

Achieving Net Zero C Emissions in U.S. Agriculture through Soil Health

September 22, 2020



Dr. Wayne Honeycutt, Soil Health Institute

Dr. Wayne Honeycutt leads the Soil Health 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, where he led programs in technology acquisition, development, and transfer to ensure NRCS conservation practices reflect the latest scientific advances for conserving our nation's soil, water, air, plant, animal, and energy resources. He served as a Research Soil Scientist for 14 years and a Research Leader for 10 years with the USDA-ARS New England Plant, Soil, and Water Laboratory, where he led and conducted interdisciplinary research on carbon, nitrogen, and phosphorus cycling and sustainable cropping systems development. In those roles, he led national research teams for predicting nutrient availability, developed procedures adopted by ARS for enhancing national research coordination, and received regional and national awards for technology transfer.

He is a graduate of the "Mastering the Art of Public Leadership" executive development program at the Brookings Institution in Washington, DC and USDA's "Performance Excellence and Knowledge" executive development program. He has served on assignments to the U.S. Senate's Homeland Security and Governmental Affairs Committee, USDA-ARS National Program Staff, and USDA-ARS Area Office Staff.

Dr. Honeycutt'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 Ph.D. in Soil Genesis from Colorado State University. He was the 2018 recipient of the Hugh Hammond Bennett Award, the highest honor bestowed on an individual by the Soil and Water Conservation Society.

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Dr. Cristine Morgan, Soil Health Institute

Dr. Cristine Morgan is responsible for developing and establishing the scientific direction, strategy and implementation plan for the Soil Health Institute research programs and establishing the research priorities for the Institute. Her duties include leading the scientific research and coordinating projects carried out at various institutions that advance soil health science and result in useful and reportable results.

Prior to joining the Institute, Dr. Morgan was Professor of Soil Science at Texas A&M University in College Station, Texas, where she was recognized for outstanding collaboration, teaching, research, and mentoring. Her emphasis was in soil hydrology, pedometrics, and global soil security. Among her many accomplishments, Dr. Morgan conducted ground-breaking research on how management practices influence soil-plant-water relations. She also developed methods that were adopted by USDA for easily measuring soil carbon. She has a history of applying her knowledge for addressing real-world problems experienced by farmers and ranchers and is passionate about educating others.

Dr. Morgan serves on the board of directors for the Soil Science Society of America, is an editor in chief at the global soil science journal, *Geoderma*, and participates in committees for the International Union of Soil Sciences.

Dr. Morgan earned her M.S. and Ph.D. in Soil Science from the University of Wisconsin-Madison, Soil Science Department (2000 and 2003 respectively). Her B.S. degree is in Plant and Environmental Soil Sciences from Texas A&M University, magna cum laude (1998).



Mr. Ryan Sirolli, Cargill

Mr. Ryan Sirolli is the Global Row Crop Sustainability Director for Cargill. In his role, he is responsible for leading strategy development and implementation of row crop sustainability programs and initiatives across Cargill's enterprises. Focus areas include optimizing farmer productivity and prosperity while lessening impact on water and climate through scalable adoption of soil health best practices and supply chain alignment. Mr. Sirolli has spent his entire career working along the food and agriculture value chain. His experiences range from managing a row crop and beef operation in Maryland to creating integrated supply chain solutions between dairy producers, growers and consumer packaged goods (CPG) companies. Most recently, he has led the launch of a soil health program at a global FMCG before returning to Cargill to lead row crop sustainability within Cargill's Sustainability Hub. Mr. Sirolli holds a B.S. in Animal Science from Virginia Tech and a M.S. in Economics from the University of Delaware.

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Dr. Dianna Bagnall, Soil Health Institute

Dr. Dianna Bagnall serves as Research Soil Scientist for the Soil Health Institute. From 2014 to 2016, she served as a project manager for AgriLife Research's Corporate Relations Office, developing proposals and managing projects. She managed sponsored research projects in soil and crop science, renewable energy, and agricultural engineering. In 2016, she joined the newly established Soil Security Team at Texas A&M University composed of soil scientists, economists, and sociologists. Her Ph.D. research received departmental and international recognition and included on-farm soil health assessments, qualitative analysis of farmer interviews, and development of novel soil structure scanning methodology.

Dr. Bagnall received an M.S. in Soil Science at Texas A&M University in 2014 working on a National Science Foundation project. The research used both modeling and field experiments to investigate water movement on shrink-swell clay soils in Texas.



Mr. Leo Pradela, Walmart.org

Mr. Leonardo Pradela ("Leo") is a senior manager at the Walmart.org team, designing shared value strategies that create long-term social, environmental and economic sustainability. He leads the implementation of philanthropic portfolios for the Walmart Foundation in the areas of regenerative agriculture and deforestation. Over the last 10 years, Leo worked both in the non-profit and private sectors developing programs for environmental sustainability and agricultural development, with activities in 4 continents and over 20 countries. Leo received his B.A. in International Relations from PUC-Rio, and his MPA in Environmental Science and Policy from Columbia University.

OUR MISSION: SAFEGUARD AND ENHANCE THE VITALITY
AND PRODUCTIVITY OF SOIL THROUGH SCIENTIFIC
RESEARCH AND ADVANCEMENT
