

## Tuesday Morning Opening General Sessions

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### ***“Conference Welcome”***

Conference welcome, trends in oilseed and direct seed production in the PNW.

#### **Dr. Bill Pan, WSU**

Bill Pan is a professor in the Department of Crop and Soil Sciences at WSU, leads the WA Oilseed Cropping Systems Project, serves as institutional and cropping systems lead in REACCH, the USDA NIFA PNW coordinated ag program on climate change adaptation and mitigation, and a founding advisor for the NSF funded NSPIRE graduate training program on global N cycling and policy. He has research interests in N cycling and management, plant root dynamics, and recycling of organic wastes.

### ***“Cropping Systems in the PNW”***

#### **Frank Young, USDA-ARS**

Frank Young received his MS and PhD degrees in Agronomy/Weed Science from the University of Minnesota. After graduation Dr. Young went to work for the USDA-ARS and has been at Pullman for 31 years. His research focus has been weed biology and ecology (Russian thistle and jointed goatgrass), and Conservation Tillage Cropping Systems. Since 2003 he has conducted research to introduce winter canola into the wheat fallow, low rainfall zone of the PNW.

### ***“Innovations in Agriculture and Components of a Successful Cropping System”***

#### **Neil Harker, Agriculture & Agri-Food Canada**

Neil Harker received B.Sc., M.S. and Ph.D. degrees at the University of Alberta, the University of Minnesota, and the University of Guelph. Since 1985 he has been employed as a Weed Scientist with Agriculture and Agri-Food Canada at Lacombe, Alberta. His research interests include direct-seed cropping systems, integrated weed management, weed interactions with insects, and canola production and sustainability. Neil has published over 170 scientific journal papers and 13 book chapters. He is Adjunct Professor at the University of Alberta. In 2000 he received the Excellence in Weed Science Award from the Canadian Weed Science Society. From 2007 to 2012 he was as editor-in-chief for the scientific journal Weed Technology. In 2014, he received the Outstanding Research Award from the Weed Science Society of America, and is a fellow of the Canadian and American Weed Science Society.

### ***“High Residue Farming in Irrigated Cropping Systems”***

Dealing with high crop residue levels, numerous crops in rotation, and limited research support, irrigated growers are implementing high residue farming systems to save time and money while improving their soil and controlling wind erosion.

#### **Andy McGuire, WSU**

Andy McGuire has been working for WSU Extension since 1999, helping farmers implement sustainable solutions to irrigated farming challenges in the Columbia Basin of Washington. His current efforts focus on developing systems that build soils through high residue farming and cover cropping. Before coming to Washington, Andy was with the University of Nebraska Cooperative Extension. While there, he worked with farmer groups across the state involved in

management-intensive grazing, direct marketing of meats, cover cropping, organic grain farming, and alternative crops. He has worked as an irrigation engineer for the NRCS and served in Ecuador with the Peace Corps. Andy, his wife Melinda, and their three daughters live in Ephrata, Washington.

### ***“Oilseed & Direct Seed Producer Panel - Innovative Production Strategies”***

These innovative producers are making changes within their regions that challenge mainstream production strategies.

**Douglas Poole, Mansfield, WA:** Making oilseeds and direct seeding work in low rainfall region.

**Andy Juris, Bickleton, WA:** Benefits of high residue from stripper header in maximizing moisture and building OM.

**Eric Odberg, Genesee, ID:** Variable Rate of 3 products, improving soil health with alternative crops and cover crops.

**Drew Leitch, Nezperce, ID:** Cover cropping benefits for soil health and winter cattle grazing.

**Bill Jepsen, Heppner, OR:** Flex-cropping, conditions and how-to's for bringing an annual crop rotation to historical wheat - fallow rotation.

## Tuesday Afternoon Breakout Sessions I

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### ***“Organic soil amendments that are maximizing moisture and yields”***

The use and benefits of compost in modern, precision agriculture. A new way to view and apply a traditional, valuable soil amendment.

#### **Thad Schutt, Royal Organics, Royal City**

Thad Schutt is the President of Royal Organics, a compost and soil amendment company in Central Washington. He grew up farming in the Yakima Valley where the family farm grew mint, wheat, asparagus, corn, and other crops. After receiving a B.S. from Central Washington University he spent some time as an aerial applicator then became a field representative/crop consultant for a mint company, and later as the North American Procurement Manager. The company started a composting project and he was given the task to turn it into a business. Research regarding the application of compost into no-till agriculture systems began in 2010. In 2012 he, along with two colleagues and partners, acquired the compost company with the focus on product development.

### ***“Sharpening your skills with Precision Ag tools, data management, and production decisions”***

In depth view of what exactly Variable Rate Application means; the savings and benefits; startup cost; the how, where, when, and technology needed to create VRA maps.

#### **Ryan Kuster, AgEnterprise, Cheney, WA**

Ryan Kuster grew up working on his grandfather's farm in Benge, WA. After earning a degree in Agricultural Technology and Management from Washington State University in 1998, he worked on an irrigated/ dryland farm near Washtucna, WA. In 2009 he accepted a job with Ag Enterprise Supply, Inc. where he is a Precision Ag Specialist and currently manages the parts/ fabrication division of the company. Ag Enterprise is an independently owned and operated company located in Cheney, WA since 1980.

## Tuesday Afternoon Breakout Sessions I Continued

### ***“Conservation approach to high-disturbance crops to build OM and reduce fumigants within a wheat, canola, potato rotation”***

The severe demands on the soil to maintain high yields and quality in close crop rotations led Dale to develop a brassica green manure program to rebuild their soil. This system has been successfully utilized and studied on his farm for the last 20 years. During his presentation he will share his production strategies and benefits.

#### **Dale Gies, Irrigated Producer, Moses Lake, WA**

Dale is an agronomist and seed producer from Moses Lake, Washington USA, an intensively managed irrigated area in the desert of Eastern Washington known for exceptional potato, onion, and vegetable seed production. Due to the demand for high quality seed and technical support to develop sustainable green manure programs in other areas of the world, Dale and his sons, Joe and Mike, formed High Performance Seeds, Inc., which is currently involved in commercial and research projects in over 25 countries.

### ***“Canola 101 – Getting Started and Revisiting the Basics”***

Whether you’ve grown canola for short time, many years, or are just considering it, you’ll likely pick up some useful information in this session. Topics will include planting considerations, basic fertility information, weed control options, a pest overview, harvest information, and a review of online information sources.

#### **Jim Davis, UI**

Jim Davis is currently a Research Support Scientist with the University of Idaho Canola, Rapeseed and Mustard Program. Jim, a northern Idaho native, has worked with canola, rapeseed and mustard at the University of Idaho for 26 years. Jim has also worked as a plant disease diagnostician at Utah State University, with alfalfa at the University of Wisconsin, and with barley at Washington State University. He has a Master of Science in Plant Science from the U of I.

