WORKSHOP ONE – PROJECT ORIENTATION AND SOIL HEALTH PRINCIPLES

SEPTEMBER 24 AND 25, 2018 ● CORTLAND, NY

Speakers

Paul Salon

Soil Health Specialist, paul.salon@ny.usda.gov

Plant Materials Center, USDA-NRCS New York

Paul Salon, Ph.D. has worked for the USDA-Natural Resources Conservation Service (NRCS) since 1978. Paul has worked as a Soil Conservationist and District Conservationist at field offices in New York State for over a decade planning and implementing conservation practices with farmers and other landowners. Since 1987 Paul has worked as a Research Agronomist at the USDA-NRCS Big Flats Plant Materials Center a 200 acre research facility. He became part of the NRCS Soil Health Division Team in 2016. As a Research Agronomist he has conducted research developing plants and methodology to utilize plants to solve conservation problems. Paul has worked on the establishment and management of cover crops since 1987. He received two Sustainable Agriculture Research and Education Grants for work on the establishment and utilization of a native grass, eastern gamagrass, for forage production; and for the development of a cover cropping system for silage corn production which included the management and interactions of the crop, weeds and cover crops with herbicides. This project was evaluated for soil health and soil biology by the Cornell soil Health Lab and the NRCS National Soil Survey Lab. Paul initiated and collaborated with the National Soil Survey Lab and USDA-ARS on a project evaluating the soil biological and physical properties in silage corn systems with and without tillage and fall seeded cover crops in Pennsylvania. He has organized numerous workshops on cover crops and soil health at the Big Flats Plant Materials Center and on farms. He has written The Guide: To: Conservation Plantings on Critical Areas in the Northeast. Paul received a B.S. degree in Ornamental Horticulture and a Ph.D. in Plant Breeding from Cornell University. He holds a professional certification as a Certified Crop Advisor, Certified Pesticide Applicator and is a member of the American Society of Agronomy, Soil Science Society and the Soil and Water Conservation Society.

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David W. Wolfe

Professor of Plant and Soil Ecology, dww5@cornell.edu

School of Integrative Plant Science at Cornell University

David Wolfe the project leader for the New York Soil Health research and outreach program (www.newyorksoilhealth.org), and author of the award-winning popular science book on soil ecology, *Tales From the Underground: A Natural History of Subterranean Life*. He is also a leading authority on climate change adaptation and mitigation in the agriculture sector, including soil carbon sequestration and monitoring. His work is both regional and international, with several recent soil conservation and climate change resilience projects in Ethiopia, Malawi, and Kenya. At Cornell he teaches "Climate Change and Food Security". For more information, see his website: www.hort.cornell.edu/wolfe.

Amy Langner

Resource Soil Scientist, amy.langner@ny.usda.gov

Marcy Service Center, USDA-NRCS New York

Amy Langner has a Masters in Soil Science from Iowa State University. One of her favorite classes was Soil Management with Rick Cruse. Looking back, she can see that it was actually a "soil health" course at the time. Amy was hired by the Natural Resources Conservation Service to assist with initial mapping in the Adirondacks and Tug Hill Plateau out of the Lowville, NY soils office. She currently works as a soil scientist for the Natural Resources Conservation Service in Marcy, NY completing on-site wetland determinations and providing technical soil services for 9 assigned counties in New York and wherever needed. Ongoing data collection includes soil temperature and water table measurements in Lewis and Madison Counties. Teaching events and workshops include Conservation Field Days, Envirothons, Conservation Skills, Empire Farm Days, CCE events, Cobleskill and Morrisville events, STEM teacher training, and the Water Quality Symposium. Many teaching events involve soil health or some aspect of it like soil compaction. She is a member of the Soil Science Society of America, NY NRCS Soil Health Committee, and NY Soil Health Interagency Group.

