missouri. His professional expertise encompasses sustainable agriculture, conservation, cover crops and soil health. He has done field research on cover crops and is a frequent speaker on topics related to cover crops and soil health. He recently served as

co-chair of the National Working Group on Cover Crops and Soil Health. His PhD in agronomy is from University of Minnesota, and he grew up on a family farm in central Illinois.



Keith Berns combines over 20 years of no-till farming with 10 years of teaching agriculture and computers. In addition to no-tilling 2,500 acres of irrigated and dryland corn, soybeans, rye, triticale, peas, sunflowers, and buckwheat in south-central Nebraska, he also co-owns and operates Green Cover Seed, one of the major cover crop seed providers and educators in the United States. Through Green Cover Seed, Keith has experimented with over 100 different cover crop types and hundreds of mixes and has learned a great deal about cover crop growth, nitrogen fixation, moisture usage, and grazing utilization of cover crops. Keith also developed the SmartMix Calculator™, one of the most widely used cover crop selection tools on the internet.

BREAKOUT PRESENTERS



Shalamar Armstrong is an assistant professor of agronomy with a focus area of soil conservation and management at Purdue University. Currently, he is the director of the Soil Ecosystem and Nutrient Dynamics Laboratory at Purdue University and the Nitrogen Management Research Field Station in Lexington, Illinois. The overarching goal of his research program is to determine the agronomic, environmental, and economic benefits of cover crop inclusion within conventional and alternative cropping and nutrient management systems. Within the last seven years, the impact of Shalamar's research program has been recognized on a national level by several awards and numerous invited presentations to share his research findings with farmers, agricultural commodity groups, extension agents, and state/government soil conservation agents.



Betsy Bower has been a trusted agronomic voice for over 25 years in the Indiana agriculture community. Betsy works as a professional certified crop adviser for Ceres Solutions Cooperative, a large retailer operating more than 40 agronomy service locations across Indiana and into Michigan. Betsy's areas of expertise include working with no-till and conventional customers on improving their cropping system regarding nutrient management and pest control. Betsy holds a degree in agronomy from Purdue University and a master's degree in agronomy from the University of Nebraska. For almost 10 years, she has been instrumental in developing success strategies for farmers in the areas of conservation agronomy and resource management. Betsy is trusted to help develop programs for nitrogen management, cover crops, and soil moisture management.



Sarah Carlson is the Midwest Cover Crop Director for Practical Farmers of Iowa. She helps transfer agronomic research about cover crops and small grains through supply chain projects, articles, blogs, and presentation materials, while working to improve the support for cover crop and small grains research. She also serves as the staff agronomist transferring ideas for solutions to integrated crop and livestock concerns from farmers' stories, results from on-farm research projects, as well as her own knowledge as a trained agronomist. Sarah has a degree in biology and geography from Augustana College. Following her Peace Corps service as an ag-business and ag extension volunteer in Ecuador, Sarah returned to the Midwest and completed her masters degree in sustainable agriculture and crop production/physiology at Iowa State University.



Bill Curran is a professor in the Penn State Department of Plant Science. Bill has an extension-research split and has statewide responsibilities for weed management education in agronomic crops. His extension program focuses on providing his agriculture constituents with the latest weed management information and his extension program is very much tied to his applied research program. He regularly develops outreach information that includes annual production of the *Mid-Atlantic Weed Management Guide*, targeted factsheets on problem weeds, and timely newsletter articles. Bill conducts research on weed biology and ecology, integrated weed management, and weed management in conservation tillage systems; and has a long history of conducting research focused on cover crop management.



Risa DeMasi grew up on a beef farm in Oregon, learning the value of hard work and the volatility of agriculture. She began her seed career at Olsen-Fennell Seeds and held numerous positions in the company. In 2000, she co-founded Grassland Oregon, which functions as a breeder, producer, and provider of a wide range of seed products and knowledge, including a focus on cover crops. At Grassland Oregon, Risa oversees marketing, sales, education, and government affairs. In 2013, Risa became the first woman to serve as an officer of the American Seed Trade Association (ASTA) in its 130-year history and served as chairman of the Board in 2015-2016. She remains on ASTA's Board and has helped to create and develop the Cover Crop Working Group, which continues to advance the industry's interests through national and international policy debates.