#### **Beau Blachly, Croplan by Winfield**

Beau Blachly was born and raised on a wheat and cattle operation in Pomeroy, where he still resides recreationally farming wheat and canola. Beau started farming on the side in 2003 for an additional challenge and also to do research on fungicides and fertility. After completing his AA degree at Walla Walla Community College in 1994 he went to work at Pomeroy Grain Growers as an Agronomist and became manager of Agronomy in 1997. Beau moved to Winfield Solutions in 2011 as a seed and agronomy advisor, also finishing his B.A. degree.

### ***“Variety Performance & Research – University Perspective”***

New technologies and traits are resulting in a wider range of spring and winter canola varieties available to producers. Speakers will performance data from the National Winter Canola Variety Trials, winter canola variety trials in the low rainfall regions of WA, and winter and spring canola variety trials in the intermediate and high rainfall and irrigated regions. Current breeding efforts will also be addressed.

#### **Mike Stamm, Kansas State University**

Mike Stamm an associate agronomist and canola breeder in the Department of Agronomy at Kansas State University. He directs the canola breeding and research program and coordinates the National Winter Canola Variety Trial. The overall objective of his research is to improve adaptability and performance of winter canola in the southern Great Plains. Under his leadership, the program has released one germplasm line, three conventional varieties, and four Roundup Ready varieties. Through participation in the Great Plains Canola Association and the U.S. Canola Association, Mr. Stamm has been instrumental in bringing crop insurance, a regional market, and other risk management tools to southern Great Plains canola growers. Through partnerships with the USDA Risk Management Agency, Mr. Stamm and the canola research team coordinate production schools, field tours, and field days throughout the growing season. These hands-on activities have resulted in record planted canola acres in Kansas and the region.

#### **Frank Young, USDA-ARS; See bio above**

#### **Jack Brown, UI**

Jack Brown joined the University of Idaho in February 1992 and oversees the University Brassica Breeding and Genetics Research group. Prior to accepting his current position Jack worked on potato breeding and genetics at the ESCAgenetics Corporation/Pioneer Hybrid in California, and before then he was a Higher Scientific Officer breeding potatoes at the Scottish Crop Research Institute. Since joining the University of Idaho, Dr. Brown has been involved in developing genetically superior *Brassica* edible and industrial oilseed and condiment mustard (*Brassica napus*, *B. juncea*, *Sinapis alba*, and others) cultivars suitable for a wide range of environments throughout Idaho, the PNW, and other regions in the USA. Dr. Brown was born in Edinburgh, Scotland, and completed his M.S. and Ph.D. degrees in Plant Breeding and Genetics at the University of St Andrews after completing a HNC at Napier College Edinburgh in Mathematics and Statistics.

### ***“Flax, Camelina, Mustard, and other oilseeds”***

While canola acreage typically tops the acreage charts in the PNW, many producers are opting to try other oilseed crops. Industry and producer perspectives of the viability of flax, camelina, mustard, and safflower production will be the focus of this session.

#### **Tomas Endicott, Willamette Biomass Processors;**

Tomas Endicott moved to Oregon from his native Kentucky in 1997 to attend graduate school at University of Oregon, where he received his Master’s Degree in Community and Regional Planning in 2001. Tomas’s interest in oilseeds grew from his involvement with Sequential Biofuels, a biodiesel production and retail company, from 2002 to 2008. He has served as Vice President of Business Development and Government Relations at Willamette Biomass Processors, Inc. (WBP) since 2008. WBP operates Oregon’s largest oilseed processing facility located in Rickreall, Oregon—ten miles west of Salem. The Rickreall facility processes up to 120 tons per day of oilseed—primarily soybeans, canola, camelina and flax. The Rickreall facility processes both organic and non-GMO conventional crops and is certified organic through Oregon Tilth and non-GMO through the Non-GMO Project. Tomas works with oilseed growers, meal buyers and oil buyers in the PNW region, California, Montana and Canada.

#### **John McElheran, Producer, Maupin, OR;**

John McElheran received a B.S. in chemistry from Eastern Oregon State and is the 5th generation on the family farm near Maupin, OR.

The farm is in a 12" rainfall zone with flat ground, fairly heavy silt loam soil that averages 30" deep, and typically has a three year dryland rotation of winter wheat-oilseed-fallow. The entire 1200-acre farm is dryland with the exception of one pivot where John has been able to try more diverse rotations that have included soybeans and fall canola. He has been 100% no-till since 1997, using a Flexicoil 8000 drill with Barton II disc opener.

**Gaylin Davies, McKay Seed;**

Gaylin Davies earned a B.S. in Ag Economics and Soils from BYU, and has over 35 years of experience as a production agronomist in the Columbia Basin and Eastern Washington. He is a licensed Certified Crop Consultant (CCA) and WSDA Consultant. Gaylin is a member of the Columbia Basin Crop Consultants Organization, and is on the WSDA Advisory committee on Brassica Seed Production Districts. He is currently the Director of Marketing and Research and Development for McKay Seed Company, Inc., with emphasis in oilseeds, specialty foods, and cereal seed production.

**Scot Hulbert, WSU**

Scot Hulbert grew up on a farm in Skagit Valley, WA. He earned a B.S. degree in horticulture from WSU in 1979 and M.S. and Ph.D. degrees in Genetics from the University of California, Davis. After a postdoctoral appointment in the Biology Department at Purdue, he joined the faculty as an Assistant Professor of Plant Pathology at Kansas State University in 1989 with teaching and research responsibilities in molecular genetics. He served as Head of the Department from 2004 until 2006. He then returned to WSU as the Cook Chair for Cropping Systems Pathology 2006 with a research appointment in the Department of Plant Pathology and a teaching appointment in the Department of Crop and Soil Sciences. He is currently serving the Interim Chair of the Department of Plant Pathology.

## Tuesday Afternoon Breakout Sessions II

***“Environmental market development study and a new opportunity for direct seed farmers using carbon and environmental markets.”***

Washington Conservation Commission will provide an update on environmental market feasibility study they are conducting. Applied Ecological Services, Inc. has a partnership with Shepherds Grain to measure soil carbon changes. Eight hundred soil samples were taken on 120,000 acres of Shepherds Grain farms, where significant and valuable improvements in soil carbon with direct seeding are now documented. Now, partnering with Nativenenergy, a carbon project packager/broker, we are commercializing the sale of the increased carbon, and look forward to including PNDSA member farms to expand the acreage of included farms.