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Janice Thies

Associate Professor of Soil Biology; International Professor of Soil Ecology, janice.thies@cornell.edu

Soil and Crop Sciences Section at Cornell University

Janice Thies was a key contributor to the Cornell Extension Soil Health Program Work Team and is co-author of the "Comprehensive Assessment of Soil Health – the Cornell Framework" training manual. She has served as an expert consultant to many national and international organizations and is currently the Action Team Chair for the Research Action Team with the Soil Health Institute. Her research program in soil ecology focuses on developing, testing and implementing methods to assess soil biological quality, remediate degraded soils, and improve soil management practices to ensure the long-term sustainability of agricultural ecosystems. For more information see her website: https://scs.cals.cornell.edu/people/janice-thies/

Laurie Drinkwater

Professor of Plant Biology, led24@cornell.edu

School of Integrative Plant Science at Cornell University

Laurie Drinkwater studies soil nutrient cycling processes in agroecosystems at scales ranging from the rhizosphere to farm and watershed scales. Current research projects are focused on understanding mechanisms regulating linkages between carbon and nitrogen cycles. Additional work is geared toward the development of management practices that improve soil quality while optimizing carbon and nitrogen cycling in intensive horticultural systems. She coordinates extension and outreach activities in conjunction with research through partnerships that entail the active participation of farmers. Educational activities are aimed at farmers who rely on green manures as nitrogen sources or who are interested in using cover crops in their farming system. She aims to equip students to address the global challenges we face in agriculture and environmental management. For more information see her website: http://hort.cals.cornell.edu/people/laurie-drinkwater

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Kirsten Kurtz

Manager of the Cornell Soil Health Laboratory, ksk64@cornell.edu

Soil and Crop Sciences Section at Cornell University

Kirsten Kurtz manages the Cornell Soil Health Laboratory, with additional responsibilities in research, teaching and outreach. She has more than six years of experience working with the Cornell Assessment of Soil Health. Before joining the lab, Kurtz worked with Finger Lakes wineries and vineyards, accumulating valuable agricultural and scientific knowledge. She also gained a wide range of hands-on experience co-owning and managing a small-scale organic farm selling garlic and small fruits. In addition to her laboratory responsibilities, Kurtz is concurrently a Masters student in the Graduate Field of Natural Resources. Her research focuses on quantifying soil health properties of remnant tallgrass prairies compared to adjacent agricultural lands to identify and target future soil remediation efforts. Kurtz is also an artist who creates paintings using pigments she makes from soil**,** bringing together her love of art and soil science. She organizes community painting events to raise public awareness of soil health as a critical issue, as important to our future as clean air and water.

Bob Schindelbeck

Extension Associate, rrs3@cornell.edu

Soil and Crop Sciences Section at Cornell University

Bob Schindelbeck directs the Cornell Soil Health Laboratory in the Department of Soil and Crop Science and oversees the operations and development. Bob has been part of the Cornell Soil Health Team's development of soil management strategies to address laboratory-measured soil constraints since the inception in 2003. He has produced numerous peer-reviewed and extension articles and has delivered over 200 presentations related to tillage, soil compaction and soil quality at farmer twilight meetings and professional conferences. These Extension presentations feature combining the comprehensive soil health testing results with generalized soil management options to allow for farmer- and field-specific adaptive management strategies to be developed for sustainable soil management. Bob has produced and given hands-on soils workshops and workshop modules to soil professionals, crop consultants and Extension personnel where attendees can cross- train with other professionals. Bob has developed and presented modules on soil physical processes and soil health assessment to various Cornell graduate and undergraduate classes in Soil and Crop Sciences, Horticulture and Agricultural Sciences. Field and laboratory exercises demonstrate the utility of the Cornell Soil Health laboratory assessments to quantify soil parameters. Students learn of the interactive nature of soil processes towards developing a holistic agroecosystem management strategy. For more information visit soilhealth.cals.cornell.edu

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Stephen Page

Soil Scientist, stephen.page@ny.usda.gov

New York State Office, USDA Natural Resources Conservation Service

Steve Page has over 30 years of experience working as a soil scientist for the Natural Resources Conservation Service. He did soil survey work in most regions of New York, including mapping, describing, and classifying soils in the field. He has conducted on-site soil investigations and provided technical planning assistance for a variety of conservation practices. In recent years, Steve has participated in soil health training sessions and contributed to soil health presentations at workshops and farm shows.

Olga Vargas

Soil Scientist, olga.vargas@ny.usda.gov

Norwich Service Center, USDA Natural Resources Conservation Service

Olga Vargas provides technical soil services to eastern NY along with soil health demonstrations, site assessments and outreach workshops. She also conducts wetland determinations and delineations for compliance of Food Security Act, appeals, and USDA programs. Olga is also a ground penetrating radar operator. She also operates the Portable X-Ray Florescence (PXRF) in trace metal analysis and Electrical Magnetic Induction (EMI) meter. She has been an instructor of NEDC training "Application of Soil Data Viewer and ArcGIS in Technical Soil Services", since 2006. Her career with NRCS began as a Soil Conservation Technician, first in Stronghurst, Illinois (1998) and then in Gorham, Maine. Initial soil survey mapping experience includes working on the NYC Soil Survey from 2001-2003 and in the Adirondacks from 2006-2008. Olga received her B.S. in Natural Resources from Cornell University in 1997.