Darin Eastburn is an emeritus professor of plant pathology in the Department of Crop Sciences at the University of Illinois at Urbana-Champaign. He received his bachelor's degree in botany from Humboldt State University in California, and his master's and PhD degrees in plant pathology from the University of California, Davis. He joined the faculty at the University of Illinois as an extension specialist, working with the commercial vegetable production industry. He later transitioned to a research/teaching position, and his research focused on soilborne fungi, the effects of environment on disease development, and on alternative plant disease management strategies. Recent projects included studies on disease aspects during the transition to organic production, on the effects of climate change on corn and soybean diseases, and on effects of cover crops on diseases in soybeans.



Gary Farrell grew up on a dry land farm in northwestern Idaho. After school he went to work in the retail fertilizer and agriculture chemical business, where he has spent the last 42 years. For the last 31 years Gary has owned and operated his own company, serving the crop production needs of his customers in the eastern Washington dry land market. He is the past chairman of the Ag Retailers Association, a member of the National Cover Crop Committee, and currently serves as co-chairman of the Washington State Soil Health Committee.



Barry Fisher, the Central Region Leader for the Soil Health Division of USDA-NRCS, provides soil health management systems technical leadership, training, and assistance to NRCS, farmers, and partners throughout the Corn Belt and Northern Plains. He assists with state and regional conservation cropping systems initiatives, serves on the National Soil Health Training Cadre for NRCS, and represents NRCS on the Midwest Cover Crops Council and North Central SARE Advisory Council. Barry was recently recognized as one of the 25 Living Legends of No-Till and was given the Conservation Legacy Award from NRCS for his contribution to the "Unlock the Secrets of the Soil" campaign. Barry is also a certified crop advisor, and he and his wife Michael operate a cash grain and livestock farm in west-central Indiana.



Will Glazik is a graduate of the University of Illinois in crop sciences, where he specialized in soils and fertility. After graduation he started working in retail fertilizer and has continued to use cover crops as a way to maximize nutrient cycles, weed control, and slow erosion. Will also farms and utilizes cover crops on every acre each year, which gives him the opportunity to experiment with new cover crops and cover crop mixes.



Steve Groff and his family, farm 265 acres of cash grain crops, pumpkins, and heirloom tomatoes in Lancaster County, Pennsylvania. For the past 22 years, his Cedar Meadow Farm has conducted thousands of cover crop research trials, out of which he developed the well-known Tillage Radish. Steve founded Cover Crop Coaching, a business that “trains the trainers” on how to talk to farmers about effective cover crop use.



Wayne Honeycutt is the president and CEO of the Soil Health Institute, where he leads the Institute’s programs to safeguard and enhance the vitality and productivity of soils. He previously served for 5 years as the Deputy Chief for Science and Technology with USDA-NRCS in Washington, DC; and for 10 years as a Research Leader and 14 years as a Research Soil Scientist with the USDA-ARS New England Plant, Soil, and Water Laboratory. Wayne’s commitment to agriculture is rooted in his experiences with raising tobacco, corn, and other crops on his family’s 120-acre farm in Metcalfe County, Kentucky. He holds a bachelor’s degree in forestry and master’s degree in soil science from the University of Kentucky, and a PhD in soil genesis from Colorado State University.



Jim Hoorman is the new NRCS Northeast Soil Health Specialist for Ohio and Michigan. He was an assistant professor and extension educator for Ohio State University Extension for 25 years specializing in soil health, cover crops, nutrient recycling, and water quality. Jim has worked with cover crops and no-till for over 15 years promoting soil health principles throughout the United States and the world.



Tom Kaspar is a plant physiologist at the USDA-ARS National Laboratory for Agriculture and the Environment in Ames, Iowa, and has been with ARS since 1981. Over his career, his research has focused on crop and soil management to improve water quality and soil productivity. Since 1990, he has worked on the benefits and management of winter rye as a cover crop in corn and soybean rotations in Iowa.



Eileen J. Kladvik is professor of agronomy at Purdue University, where she teaches and does research and extension work in soil physics, soil biology, and soil management. Her research studies have included cover crops, soil health, earthworms, no-till, drainage, and water quality over the past 35 years. She is a founding member of the Midwest Cover Crops Council.