**Ron Schultz, Policy Director, WA Conservation Commission**

Ron is the Policy Director at the Washington State Conservation Commission. Previously he was the Natural Resources Policy Advisor to former Governor Gary Locke. Ron also served as the first Acting Director of the Puget Sound Partnership. Ron is a fourth generation Washingtonian growing up on a small farm in Tenino. He received his law degree from Seattle University School of Law.

**Stephen Apfelbaum, Chairman of Applied Ecological Services, Brodhead, Wisconsin**

Stephen Apfelbaum has conducted ecological research, designed award-winning projects, successfully navigated regulatory programs, and contributed his unique creative scientific expertise and

enthusiasm to over 1,500 projects throughout North America and beyond. He is one of the leading ecological consultants in the U.S., providing technical restoration advice and win-win solutions where ecological and land development conflicts arise. Mr. Apfelbaum has authored hundreds of technical studies, peer-reviewed technical papers, books, reports, ecological restoration plans, and regulatory monitoring and compliance reports. He promotes using ecological and conservation design principles in developments, industrial projects and parks that help clients save money while increasing ecological functionality, improving public perception and generating award-winning outcomes.

***“Collecting and Deciphering On-Combine Data to Improve Nitrogen Management”***

Herb March will talk about spatial variability on his farm and the equipment used to collect and map the protein content of grain, and how this information is used to vary nitrogen fertilizer across his fields. Dan Long will talk about on-combine systems for collecting data with up to three different sensors going at once and how this information can be used to identify areas within fields that experienced nitrogen stress, moisture stress, or both.

**Dan Long, USDA, ARS, Pendleton, OR**

Dan Long is research leader of the USDA-ARS Soil and Water Conservation Research Unit near Pendleton, OR. Prior to joining ARS, he was a member of faculty in the MSU Department of Research Centers and was stationed at Havre, MT. He has worked on agricultural applications of in-line, optical sensing of grain during most of his career. Currently, he leads a team of scientists that is responsible for identifying and evaluating dryland cropping systems comprised of cereals and oilseeds that can produce biofuels and derive environmental benefits.

**Herb March, Producer, Milton-Freewater, OR**

Herb March is a wheat producer and owner of the Couse Creek Ranch, LLC near Milton-Freewater, OR. He and son Herby raise wheat and canola on steep slopes in the foothills of the Blue Mountains. They are early adopters of on-combine optical sensing technology and pioneered the use of grain protein mapping to help make informed decisions about nitrogen fertilizer placement on spatially variable soils. They designed and built their own seed drill for both direct seeding and applying variable rates of fertilizer under the unique conditions found on their farm.

***“Stripper Header Results – Increasing moisture, lowering soil temp, and building OM and soil structure”***

Producers and researcher share their years of experience with using a stripper header, its benefits, and options for managing remaining heavy residue.

**Lauren Young, WSU**

Lauren Young was raised in western Washington, but now calls the Palouse home. She graduated from WSU with a B.S. degree in Agricultural and Food Systems in 2010, and returned to WSU in 2012 to join the REACCH project. Her current research work is focused on cropping system intensification and diversification with oilseed crops in intermediate and low rainfall zones under both till and no-till management. She is currently pursuing a master’s degree in crop science, and hopes to continue working in research and extension after graduation.

**Eric Thorn, Producer, Dayton, WA**



Eric is a 4th generation farmer and has been 100% no-till since 2000 and has seen benefits in soil health, crop productivity and water infiltration. Eric uses a stripper header as part of his no-till system and will discuss how he integrated the heavy residue system in to his no-till operation.

**Andy Juris, Producer, Bickleton, WA**

Andy Juris was born and raised on a wheat farm in Bickleton, WA where he now farm with his father, Ron Juris. After graduating from the Univ. of North Dakota with a degree in Aeronautical Science, Andy worked as an airline pilot for a decade. While he enjoyed his career in aviation, Andy always longed to return home so in 2008, he and his wife moved from St. Louis back to the farm. While a far cry from his days in the cockpit, farming is where Andy believes he is meant to be and he is thankful for the opportunity.

***“Winter Survival – Survival of the Fittest?”***

The speakers in this session will examine factors that contribute to winter survival of winter canola and offer advice to help you maximize your chances of having a successful crop. These include variety selection plus agronomic factors such as planting date, fertility timing, and crop residue management.

**Bill Pan, WSU, See bio above**

**Curtis Hennings, Ritzville;**

Curtis Hennings is a third generation farmer, and started farming on his own in 1978 when he began following alternative crops. Canola, safflower, and later sunflower and camelina were alternative choices for oilseed crops. Triticale is the main cool-season grass crop in his rotation. His crop rotation plan is to rotate a grass crop and a broadleaf crop on a continual cycle. He started Spectrum Crop Development in 1987 as an avenue to find and explore market outlets for crops that were not normally marketed out of this region.

**Jim Davis, UI, See bio above**

**Mike Stamm, KSU, See bio above**

***“Water Management in Dryland and Irrigated Oilseed Systems”***

Water management is key to optimizing yield, and this session will include current research results from in-season moisture sensors in different rainfall and residue systems, as well as on-farm experiences with irrigation management.

**Megan Reese, WSU**

Megan Reese grew up among the crops and livestock of central California. She studied Plant Science at UC Davis, where she also played water polo. Megan is currently pursuing a soil science master's degree at WSU, focusing on winter canola. Her research involves tracking canola nitrogen and water use across different locations and planting dates. Megan and her border collie and enjoy exploring the PNW!

**Bill Schillinger, WSU;**

Bill Schillinger is a professor and research agronomist based at the WSU Dryland research Station at Lind. Bill and colleagues conduct research on winter canola yellow mustard, safflower, camelina, winter pea, and winter triticale in wheat-based cropping systems and on winter canola in irrigated cropping systems. Research results have been published in numerous journal articles, extension bulletins, and popular publications.

**Kurt Melville, Producer Enterprise, OR**

Kurt Melville in partnership with his father Tim manage Cornerstone Farms in Enterprise, Oregon. Together they farm about 2100 acres of both irrigated and dry land production in a 12 to 18 inch rainfall zone. Exclusively direct seeding, they have many fields that have been in no till for over 30 years. The major crops grown each year include wheat, alfalfa, peas, canola, timothy hay, barley, oats, and mustard. Some other crops tried over the years include lentils, bluegrass, and clover seed. Their main drill is now a Horsch Cougar drill and they also have access to older brother Kevin's Cross Slot drill for certain situations. Their main experience with oilseeds is with about 200 acres of spring canola and mustard each year. After having tried winter canola for four years and losing it to winter kill each year they are currently waiting for more winter hardy cultivars.

***“Managing Chem Fallow for Oilseeds”***

Herbicide application and timing in chem fallow systems east of the Cascades, herbicide plantback restrictions and herbicides available for use in winter canola will be discussed.