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Producer

Marty Young

Producer, Whey Street Dairy, wheystreetdairy@frontier.com

Truxton, New York

Marty Young is the owner/operator of Whey Street Dairy, a 600 cow farm operating over 1684 acres. They raise 1244 acres of corn, alfalfa, and grass hay crops in support of the dairy operation.Whey Street Dairy LLC is a family farm that has been in operation since 1959. Ernest and Janet Young purchased the farm in 1959 and moved their operation from East Homer. Marty joined as a partner in 1981 and became sole owner of the operating business in 1988. He currently operates the farm with his family. The farm has grown from 60 cows in 1959 to over 600 today. The farm is located in the Upper Tioughnioga watershed in the Chesapeake Bay watershed. Land operated by the farm is also within the watershed for Whitney Point Reservoir, an important local waterbody for recreation.

Marty was an early adopter of the principles of Agricultural Environmental Management. He participated in the Cortland County Farm*A*Syst program in the late 1990s. Farm*A*Syst was a precursor to AEM, adapted from materials developed in Wisconsin for use in Cortland County. Farm*A*Syst enabled farms to prevent pollution using confidential environmental assessments to determine what risks could threaten a farm, the family or the environment.
Whey Street Dairy's involvement in the AEM program followed and has continued since 2000. The farm actively seeks assistance and information from the District and many different federal and state programs related to a host of management practices.

Often the farm will invest in new, cutting edge technologies, to better their management and environmental stewardship, but also to be a leader, setting an example for other farms to follow. Their willingness to share what they have learned with their fellow farmers and community is a testament to their commitment to environmental stewardship. Marty has been known to speak at meetings and conferences and is active on local agricultural and community boards. He participates in the county's local working group and has had an active role in the development and updates of the district AEM Strategic Plan as a Core Group member. He is an excellent spokesman for local farms and the agricultural industry.

The farm switched to using a zone till corn planter in 2006 reducing soil loss and fuel for tillage. They commissioned a Petroleum Spill Prevention, Control & Countermeasure Plan and installed secondary containment for all fuel storage in 2012. They added use of a no-till drill for seedings and regular use of cover crop to their tillage and field management practices in 2016.

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Support

Aaron Ristow

New York State Agricultural Stewardship Program Manager, aristow@farmland.org

American Farmland Trust

Aaron Ristow has 16 years of experience coordinating and administering agricultural extension and research activities, most recently focusing on multi-partner projects related to soil health and adaptive nutrient management. Aaron has held positions with the Cortland County and Tompkins County Soil and Water Conservation Districts and facilitated regional work that included multi-partner collaboration and conservation extension and outreach as Agricultural Coordinator with the Upper Susquehanna Coalition. He most recently held the position of Extension Associate at Cornell University, where he coordinated research and extension efforts on soil health and nutrient management programs and led workshops and trainings at the local, state and national levels. A two-time Peace Corps alum (Bolivia and Nicaragua), Aaron holds a B.A. from the University of Washington and two masters degrees from the University of California, Davis, in Soils and Biogeochemistry and International Agricultural Development. A strategic leader and accomplished educator, Aaron will be leading AFT New York's agricultural stewardship programs as AFT ramps up projects across the state.

Joseph Amsili

Extension Associate, jpa28@cornell.edu

Soil and Crop Sciences Section at Cornell University

Joseph Amsili recently joined the Cornell Soil Health Team in September 2018 to coordinate extension and research activities related to the Cornell Soil Health program. Joseph previously worked as a laboratory technician in the Cornell Soil Health Lab from 2013-2016. During that time, he gained extensive experience in soil health testing. Joseph earned his Masters at the Pennsylvania State University where he was part of research group studying the multiple benefits of cover crop monocultures and mixtures. His M.S. research focused on comparing cover crop root traits and tracing cover crop rhizodeposition (the organic carbon released from living plant roots) into stable fractions of the soil. Joseph's excitement for soil health is rooted in his passion for assessing the benefits of sustainable soil management practices.

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