Eric Lee-Mäder is the Pollinator Conservation and Agricultural Biodiversity Co-Director at the Xerces Society for Invertebrate Conservation. In this role, Eric works across the world with farmers, major food companies, and agencies such as the USDA-NRCS and the United Nations Food and Agriculture Organization to enhance biodiversity in agricultural lands. Since 2008, Eric and his team have supported large-scale habitat restoration for pollinators across more than 400,000 acres throughout the United States. Eric’s professional background includes previous work as an extension farm educator, commercial beekeeper, and crop consultant for the seed industry. Eric is the author of several books, including the best-selling *Attracting Native Pollinators* and *Farming with Beneficial Insects: Strategies for Ecological Pest Management*.



Steven Mirsky is a research ecologist for the USDA-ARS in the Sustainable Agricultural Systems Laboratory located in Beltsville, Maryland. His formal training includes an MS in soil science/fertility and PhD in agronomy. Steven conducts research on the multifunctional role of cover crops and the extent to which they influence field crop production including crop productivity, weed suppression, nitrogen and water use efficiency, and carbon and nitrogen cycling. His program focuses heavily on how cash and cover crop management, soil, and climate influence cover crop performance and the services provided. Steven serves as project director for the National Legume Cover Crop Breeding program, partners with The Noble Research Institute on cereal and brassica cover crop breeding, and is chair of the Northeast Cover Crop Council.



Bianca Moebius-Clune directs the USDA-NRCS Soil Health Division in Washington, DC, and has led the deployment of its staff of regional and national specialists who provide training, technical assistance, science and technology acquisition, and leadership to the soil health movement across the country. Bianca came to the agency from Cornell University, where she was a Senior Extension Associate and Lecturer with research and extension responsibilities in soil health assessment and management and in weather-based precision nitrogen management. She has authored numerous peer-reviewed and extension publications and has provided workshops and trainings nationally and internationally. Bianca has conducted research on agricultural management impacts on soil health and nitrogen dynamics in the Northeast and Midwest, as well as in Kenya, and developed a framework for soil health management planning. She holds PhD and MS degrees from Cornell University and a BS from University of New Hampshire, all in soil science.



Jennifer Moore Kucera is the West Regional Soil Health Team Leader for the NRCS Soil Health Division, where she leads a team to support the agency's soil health activities in 13 western states and the Pacific Islands. Jennifer holds a PhD in soil science with an emphasis on soil microbial ecology. Prior to joining NRCS, she was an associate professor at Texas Tech University. Her research involved a multidisciplinary approach to answer field to landscape level questions about soil management and impacts on air and water quality and soil health. She continues this approach in her role with NRCS and strives to help translate current research on soil health to the landscape and develops training materials and curricula on soil health topics to help build capacity within the agency.



Jim Mosley has been farming for 47 years and has two tenures at USDA as Undersecretary for Natural Resources and the Environment and Deputy Secretary. He has also served as Agricultural Adviser to the Administrator of EPA and Director of Agriculture for the State of Indiana. Jim is currently the co-chair of AGree and has worked extensively in natural resource and environmental issues at the national level. He applies current conservation technology to his own farm as well.



Tim Palmer is first vice president of the National Association of Conservation Districts and a farmer from Madison County, Iowa. Tim farms with his wife Shelly and sons Geoff and Greg. He raises corn, soybeans, and hay, and has a 120 head of cattle. The calves are fed to finish. Tim uses cover crops to protect soil from eroding, build organic matter, and to provide late fall and spring grazing for the cows.



Josh Payne is a retired high school English teacher, corn/soybean/wheat farmer, agroforestry enthusiast, and part-time pastor. Joining his story is his wife, Larin, and their three young children—Reina, Ella, and Jacob. Currently, Josh is enrolled at Central Baptist Theological Seminary, where he is working on a MDiv in theology. Along with his 89 year old grandfather, Josh farms 600 acres in Missouri, most of which has continuous living cover, and stubbornly refuses to pick up more.