**Frank Young, USDA-ARS; See bio above**

**Douglas Poole, Mansfield, WA**

Douglas is a third generation farmer, farming 20 minutes from Lake Chelan, in a 7-9" rainfall zone on sandy loam soil. As he recently returned to farming and started direct seeding with adding canola in his rotation to manage his investment, improve his yields, maximize moisture, and build soil health.

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## Tuesday Dinner General Session

***“Precision Ag Panel – Unmanned Aerial Vehicles and Satellite Imagery”***

This panel of experts will address the following questions and other's from the floor: How aerial and satellite imagery and remote sensing equipment works with UAVs?, How you use remote sensing and aerial/satellite imagery in water and nitrogen management research?, What do growers need to know about the laws and regulations surrounding UAV usage in agriculture and are there any actions they can take to help support regional efforts for using UAVs in the region?, How do you suggest that growers who want to experiment with UAVs in their farming operations get started?

**Robert Blair, Producer, Kendrick ID**

Robert Blair grew up on a diverse, dryland farm in Kendrick, Idaho that overlooks the Clearwater River. He is an Ag Business major from the University of Idaho and helps to inform students and the public about precision Ag. He is the 2009 Precision Ag Institute's Farmer of the Year and a 2011 Eisenhower Fellow for Agriculture.

**Brad Ward, VP R&D, Advanced Aviation Solutions**

Brad is an Air Force veteran with over 11 years of experience in drone operations and policy. He is experienced in and legal and regulatory issues surrounding UAV's in agriculture. Empire Unmanned, a company formed by Robert, Brad Ward and others has just received an FAA Exemption to fly commercial UAV missions nationwide over farmers' fields in 2015.

**John Sulik, USDA Ag Research Services, Pendleton, OR**

Dr. John Sulik has been a research associate with the Agricultural Research Service since May 2012. His research primarily focuses on the use of ground based, aerial, and satellite radiometric sensors for providing mid-season acreage and yield estimates of Brassica oilseeds.

## Wednesday Morning General Session

### *“Welcome and Intro – Soil Research: The New Frontier”*

#### **Jim Moyer, WSU, Ag Research Center**

Jim Moyer is Associate Dean for Research and Director of the Agricultural Research Center in the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS). He joined the CAHNRS administrative team in April, 2013 following a distinguished career in plant pathology at North Carolina State University. In addition to his teaching, research and administrative duties, Dr. Moyer has served on and/or chaired several USDA-NIFA panels, USDA Program Reviews and Plant Pathology Departmental Reviews. He served as Senior Editor of Phytopathology, is a Fellow of the American Phytopathological Society and has been recognized for his fundamental and applied contributions by the Japanese government, USDA-ARS (Morrison Medal), and the national floral culture industry (Alex Laurie Award) and recently (2008-09) served as President of the American Phytopathological Society. In 2012, he was recognized as an Outstanding Alumnus of the College of Agriculture Sciences at Penn State University. He received his B.S. degree in Agronomy from WSU and his M.S. and Ph.D. degrees in Plant Pathology from Penn State University.

### *“Crop Productivity is Rooted in Healthy Soil”*

Healthy soils are a habitat for, millions of bacteria and fungi (primary producers), predators that feed on the primary producers, fungi and microarthropods that actively decompose crop residues, earthworms- the chief infrastructure and habitat engineers, plants- the architects, supplier of raw materials, and chief systems engineers. Our crop sequences, fertility and pest management strategies, and soil management practices can all influence agroecosystem and soil function. So as farmers how do we help the system function more efficiently and effectively in the Pacific Northwest?

#### **Jill Clapperton, Rhizoterra, Spokane, WA**

Jill Clapperton (PhD) is the Principal Scientist and Co-founder of Rhizoterra Inc. and a well-known researcher, international lecturer and advocate for practices that promote soil health. Her company, Rhizoterra, helps agricultural businesses make that informed decisions about soil health and food quality based on science. Rhizoterra believes that healthy soil grows healthy food, and healthy people (livestock, too) that all live in a healthy watershed.

### *“Soil Health and Quality Panel Discussion”*

#### **Dave Huggins, USDA-ARS: Soil testing**

Dave Huggins is a Soil Scientist with the USDA-ARS, Land Management and Water Conservation Unit, in Pullman, WA. His research efforts have focused on agriculture management impacts on soil organic matter, N use efficiency and sustainable agricultural systems including no-till. Dr. Huggins received his Ph.D. in soil fertility and plant nutrition from WSU. Prior to joining the USDA-ARS he was an Asst. Professor with the Univ. of Minnesota. Dr. Huggins aids in managing the USDA-ARS Palouse Conservation Field Station and the WSU Cook Agronomy Farm. He is an Ex-Officio Board Member of the PNDSA and a District Supervisor on the Latah Soil and Water Conservation District Board.

**Bill Pan, WSU:** Importance of sub-soil quality, see bio above

**Stephen Machado, OSU:** Soil health and cropping systems  
Stephen Machado is a Professor of Crop Physiology/Agronomy at the Oregon State University’s Columbia Basin Agricultural Research Center (CBARC) located near Pendleton, OR. Stephen is responsible for conducting cropping systems research to develop economically and biologically sustainable agricultural practices for cereals, legumes, and new crops. His research work includes crop rotations, long-term experiments, alternative crops, drought tolerance, site-specific farming, and organic farming. Stephen has served as the President of the Biometry Division of the Tri-Societies (American Society Agronomy, Crop Science Society of America, and Soil Science Society of America) and the President of the Western Crop Science Society of America.

#### **Jodi Johnson-Maynard, UI: Earthworms and soil health**

Jodi Johnson-Maynard teaches, conducts research and serves as the faculty advisor for the student-run campus farm and for the past 14 years, Jodi has researched and published on the influence of management on soil processes and earthworm ecology. Studies have focused on earthworm density and diversity and carbon cycling processes.

## Wednesday Morning Breakout Sessions III

### *“Rattail Fescue and Russian Thistle management”*

Leading researchers provide updates on recent studies and techniques to manage these two noxious weeds including the use of minimum tillage as a tool.

#### **Drew Lyon, WSU**

Drew Lyon is currently serving as the Endowed Chair in Small Grains Extension and Research, Weed Science at Washington State University in Pullman. Prior to taking the Pullman position in September of 2012, Drew served for 22 years as the Extension Dryland Cropping Systems Specialist at the University of Nebraska-Lincoln Panhandle Research and Extension Center in Scottsbluff. He received his BS in Agriculture from the University of Illinois at Urbana-Champaign and his MS and PhD degrees in Weed Science from the University of Nebraska-Lincoln.

