



BREAKOUT PRESENTATION SUMMARIES

TUESDAY, JANUARY 7, 2025 - MORNING

ROOM C/D

10:15-11:15 a.m.

**Direct Seed- Seeding and Drills: Techniques, Tools and Best Practices,
Jesse Brunner, Brent Uhlorn, Jake Markgraf and Brad McManigal**

Join direct seed producers Jesse Brunner, Jake Markgraf, Brad McManigal, and Brent Uhlorn as they share their valuable experiences with direct seed drills. They will discuss essential techniques, tools, and best practices tailored to the rainfall conditions in their respective regions. Gain insights into optimizing seeding operations, improving efficiency, and addressing local challenges through practical, firsthand knowledge from seasoned professionals.

ROOM E/F

10:15– 11:15 a.m.

**Seed Inoculants Under Variable Fertilizer Rates in Spring and Winter
Jacob Powell, OSU**

There are hundreds of different biological products available for wheat production. Some of these products are foliarly applied while others are soil or seed applied. The product MycoGold is a mycorrhizal fungi wheat seed treatment or additive mixed into the drill at seeding. It contains an endomycorrhizal fungi, several bacteria strains, and several micronutrients. Some local producers in the PNW have been using this and seen some success, but it has not been well quantified. Testing by the MycoGold manufacturer shows that it can increase wheat yields by 12.4% over three years of testing in the mid-west. Research by other independent sources have not examined this product in wheat, but have in corn and have found varying responses. It is unknown how effective seed applied biological products will be in the arid wheat producing region of north central Oregon. The objective of this study is to determine the impact of applying these products alone under five different nitrogen fertilizer rates on the following variables in spring and winter wheat: grain yield and quality, nitrogen and other nutrient concentrations in wheat tissue, root size, and soil macro and micronutrients. This study is being completed at the Sherman Experiment Station in Moro, OR in a 10-12 inch annual precipitation zone and at the Pendleton Experiment Station (14 inch precipitation zone). Trials were seeded in October 2023 and April 2024 with data collection just now beginning. This presentation will share research findings and discuss costs and benefits of using biological seed inoculants in dryland crop production.

1-CM CCA Credit



Room G/H

10:15 - 11:15 a.m.

Sustainable Oil Camelina – How Intermediate Crops Add to Farm Sustainability, Barney Bernstein, Sustainable Oils

Join Barney Bernstein of Sustainable Oils for an in-depth exploration of camelina's potential as a biofuel feedstock crop. With roots dating back to 2005, Sustainable Oils has emerged as a leader in camelina development. This presentation will examine the performance of camelina across five distinct U.S. agroclimatic regions, highlighting its contributions to biofuel production, carbon sequestration, and carbon intensity reduction. Learn about camelina's role in promoting regenerative agriculture practices and enhancing economic viability, as well as its potential to transform sustainable energy solutions and agricultural systems

TUESDAY, JANUARY 9, 2025 - AFTERNOON

Room C/D

12:45-1:45 p.m.

Fallow/Residue Management: Optimizing Fallow and Residue Management for Sustainable Agriculture, Dr. Judit Barroso, Dr. Stewart Wuest, PNW Producers: Jesse Brunner Fifth Gen Farm and Berk Davis, B L Davis Ranch

Join Dr. Wuest, Dr. Barroso, and a panel of experienced Pacific Northwest growers, including Berk Davis and Jesse Brunner, for an insightful discussion on fallow management. This session will cover effective strategies, practical approaches, and innovative techniques to optimize fallow periods. Gain valuable perspectives from both researchers and growers on enhancing soil health, conserving moisture, and improving overall crop productivity in diverse farming systems.

Room E/F

12:45-1:45 p.m.

Winter Pea Cover Crop Decreased Nitrate Leaching and Improved Winter Wheat Nitrogen Uptake, Hero Gollany, USDA

Nitrogen (N) is most often limiting yields. Despite the misconception that there is no nitrate (NO₃-) leaching under the dryland production system, it may be possible because of overfertilization. Our objectives were to determine the effect of a winter wheat-winter pea (WW-WP) cover crop on 1) winter wheat-fallow (WW-F) yields and protein nitrate leaching. A long-term WW-F experiment was established in 1982. A second WW-F experiment was established in 1997 and converted to WW-WP cover crop in 2010. In 2017, nitrogen tracer (15N) was applied to a 3.28 ft² subplot of each plot in late April. By the end of the season in 2017, the 15N tracer had moved below 24" depth across all plots

with or without a cover crop. The 15N moved below 5 ft depth by 2019. Wheat grain protein content reached 10.5% in the WW-WP at ~ 61 lb N/ac, while in the WW-F, it needed ~86 lb N/ac application rate before reaching 10.5% protein content. Three years 15N recoveries were 57.5% and 32.7% in the WW-WP and WW-F, respectively. Nitrogen contribution from pea cover crops could reduce N fertilizer application rates while reducing NO₃- leaching and nitrogen fertilizer carbon footprint.