Chris Reberg-Horton received his BS at the University of North Carolina at Chapel Hill in environmental science and his MS from the University of California at Davis where he worked on crop modeling. After working with cooperative extension in California and North Carolina, he returned to graduate school at North Carolina State where he worked on his PhD. After graduation, he took a position with the University of Maine as assistant professor of sustainable agriculture where he worked with organic dairy farmers on grain and forage production. Currently, Chris researches weed management in organic soybeans, reducing tillage in organic systems, and collaborating with plant breeders on developing better cover crop cultivars. He is the SARE professional development coordinator for North Carolina State and is Assistant Director of Collaborative Research at the Center for Environmental Farming Systems.



Matt Ruark is the lead scientist in the Nutrient Cycling and Agroecosystems Laboratory at University of Wisconsin-Madison. His research and extension program focuses primarily on nitrogen, phosphorous, and carbon management across grain, dairy, and vegetable production systems. Matt has a BS and MS from the University of Minnesota and PhD from Purdue.



Ken Rulon earned a BS degree from Purdue University. After college, he spent 10 years off the farm, ending his non-farm career as a marketing manager for GE Plastics. Ken purchased a share of the family partnership and returned to the farm in 1991. He was named *Top Producer* magazine's Best Farm Marketer in 1993 and has given numerous presentations over the years concerning marketing, risk management, and the economics of soil health.



Rodney Rulon, a member of Rulon Enterprises, LLC, has been farming full time since graduating from Purdue University with an M.S. in Agricultural Systems Management. Rulon Enterprises is a fourth-generation family farming operation that includes more than 6,000 acres of no-till corn and soybeans in central Indiana as well as a farrow-to-finish hog operation (Bryant Premium Pork LLC), a Beck's Hybrids seed dealership, The Peer Network (a subscription-based ag discussion group), custom drainage design and installation business, and several other custom services. Rodney currently serves as chairman of the Hamilton County Soil and Water Conservation District board and volunteers with his church, Boy Scouts, helps with their youth sporting clays team, and is a 4-H project leader. Rulon Enterprises received the No-Till Farmer Magazine/Syngenta's National No-Till Innovator Award in 2011 based on Rodney's efforts focused on improving soil health and the economics of conservation production practices, and received the ASA Regional and National Conservation Legacy Award in 2012.



Jamie Scott of Kosciusko County, Indiana, farms 2,000 acres as part of a family operation. He also provides sales and service for cover crop seeding in northern Indiana, southern Michigan, and northwestern Ohio. The service includes a "turn-key" aerial seeding operation. The operation was an early adopter of conservation tillage. Now all tillable acres are no-tilled and have had cover crops planted for the past nine years. He had been a supervisor and chairman for the Kosciusko County SWCD and currently serves as chairman of the Indiana Association of Soil and Water Conservation Districts (IASWCD). The family has implemented many conservation practices and earned recognition as the IASWCD Conservation Farmer of the Year and both regional and national Conservationist of the Year awards from the American Soybean Association. A spring workshop and field demonstration on cover crops has been held for the last three years.



Erin Silva is an assistant professor in the Plant Pathology Department at the University of Wisconsin-Madison. Her research and extension program focuses on sustainable and organic cropping systems, including cover crops and cover crop-based no-till production, and the impact of organic management on soil biological and physical properties. Her teaching responsibilities include, “Food, Sustainability, and Climate Change” and “Organic System Health.” With Anders Gurda, Erin has launched a comprehensive organic grain training program for farmers in the upper Midwest called “OGRAIN.” Erin works closely with organic farmers and industry members both in Wisconsin and throughout the United States and serves as co-facilitator of the Wisconsin Organic Advisory Council.



Brandon Smith is the Northeast Region Team Leader for the national USDA-NRCS Soil Health Division. He provides technical assistance and training on soil health management planning to Northeast NRCS staff and external partners in the region’s varied production systems. He earned his PhD from Cornell and a MS and BS from the University of New Hampshire. He has extensive experience with cover cropping, conservation tillage, mineral nutrition, root micronutrient uptake mechanisms, and organic production systems.