#### **Joan Campbell, UI**

Joan Campbell, Research and Instructional Associate at the University of Idaho, Moscow. Joan teaches Weed Control and Pesticides in the Environment classes. Research is focused on weed control in wheat cropping systems in northern Idaho.

### *“Analysis Tool for real-time monitoring of Water Quality, Soil Quality, and Plant Nutrition”*

One of the biggest challenges we all face as farmers, consulting agronomists, and scientists is how to measure beneficial change. Now that we can adjust the flow from individual nozzles on the pivot with our cell phones, use UAVs to scout crops, use our iPad’s and tablets to adjust the variable seeding and fertilizer rates from one of the 6 boxes on our drill..... Let’s look at some of the new tools in the tool box that will help us make informed decisions about how we can better measure plant wellness and soil health.

#### **Jill Clapperton, Rhizoterra, Spokane, WA**

Rhizoterra Inc is an International company based in Spokane WA that creates, translates and summarizes information with respect to all aspects of soil health and agroecosystem function

## Wednesday Morning Breakout Sessions III Cont'd

### ***"Can cover crops replace summer fallow?"***

This presentation summarizes short-term water use by a 2014 cover crop versus three fallow systems: 1) bare soil, 2) wheat straw residue cover, and 3) full shade. Our primary objective was to document cover crop water usage. Cover crop systems can effectively improve soil health, as demonstrated across the corn belt of the continental US. They will discuss the water balance trade-off of building soil quality with a cover crop system versus allowing for water storage with a conventional fallow system. Cover crop biomass accumulation and water consumption rates will be reported and contrasted with evaporative water loss under fallow systems relative to evapotranspiration for up to five locations in southeastern Washington State. They will also discuss soil factors that confounded the results of the study, specifically – nutrient stratification under long-term direct seed cropping systems.

**Wayne Thompson, WSU Extension, Walla Walla, WA**

Wayne Thompson is an Assistant Professor and WSU Regional Dryland Cropping Systems Specialist and Extension Agronomist for the SE region of Washington.

**Mary Dye, Producer, Pomeroy, WA**

Mary Dye has a BS in Agronomy from UI and 30 years of dryland farming experience with Roger Dye in Garfield County, Washington

### ***"Nutrient and Soil pH Management Strategies"***

There are many choices to make when it comes to fertilizer timing, amount, source and placement. Decision making about soil and fertilizer management includes being proactive in managing pH, crop nutrient uptake and application timing, micronutrient needs, tissue testing, and effects of low pH on herbicide carryover, weed populations and diseases.

**Don Wysocki, OSU;**

Don Wysocki grew up on small farm in central Wisconsin, and has served as Extension Soil Scientist with Oregon State University at the Columbia Basin Agricultural Research Center, Pendleton, Oregon since 1986. He received his B.S. degree from Univ. of Wisconsin, M.S. from WSU, and PhD from Iowa State University. He conducts Extension programs and applied research on soil, water, and crop management in dryland cropping systems of the semiarid Pacific Northwest. Don has worked extensively with canola, mustard, camelina, and other oilseed crops to develop agronomic recommendations for these energy crops. This includes integrated research on tillage, fertility, residue management, rotations, and diversification of cropping systems. He works with producer organizations, Extension agents, NRCS personnel, agricultural consultants, and Conservation Districts to get research information into the hands of farmers and other users.

**Markus Braaten, Agri-Trend**

Markus Braaten graduated from Montana State University with a BSc in Agriculture Education and Biology in 1998. He spent six years as an instructor of Agriculture Science concentrating in the areas of Ag Business & Economics, Horticulture, Crop & Livestock Production, Equine Science and Precision Agriculture. In 2000, Markus returned to his hometown of Kalispell where he continued teaching prior to starting their consulting business. Currently, he works with farmers, ranchers and landowners, large and small, in Western Montana as an Agri-Coach and Certified Crop Advisor. He serves on the Rocky Mountain Regional CCA Board and Montana Agricultural Experiment Station State Advisory Council. Markus has recently taken on the

role within Agri-Trend as US Director of Agri-Knowledge where he leads the mentorship and training for new coaches in addition to speaking as an advocate for Agri-Trend and sound agronomic practices around the country. With his wife and kids, he raises registered Icelandic sheep and hay. He also assists his father on a registered Black Angus operation.

**Paul Carter, WSU**

Paul joined Washington State University in 2005 and is an Extension specialist, Associate Professor and Columbia County director. From Purdue University in Indiana, Paul is an Agronomist with a background in soil science and remote sensing and is currently working with soil pH and nutrient availability for crops on Eastern Washington dryland soils. Paul has farming experience with corn, soybeans, wheat, cattle and hogs on an Indiana family farm.

### ***"Canola Variety Selection & Research – Industry Perspective"***

National and regional representative from five seed companies will discuss current canola varieties and what is in the pipeline for stacked traits and other technology.

**Bayer, Croplan, Monsanto, Rubisco, Star Specialty**

### ***"What IS Canola Doing to the Soil?"***

Almost anyone who has grown canola comments on the difference in the soil after the crop. This panel will discuss proven and possible reasons for those differences including nitrogen cycling, root structure (including live scans of root growth), infiltration, silica content of residue, soil microbiology, and more.

**Tai McClellan Maaz, WSU**

Tai is originally from southwest Virginia. She received her B.S. and M.S. degrees from University of Hawaii at Manoa in Tropical Plants and Soil Science with a focus in soil fertility, and her PhD in 2014 at WSU with Bill Pan on nitrogen cycling in no-till cropping systems featuring canola. Tai is continuing her research on rotational N use efficiency with Bill Pan as a Post-Doc. She also plans to study database management and data science in agricultural systems.

**Taylor Beard, WSU;**

Taylor is currently an Associate in Research at WSU working under Dr. Bill Pan and WA Oilseed Cropping Systems project. In December of 2012 she received her M.S. degree in soil science specializing in soil fertility. The WOCS project has been an essential part of her research and extension efforts for the past three years. Prior to attending WSU Taylor received a B.S. in Natural Resource Management from the University of Alaska. This Colorado native was recruited by UAF to compete on the collegiate rifle team. From the age of 14 Taylor competed at a national and international level as a member of the USA Shooting National Development Team.

**Jeremy Hansen, WSU;**

Jeremy is a USDA-ARS employee in the Northwest Sustainable Agroecosystem Research Unit in Pullman. He received his B.S. degree from Utah State University and M.S. degree from University of Idaho, both in soil science. While with the ARS he has been involved in research focused on soil quality with differing agricultural management strategies. Recently, Jeremy started a PhD program in the WSU Crop and Soils department. His proposed research will investigate soil quality with the addition of an oilseed crop in rotation, specifically using phospholipid analysis to monitor shifts in microbial communities in response to the inclusion of an oilseed crop.



