

WSU Wheat Academy – 2017

Meet the Speakers

Rachel Bomberger, WSU Plant Diagnostician and Diagnostics Coordinator

Rachel Bomberger received a B.S. in Ecology and Evolutionary biology from University of California, Santa Cruz. While at UCSC Rachel worked on the speciation of California Bull Clover (*Trifolium fucatum* complex). Rachel received her M.S. in Botany and Plant Pathology from Oregon State University working with Dr. Cynthia M. Ocamb on vascular wilt pathogens of seed radish. After graduating, Rachel worked as the diagnostician for the Nevada Department of Agriculture. In December 2015 Rachel became the plant diagnostician for Washington State University's newly re-opened Plant Pest Diagnostic Clinic in Pullman. At the Plant Pest Diagnostic Clinic Rachel provides diagnosis on all manners of plant health problems including the detection of: fungi, viruses, bacteria, and nematodes caused diseases; arthropod pests; and abiotic disorders such as physiological disorders, nutrient deficiency, and chemical damage.

Dr. Ian Burke, WSU Weed Scientist

Ian Burke is an associate professor in the Department of Crop and Soil Sciences at WSU. Prior to accepting his position at WSU, Ian served as a postdoctoral research associate and plant physiologist at the USDA-ARS Southern Weed Science Research Unit in Stoneville, Mississippi and as a graduate research associate in the Department of Crop Science at North Carolina State University. He received his Ph.D. and M.S. in weed science from North Carolina State University.

Dr. Arron Carter, WSU Winter Wheat Breeder

Arron Carter is an associate professor in the Department of Crop and Soil Sciences at WSU. He received his PhD in Crop Science with an emphasis in Plant Breeding from WSU, and his BS/MS from the University of Idaho. In 2009 he was hired to lead the winter wheat breeding and genetics program. His main focus is to develop new winter wheat cultivars for the state of Washington. His main objectives are to increase yield potential, increase genetic resistance to both biotic and abiotic stresses, and to increase end-use quality. His breeding program focuses on soft white winter wheat, with efforts in hard red, hard white, and club wheat as well. Apart from the breeding program, Arron also conducts research in areas that support the wheat breeding effort. Some of these include identifying genetic resistance to stripe rust and other disease of interest in the state, identifying the genetic control of drought resistance, and identifying the genes controlling end-use quality in soft white wheat.

Paul Carter, WSU Extension Educator and Columbia County Extension Director

Paul Carter joined Washington State University in 2005 and is an Extension specialist and Associate Professor. Graduating from Purdue University, Paul has degrees in Agronomy with a background in soil science and remote sensing. Current research includes soil acidity and nutrient availability for crops on eastern Washington soils. Paul has farming experience with row crops and livestock on an Indiana family farm.

David Crowder, WSU Entomologist

Dave Crowder is an assistant professor in the Department of Entomology at WSU. He graduated with his BS and MS in Natural Resources/Environmental Sciences from the University of

Illinois, and his PhD in Entomology from the University of Arizona. His lab conducts research on insect ecology and pest management in agricultural systems, including studies of pests in wheat, legumes, canola, and quinoa in the dryland region of Washington. In wheat cropping systems he was worked extensively with wireworms and aphid pests.

Doug Engle, USDA-ARS Physical Science Technician

After graduate school, Doug started work as a wheat milling technician with the USDA-ARS at the Western Wheat Quality Laboratory. Over the last 30 years of employment at the WWQL, he has obtained experience in analytical flour testing and experimental baking. Currently, Doug is a Food Technologist and oversees all laboratory operations within the cultivar development program. In addition, he is part of the variety release team for WSU wheat development and organizes an industry collaborative program run through the WWQL: Pacific Northwest Wheat Quality Council.

Aaron Esser, WSU Extension Agronomist

Aaron Esser is a professor of Extension at WSU. He received his M.S. in Plant Science from the University of Idaho and his B.S. in Agricultural Economics from the University of Idaho. His research focuses on the adoption of conservation tillage practices, diversified cropping and improved farm economics. He has been working on integrated wireworm management strategies in wheat cropping systems since 2008. He also oversees the management of the WSU Wilke Research and Extension Farm in the intermediate rainfall cropping zone of eastern Washington.

Dr. Randy Fortenbery, WSU Endowed Chair of Small Grains Economics

Randy Fortenbery is currently a professor and the Thomas B. Mick Endowed Chair in the School of Economic Sciences at Washington State University. He also serves as Chairman of the Ag Markets Advisory Committee to the Commodity Futures Trading Commission, the government agency responsible for oversight of U.S. derivative markets. His research focuses on agricultural price performance, the impacts of new information on relative and overall price levels, as well as the impact of futures price action on the stability of cash markets. He joined the WSU faculty in 2011 after spending 19 years at the University of Wisconsin – Madison.

Ryan Higginbotham, WSU Extension Specialist

Ryan Higginbotham directs the Cereal Variety Testing Program (VTP) at WSU and is an Assistant Professor with WSU Extension. The VTP conducts field trials on winter wheat, spring wheat, and spring barley at 40+ locations across the different production zones of eastern Washington. Originally from a dryland wheat farm in Washington, Ryan seeks to provide farmers and the agricultural industry with unbiased information about cereal grain varieties. With a background in plant breeding, he received his B.S. and M.S. from WSU.