Winter Pea Agronomics, Pest and Disease Control, Dr. Kurtis Schroder, U of I

Winter peas present an opportunity to diversify Pacific Northwest crop rotations, reducing fertility inputs for following crops and realizing value when sold into foods or feed markets or used as a cover crop species. This presentation provides an overview of a multi-year and multi-site winter pea research effort including variety and agronomy trials. Understanding variety traits, planting depths, seeding density, disease resistances, and herbicides used for weed control is essential for optimum productivity. By understanding these agronomic factors, grower can optimize their planting strategies to enhance crop performance and overall productivity. This comprehensive analysis of variety traits and agronomic practices provides critical information for improving winter pea cultivation, ultimately contributing to more sustainable and profitable farming systems in the region.

Room G/H

Innovating Precision Agriculture: RDO Beta Testing and Starlink Data Integration, Dave Delmoro, RDO and Clint Zenner, Zenner Family Farms

Join Dave and Clint as they share their experiences farming in a rural area, utilizing Starlink internet and John Deere equipment to collect and transmit data on pesticides, herbicides, and insecticides. This data is then integrated into prescriptive maps, allowing for targeted spot treatments rather than blanket spraying across the entire field.

Room C/D

Washington State NRCS Update WSDA STAR Program Update, Lauren Quackenbush, Soil Health Economic Development Coordinator, WSDA

The STAR Tool is a free, confidential resource that helps producers adopt conservation practices on their fields. These practices improve soil health, water, and air quality, and can increase farm profitability. By completing a simple form about their practices, producers receive a 1-to-5 STAR rating, tailored recommendations, technical assistance, a Conservation Innovation Plan, and a field sign displaying their STAR rating. STAR will also help derisk the adoption of new practices by providing the producer with a plan, a technical advisor, and a list of eligible financial resources and programs to help with implementation. This presentation will demonstrate how to use the STAR Tool and give important program information.

Room E/F

Oregon State NRCS Update, Garret Duyck, Basin Resource Conservationist

Room G/H

Idaho State NRCS Update

WEDNESDAY, JANUARY 8, 2025

ROOM C/D

10:30-11:30 a.m.

Direct Seed Fertility: Maximizing Crop Performance: Direct Seed Fertility Strategies and Solutions, Brad McManigal, and Larry Lutcher OSU

Join PNW producer Brad McManigal and OSU researcher Larry Lutcher as they share their expertise and insights on direct seed fertility practices.

Room E/F

10:30-11:30 a.m.

Nutrient Removal in Winter Wheat and Canola, Aaron Esser, WSU-CAHNRS

Join Aaron Esser as he shares his work to assist farmers in enhancing fertilizer management across their operations. While farmers often know the fertilizer rates applied to crops, fewer understand the amount of nutrients removed per acre during harvest. In 2024, winter wheat grain samples from the dryland region underwent nutrient analysis to calculate nutrient removal accurately. By comparing the nutrients applied with those removed, farmers can better assess the residual nutrient levels in their soil for future production cycles. As more farmers adopt practices to reduce synthetic inputs and improve soil health, this approach provides a valuable tool to evaluate and validate these sustainable practices.

Room G/H

10:30 -11:30 a.m.

Soil Health, Satellite Carbon Monitoring, and how its Correlated to What Crops Are Growing, Roy Pfaltzgraff

It Is Time to Question Everything: A look into the experiments on a dryland farm in Colorado that step outside the common views and challenge issues that most take for common. Looking at experiments with different seed treatments on untreated seed compared to the standard seed treatments that come in most seed corn. The other treatments were compost extract, mycorrhiza fungal spores, micronutrients for root elongation and a combo of micro nutrients and biologicals along with the control of no additional treatments. There will also be a study of row spacing and plant population in traditional row crops with information from both corn and sunflower experiments. Plus, other

information from research ongoing at the farm.