## Wednesday Lunch General Sessions

### ***“Ice Age Geology: A Common Thread for Pacific Northwest Agriculture”***

**Nick Zentner**, Central Washington University geologist  
Nick Zentner has been with CWU Geology since 1992. He is an advisor to most of the geology undergraduates and he mentors graduate students teaching in the field and in the lab. Nick teaches a popular "Geology of Washington" course to CWU students every quarter - and his course is open to townspeople for free! Nick is the host of two ongoing video projects: KCWU-TV's "Central Rocks" and HUGEFloods.com's "2 Minute Geology". He leads the Ellensburg Chapter of the Ice Age Flood Institute, and received the 2011 CWU Most Inspirational Faculty Award and the 2012 CWU Presidential Faculty Award.

### ***“An Overview of Cover Cropping in the PNW – Opportunities & Challenges”***

Rob Myers will provide an overview of the efforts of the National Cover Crop Committee to stimulate further adoption of cover crops, trends in equipment and management approaches, and impacts on soil health and provide an overview of national cover crop survey results. Lindsey will cover importance of using certified seed and ways to minimize black leg disease in PNW.

**Rob Myers**, Co-Chair of National Cover Crop Committee, SARE Regional Director of Extension Programs, Columbia, MO  
Rob Myers did his graduate work at University of Minnesota, obtaining M.S. and Ph.D. degrees in agronomy. Following completion of his Ph.D., he served as a Congressional Science Fellow, working on the U.S. House of Representatives Agriculture Committee. He then spent five years as a faculty member in agronomy at University of Missouri, subsequently serving as national director of SARE from 1995-97. He grew up on a family farm in central IL and attended Illinois State University as an undergraduate in agricultural science. Myers will be based in Columbia, MO, where he was previously founder and director of the Thomas Jefferson Agricultural Institute, a nonprofit organization working on crop diversification and agricultural sustainability.

**Lindsey du Toit**, WSU vegetable seed pathologist  
Lindsey du Toit completed her undergraduate education at the University of Natal in South Africa, and MS and PhD degrees at the University of Illinois, majoring in plant pathology. She first worked as a plant diagnostician for the Plant & Insect Diagnostic Lab at the WSU Puyallup Research & Extension Center before becoming a WSU faculty member in the Department of Plant Pathology in 2000, based at Mount Vernon. The focus of her vegetable seed pathology research and extension program is on the etiology, biology and management of diseases that affect vegetable seed crops in the PNW, particularly small-seeded vegetable seed crops such as spinach, brassicas, carrot, onion, radish, and table beet.

## Wednesday Afternoon Breakout Sessions IV

### ***“Rotational N Uptake Efficiency: What are we missing with single season estimates?”***

The focus of the talk will be on estimating crop N recovery from soil nitrogen (N) supply. The talk will demonstrate how determining N uptake from soil N supply within a single crop window ignores the

dynamic nature of N and potential carry over into following seasons. Data will be presented which compares N uptake of spring and winter cereals in rotation with legumes, oilseeds, and/or fallow periods across multiple agroecological zones of the grain fallow, transition, and annual cropping regions. Differences in single-season and multi-season apparent fertilizer N recoveries will be discussed.

### **Aaron Esser**, WSU Extension

Aaron Esser is a Lincoln-Adams Area Extension Agronomist with Washington State University. His program is focused on using on-farm testing as a tool to development and assist grower adaptation of minimum tillage and no-till systems, and more intensive crop rotations. He grew up on a farm near Genesee, Idaho, and he received his Bachelor's Degree in agricultural economics and Master's Degree in plant science at the University of Idaho.

**Tai McClellan Maaz**, WSU See bio above

### ***“Cover Crop Study: Reporting on Results”***

Spring and fall seeded cover crops were evaluated in Lewis County, Idaho to determine impacts on annual crop rotations and potential as a source of forage for grazing. Results will be presented for large replicated on-farm tests and smaller ongoing plot-scale tests. Forage quality and quantity, date of seeding impacts, and disease and rotation implications surrounding cover crop species and mixes will be discussed.

### **Doug Finkelnburg**, UI Extension

Doug Finkelnburg received B.S. and M.S. degrees in Environmental Science from the University of Idaho. He conducted small grain and grain-legume variety testing as a UI Research Support Scientist from 2007-2012 and is currently an UI Extension Educator. Doug helps conduct extension, continuing education, and research focused on northern Idaho dryland cropping systems.

### **Ken Hart**, UI Extension

Ken received his education at Seattle Pacific Univ & U of I. Now at the UI Extension he is conducting a Cover Crop with Direct Seed Wheat Rotation research project with cooperator Drew Leitch, Kevin Seitz, NRCS, & Jim Church, UI Ext. Educator. Kevin will share the objectives, methods, & results of this study that included planting production plots with several different multi-species cover crop mixes, and several single-species cover crop plots near Nez Perce, ID.

### **Drew Leitch**, Nezperce, ID producer

Drew Leitch is an elected board member of the Lewis Soil Conservation District (since 2012). Drew is the owner and manager of Leitch Farms, a three generation farm in Lewis County, Idaho as well as a partner in L-R Farms located near Nezperce, Idaho. He was raised in Nezperce, received his agricultural degree at the University of Idaho, and taught agricultural education in eastern Colorado before returning to Nezperce where he was the general manager of a local grain elevator for seven years. After farming with his father for several years, Drew now manages the family farm which produces wheat, canola, hay, and blue grass. Leitch Farms also operates a cow-calf herd which utilizes cover crops to better manage grazing acres.

### ***“How do I know if my soil is healthy? Evaluating soil health and understanding the interactions between micro-organisms and the plant.”***

Audience members will learn through visual demonstration “How Soil Functions.” Improving soil health on your farm is a process or

journey and the more we emulate nature, we can start to decrease inputs. Managing for soil health is one of the easiest and most effective ways for farmers to increase crop productivity and profitability while improving the environment. Results are often realized immediately, and last well into the future. Using these four basic principles is the key to improving the health of your soil. 1. Keep the soil covered as much as possible. 2. Disturb the soil as little as possible. 3. Keep plants growing throughout the year to feed the soil microbes. 4 Diversify as much as possible using crop rotation and cover crops.

**Marlon Winger**, State Agronomist, USDA-NRCS, Boise ID  
Marlon earned a MS and BS degree at Utah State University in Plant Science. He grew up on a family owned dairy farm in Dayton Idaho, where he found his passion for life (Agriculture). He has worked as a County Agricultural Agent for Utah State Extension service and has been working for the USDA-NRCS for about 8 years, currently as the State Agronomist for NRCS Idaho. He has been spearheading soil health in Idaho by teaching workshops throughout the state.