Dr. Alecia Kiszonas, USDA-ARS Research Biologist

Alecia Kiszonas is a Research Biologist for the USDA-ARS in the Western Wheat Quality Lab. She received her BA in Chemistry and Biology from Ripon College, her MS in Crop Production & Physiology from Iowa State University, and her PhD in Crop Science from Washington State University. Her research focuses on the genetics and biochemistry of wheat end-use quality. Additionally, she studies nutrition and product development. She holds adjunct status at WSU in the Department of Crop and Soil Sciences, as well as the School of Food Science at WSU/UofI.

Nic Loyd, Meteorologist/Associate in Research

Nic Loyd is a meteorologist and researcher for Washington State University, AgWeatherNet, in Prosser, WA. He graduated from A.C. Davis High School in Yakima, WA in 2003, with a full International Baccalaureate (IB) diploma. He attended the Massachusetts Institute of Technology (MIT) in Cambridge, MA from 2003 to 2007, and graduated with a B.S. in the Physics of the Atmosphere and Ocean. Loyd attended Oregon State University in Corvallis, OR from 2007 to 2010, and received an M.S. in Atmospheric Sciences from the College of Oceanic and Atmospheric Sciences (COAS) in 2010. Nic has worked for Washington State University, AgWeatherNet as a meteorologist since 2011. His duties involve real-time quality control of AgWeatherNet data, inventory and improvement of historical weather data, data analysis and monthly summarization of Washington State weather, issuing weekly weather outlooks, and weather and climate research. Loyd's work also consists of extension and outreach activities, including presentations and other communications with Washington growers and the general public.

Dr. Drew Lyon, Endowed Chair in Small Grains Extension & Research, Weed Scientist

Drew Lyon is Professor and Endowed Chair, Small Grains Extension and Research, Weed Science at Washington State University in Pullman. His Extension and Research Programs focus on integrated weed management in dryland small grain production systems. Herbicide resistance is a current emphasis of his Extension and research programs, driven in part by the recent confirmation of Russian-thistle biotypes resistant to glyphosate in Eastern Washington fallow systems. Prior to his arrival at WSU in 2012, Drew served 22 years as the Extension Dryland Cropping Systems Specialist at the University of Nebraska-Lincoln Panhandle Research and Extension Center in Scottsbluff.

Dr. Craig Morris, USDA-ARS Western Wheat Quality Lab

Craig Morris has been the director of the Western Wheat Quality Laboratory since 1989. In his role, he supervises breeding line evaluation and conducts directed research on wheat quality traits. He holds adjunct professor appointments at WSU in the Department of Crop and Soil Sciences, the WSU/Univ. of Idaho School of Food Science, and at Colorado State Univ. Soil and Crop Sciences. He has served on the Board of Directors for AACCI, served three terms as Associate Editor for Cereal Chemistry, and is Editor-in-Chief Emeritus of Cereal Chemistry. Morris is chair and co-founder of the Pacific Northwest Wheat Quality Council, and a past member of the National Wheat Improvement Committee. He has published over 180 research papers, several book chapters, and been awarded six patents.

Dr. Timothy Murray, WSU Extension Plant Pathologist

Tim Murray is Professor of Plant Pathology. After teaching introductory plant pathology for 30 years, he joined the Extension Dryland Cropping Systems Team in 2013. His research program focuses on the sustainable control of wheat diseases including eyespot, Cephalosporium stripe, and snow molds, largely focusing on improving the effectiveness of disease resistance. He is author of *A Colour Handbook of Diseases of Small Grain Cereal Crops*, co-editor of *The Encyclopedia of Plant Pathology* and *Compendium of Wheat Diseases and Pests*, 3rd edition, and author of over 100 scientific publications.

Dr. Michael Pumphrey, WSU Spring Wheat Breeder

Michael is an Associate Professor and Vogel Endowed Chair. He leads the WSU spring wheat

breeding and genetics program. His program is focused on the development of biotic and abiotic stress tolerant, high-yielding, and high-quality spring wheat varieties for diverse Washington and Pacific Northwest production environments.

Diana Roberts, WSU Extension Specialist in Agronomy

Diana Roberts has been with WSU Extension since 1991, and is based in Spokane. Her research has included no-till farming, organic production systems, insect biocontrol, and integrated pest management. Recently she has focused on cover and companion cropping practices, which may be used with any production system.

Karen Sowers, WSU Extension & Outreach Specialist

Karen leads the extension and outreach side of the WSU Oilseed Cropping Systems (WOCS) Project since it started 10 years ago. She is the conduit between the WOCS researchers and growers, industry, and agency reps. Karen coordinates canola field tours, winter workshops, large-scale canola variety trials, a series of WSU Extension oilseed production fact sheets, maintains a website and Facebook page, and is a WSU liaison to the WA Oilseed Commission and U.S. Canola Association. She is currently leading an effort to form a Pacific Northwest Canola Association.

Dr. Haiying Tao, WSU Extension Soil Scientist

Haiying Tao is an assistant professor of Soil Fertility and Residue Management in the Department of Crop and Soil Sciences at WSU. Her research programs focus on fertility management and strategies to improve soil health for WA agricultural systems. She is currently leading an effort to develop a farmer's network, which will be a platform for information sharing, participatory learning and on-farm research using precision agricultural technologies.

Dr. Stephen Van Vleet, WSU Extension Specialist: Ag & Natural Resources

Steve joined Washington State University in 2005 and is the Extension specialist and Associate Professor in agriculture and natural resources. Steve has a master's in Entomology and PhD in Agronomy. Current research includes small grain production, conservation agriculture, invasive plant management and managed grazing.

Dale Whaley, WSU Extension Agronomist

Dale Whaley is the regional Extension specialist in Douglas County. His program focuses on biological weed control for noxious weeds, insect pest management and alternative cropping systems in the low-to-intermediate rainfall zones of eastern Washington.