Ryan Stockwell is the Director of Sustainable Agriculture for the National Wildlife Federation, where he leads the cover crops program including policy development, research coordination, and farmer champion communication training. Ryan has a PhD in history from the University of Missouri, a master’s in history from Miami University, and a bachelor’s degree in social change and development from the University of Wisconsin-Green Bay. In his spare time he farms near Medford, Wisconsin, using no-till cover crop methods. He serves on the North Central SARE (Sustainable Agriculture Research and Education) Administrative Council and is also a board member for the Midwest Cover Crops Council.



Sami Tellatin is a project manager with the Sustainable Agriculture Research and Education Program (SARE) and University of Missouri Extension. She works to review and synthesize existing data documenting the impacts of cover crops on soil loss, nutrient loss, infiltration, and soil organic matter in agricultural production systems, and uses the data to create educational resources for the general public. Sami is also working to organize SARE’s national “Our Farms, Our Future” conference to be held in April of 2018. She has her BS in biological engineering from the University of Missouri-Columbia and has experience working on organic and biodynamic farms in Missouri and Costa Rica. Sami currently works remotely in Oregon.



Dan Towery is field manager for the Soil Health Partnership and operates Ag Conservation Solutions in Lafayette, Indiana, which specializes in continuous no-till, cover crops, and soil health. He focuses on the “how and why” a healthy soil becomes more resilient and can be the most profitable production system, which also enables growers to improve the environment. Dan served on the Soil and Water Conservation Society’s Board of Directors for six years and was president from 2012 to 2014. He spent 25 years with the USDA-NRCS, which included positions as the Illinois state agronomist and a staff agronomist at the Conservation Technology Information Center. Dan is from Illinois and has a BS from Western Illinois University.



Danielle Treadwell fell in love with cover crops as an undergraduate intern at North Carolina State. She earned her graduate degrees there, researching living mulches and rotational cover crops in organic vegetable systems. Her research program is focused on conservation tillage strategies in organic vegetable systems, and she continues that work today as an associate professor and state extension specialist at the University of Florida in Gainesville. She provides statewide leadership for resource conservation in vegetable systems of all sizes and production approaches, as well as farm food safety and food system development. She is an active member of the Southern Region Cover Crop Council and dreams about a world where every farmer uses cover crops.



John Wallace is a new Assistant Professor of Specialty Crop Systems at Cornell University. His program will broadly focus on weed ecology and management in conventional and organic cropping systems that utilize cover cropping and reduced-tillage practices, with particular interest in the design of integrated weed management strategies that are compatible with soil-building and soil-conserving practices.



Alan Weber is a founding partner of MARC-IV, a consulting company that fosters the development of biobased innovations that benefit agriculture and enhance our environment. In addition to his activity with MARC-IV, Alan is actively engaged with the management and operation of his family's farm in central Missouri, which includes the use of cover crops.



Ray Weil is professor of soil science at the University of Maryland and a Fellow of both the Soil Science Society of America and the American Society of Agronomy. He has twice been awarded Fulbright Fellowships to support his work in Africa. He is known for his ecological approach to soil science as coauthor of the 11th-15th editions of the textbook, *The Nature and Properties of Soils*. His research focuses on soil organic matter management for enhanced soil ecosystem functions and nutrient cycling for water quality and agricultural sustainability. The analytical methods that his lab developed for soil microbial biomass and active soil C (POXC) are used in ecosystem studies and soil health assessment worldwide. He is an expert at diagnosing soil-related problems in the field and has worked with the Ag Center at Columbia University to develop the SoilDoc, a portable lab for on-the-spot soil analysis to assist in field diagnosis.



Justin Zahradka graduated from North Dakota State University (NDSU) with a BS in crop and weed science and a minor in soil science. Justin grew a 40-acre cover crop demonstration trial in Walsh County, North Dakota, in cooperation with NDSU Extension, North Dakota SARE, and Walsh County Three Rivers Soil Conservation District to determine average daily gains of beef cattle while grazing cover crop. Since then, he has grown different cover crop mixtures each year to extend the grazing season, track nitrogen fixation, and measure soil quality indicators. He was named the Future Farmers of America (FFA) American Star in Agriscience and was recently awarded the 2017 Soil and Water Conservation Society Honor Award for his conservation efforts. Justin now farms growing wheat, canola, field peas, and cover crops while expanding his cow/calf and custom grazing operations.