## Wednesday Afternoon Breakout Sessions IV Cont'd

### *"Insect and Disease Management for Oilseed Crops"*

Topics in this session will include overviews of major insect pests and diseases that could attack your canola crop in the Pacific Northwest as well as control measures for those pest and diseases. The speakers will show you how to identify pests and diseases in your crop, discuss thresholds for treatments, list potential treatments, and share online resources. The incidence and potential of Blackleg disease in the Pacific Northwest will also be discussed.

#### **Dale Whaley**, WSU Extension

Dale Whaley has been working for WSU Extension for twelve years and is currently assisting Douglas, Chelan, Kittitas and Okanogan County residents with their agriculture and integrated weed management needs. He received B.S. and M.S. degrees from WSU, and has expertise in entomology, integrated pest management (IPM), noxious weed control and invasive species. He is currently working with alternative cropping systems and continues to work as a regional coordinator for the Washington State Integrated Weed Control Project.

#### **Tim Paulitz**, USDA-ARS

Tim Paulitz is a research plant pathologist for the USDA-ARS Root Disease and Biological Control Research Unit in Pullman, a position he's held since 2000. He works on wheat, barley, canola, camelina and legume and vegetable rotation crops. His main research interests include ecology, epidemiology and management of soilborne pathogens of cereals; as well as root diseases, mycology, nematology, soil health and microbial community analysis.

**Jim Davis**, UI; See bio above

### *"2014 – The Year Your Neighbor was Right...But is Opportunity Knocking?"*

If ever there was a year of 'learning' experiences with canola and other oilseed production, 2014 was it! Join this roundtable discussion about positive and negative stories from the field, and how to find opportunities and answers to overcome challenging conditions.

**Curtis Hennings**, Ritzville; **Andy Juris**, Bickleton;  
**Denver Black**, Mansfield

### *"Forage, Grazing and Feed – It's Not Just the Seed!"*

Canola and camelina are typically produced as an annual crop for seed, yet there are other value-added options for the crop. Biennial canola production with another interseeded crop, silage production, grazing, and utilizing canola and camelina feed as a protein source in feed rations will all be discussed.

#### **Don Llewellyn**, WSU Extension;

Don Llewellyn joined WSU Extension as a Regional Livestock Specialist in May 2011 and is located in Kennewick, WA. Don grew up in Wilbur, WA working in his family's grain farming and beef cattle operations. He earned his B.S. degree in Animal Science at Oklahoma State University, and his M.S. and Ph.D. degrees in Ruminant Nutrition at Kansas State University. After his graduate studies, he was a member of the faculty at Eastern Kentucky University teaching Animal Science, Beef Production, Forages, and related topics. The focus areas for his program with WSU Extension include: 1) Beef cow nutrition and reproduction, 2) Livestock production, safety, and quality, and 3) Management practices to reduce production costs. His primary responsibilities are providing Extension programming and applied research to livestock producers in Benton and Franklin Counties and Washington State. Some of Don's recent applied research includes evaluation of on-farm processed Canola and camelina meals as protein supplements for beef cattle and a new project investigating the ensiling characteristics of fall canola forage.

#### **Randy Emtman**; Producer Valleyford, WA

Randy Emtman is a fourth generation farmer from Valleyford, Washington. He farms with his father, brother and son. They have a diversified grain, legume, canola, hay, and cattle operation. It is a dryland farm that receives about 18" of annual moisture.

#### **Keith Weerts**

Keith Weerts received a B.S in Chemical Engineering from the University of Illinois, and a MBA from the University of Minnesota. He is the owner of QuickThought, a systems integration company that implements automation programming for the food processing and oilfield industries, and is also a part-time farmer and cattle rancher near Garfield, WA. Keith has utilized canola meal in rations for his cattle for several years, and recently purchased a press for on-farm meal production.

## Wednesday Dinner General Session

### *"Maximizing Retention of Moisture in Low-Rainfall Regions & Technologies to Help Soil Retain Moisture"*

#### **Markus Braaten**, AgriTrend, Kalispell, MT

Markus Braaten graduated from Montana State University with a BSc in Agriculture Education and Biology in 1998. He spent six years as an instructor of Agriculture Science concentrating in the areas of Ag Business & Economics, Horticulture, Crop & Livestock Production, Equine Science and Precision Agriculture. In 2000, Markus returned with his wife and children to their hometown of Kalispell where he continued teaching prior to starting their consulting business. Currently, he works with farmers, ranchers and landowners, large and small, in Western Montana as an Agri-Coach and Certified Crop Advisor. Markus has recently taken on the role within Agri-Trend as US Director of Agri-Knowledge where he leads the mentorship and training for new coaches in addition to speaking as an advocate for Agri-Trend and sound agronomic practices around the country.



## Elston Solberg, AgriTrend, Alberta, Canada

Elston brings over 25 years of research expertise to Agri-Trend, through his work as Head Cereal Specialist and Research Agronomist with Alberta Agriculture. Elston Solberg is now the president of Agri-Trend Agrology, and leads the development of the science behind it.

## Thursday Morning General Session

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### ***“Welcome and Thoughts on Innovation”***

John will introduce the third day with factors that have improved his operation and the importance of continually improving.

### **John McNabb, PNDSA President, Producer, Inkom ID**

John farms in the 12-15” rainfall region in mountain loam and rocky soils of Southern Idaho. He’s been direct seeding for 37 years and is still learning and finding ways to make improvements to his operation.

### ***“The Economic Environment for Biodiesel: Plant Location Decisions and Feedstock Dynamics”***

Communities interested in attracting Biodiesel and other type bio-refineries often focus on tax and other direct incentives to encourage development. Based on research covering all U.S. biodiesel plants operating in 2010, the actual drivers of plant location are discussed, as well as feedstock development.

### **Randy Fortenbery, WSU Economist**

Randy Fortenbery is the Thomas B. Mick Endowed Chair in the School of Economic Sciences at Washington State University. He also serves as the Chairman of the Ag Markets Advisory Committee to the Commodity Futures Trading Commission. 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 prices. Prior to joining the faculty at WSU, Randy was at the University of Wisconsin-Madison for 19 years. He held the Renk Endowed Chair in Agribusiness from 2002-2011, and served as the Associate Director of the Wisconsin Bioenergy Initiative. Randy received his Ph.D. in Agricultural Economics from the University of Illinois-Urbana/Champaign and his M.S. in Applied Economics from Montana State University.

### ***“PNW...The Gateway to Asia”***

Bud will explore factors and trends in PNW grains including PNW expansion, quality, and the soft white wheat market situation.

### **Bud Reidner, General Manager, McCoy Grain Terminal**

Bud was raised on an Eastern WA wheat farm and graduated from WSU with a degree in Agronomy. He has been involved in the grain business for 33 years, 24 years in PNW exporting.

## Thursday Morning Breakout Sessions V

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### ***“Analyzing machinery costs within a crop enterprise budget: A cost comparison of conventional and direct seed production methods.”***

Calculating machinery costs, whether for direct seeding or other techniques, will vary depending on how much you use your machinery and how long you plan to keep it. Some costs are easy to calculate and others are estimates, at best. We will look at how fixed

and variable machinery costs for both direct seeding and conventional seeding varies depending on various assumptions, based on real world examples.

### **Kate Painter, UI**

Painter is an Agriculture Economics Analyst in the University of Idaho College of Agricultural and Life Sciences. She earned her doctoral degree at Washington State University in 1992 with a project focused on farm level economic and environmental effects of U.S. farm policies in the Palouse and in North Carolina. Painter currently works with farmers to produce crop and livestock budgets for University of Idaho Extension. In addition, she conducts cost and returns analyses as a member of various research projects, including several Direct Seed Mentoring projects and the direct seeded Long Term Agricultural Research (LTAR) trials at WSU’s Cook Agronomy Farm. She also teaches farm management and enterprise budget development at the University of Idaho.

### ***“Farmed Smart Certification: Update and working session for interested producers self-evaluating their operations - Panel”***

We will kick this session off with an update on program partners and market development. The bulk of this session will be a working session to review the criteria and have producers score their operation individually. Producers interested in pursuing the Farmed Smart certification program can provide their initial application and self-evaluation after the session that would be followed up by the 3<sup>rd</sup>-party auditors to formally complete the certification process. The certification fee will be greatly discounted the first 10 producers registered.

### **Kay Meyer, PNDSA Executive Director**

Kay Meyer has facilitated planning sessions of the certification criteria development committee, has submitted four grants for implementation funds, and has had many market development meetings with interested entities including co-ops, WalMart, and Campbell’s.

### **Panel Participants Include:**

**Chad Atkins**, Department of Ecology,  
**Ty Meyer**, Spokane CD, and  
**Dan Harwood**, Palouse Rock-Lake CD

### ***“What’s new for you in the Farm Bill - Panel”***

This presentation will provide an overview of the Farm Bill sign up options, and an opportunity for attendees to ask specific questions about benefits and considerations of options.

### **Rod Hamilton, USDA Farm Service Agency**

Rod Hamilton grew up on a dairy and beef cattle operation in central Montana and is a graduate of Montana State University. He worked for an investment firm in California and as a crop consultant in the Tri-Cities before joining the Farm Service Agency (FSA). Rod has worked for FSA for 30 years at the county, district and state level. He is currently the Farm Program Chief in the Washington State FSA Office with overall responsibility for the agency’s commodity, price support, conservation and compliance programs.

**Bonda Habets**, USDA NRCS State Resource Conservationist  
**Jonquil Henderson**, USDA-RMA Risk Management Specialist

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## Thursday Morning Breakout Sessions V Continued

### ***“Crop Insurance – Navigating Policies and Adjustments for Oilseed Crops”***

Insurance can appear to be very complicated – do I need it? What policy should I choose and what level should I insure at? What if I haven't grown canola before? How do I make a claim on my canola crop? These questions and more will be answered in this session.

**Jason Ludeman**, Crop Insurance Solutions

### ***“Agronomy and Economy of Rotations with Oilseeds”***

The big question about including canola or other oilseed crops in an existing rotation is typically “Will it Pay?” Join this session to hear about an online enterprise budget program from WSU/UI, and also from two producers who will share their personal experiences with canola production and how it ‘pays’ beyond just selling the seed.

**Vicki McCracken**, WSU Economist

**Wade Troutman**, Producer Bridgeport, WA

**Mark Greene**, Producer Cloverland, WA

### ***“Marketing Strategies – The Big and Little Pictures”***

The price of canola has plenty of ups and downs – so how is a person to know when to sell, when to hold, and what other marketing options are there to maximize income from canola production? This session offers perspectives from large and small grain merchandisers as well as producer viewpoints of marketing strategies.

**Mike Conklin**, The Scoular Co.

Mike Conklin is the Canola Merchant for the Scoular Company merchandising on behalf of Pacific Coast Canola in Warden, WA. He is an Oregon native having grown up on a wheat and cattle operation in Morrow County. After graduating from the University of Oregon, Mike began his career in agricultural business with his first job in Portland at United Grain Corporation, a prominent PNW export company. He then moved into the cooperative system working up from trading to management including a 2 year stint trading produce in Hawaii. He owned and operated an agricultural professional recruitment firm for 5 years and returned to the grain trade in 2012 with Pacific Coast Canola. Mike enjoys his secret life as a professional guitar maker and spending time with his wife Marlee and three sons.

**Heath Barnes**, Whitgro, St. John

Heath Barnes is currently general manager of Whitgro Inc. located in St. John. He graduated from WSU with a B.S. in Ag Econ and Business and has since worked at several grain facilities, including St. John Grain Growers, Johnson Union Warehouse, and PNW Farmers' Cooperative. Heath started a hummus business, Bronzestone, before taking a position as assistant manager for Columbia County Grain Growers in Dayton, followed by accepting the job at Whitgro in July 2013. Whitgro is a 400-member grain storage and handling cooperative drawing from an area in the heart of the Palouse.

**Steve Riggers**, Nezperce, ID

Steve Riggers currently owns and operates Riggers Clearwater Farms with his brother Nathan in Nezperce, Idaho. The farm grows wheat, barley, legumes, canola, alfalfa and grass seed. Steve is a past board member of the Pacific Northwest Direct Seed Association and currently serves on the Idaho Oilseed Commission.

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## Thursday Lunch General Session

### ***“Transgenic Crops – The Methods, Pros & Cons of GMOs and Biotechnology”***

In the past three years Dr. Neff has spoken to well over 3000 people in Washington State regarding genetically modified organisms (GMOs). In addition to discussing GMOs, Dr. Neff will talk about transgenic crops including the methods, pros and cons of GMOs and biotechnology. The goal of this presentation is to discuss the science behind the technology so that knowledgeable opinions can be developed on a case-by-case basis.

**Michael Neff**, WSU molecular geneticist

Michael Neff earned his B.S. and Ph.D. degrees in the Department of Botany at the University of Washington. After being a post doc at the Salk Institute for Biological Studies and an Assistant Professor of Biology at Washington University in St. Louis, Dr. Neff joined WSU in 2007. He is an Associate Professor of Crop Biotechnology in the Department of Crop and Soil Sciences where he is also the assistant chair. For the past five years, Dr. Neff has been the Director of the Molecular Plant Sciences Graduate Program at WSU, which was recently ranked as one of the top four in plant-related research by the U.S. National Research Council.