



Figure 2. Spring wheat after WW versus after WC at time of harvest in August 2014 near Davenport, WA. Note the pronounced visual differences in plant height and head density between treatments.

In May of every year of our study, replicated soil cores in the WC, WW, and SW phases of the experiment were collected and archived in 2-inch increments to a depth of 6 inches. As part of his doctoral soils research at WSU, Jeremy Hansen conducted comprehensive laboratory analysis of these cores each year to determine any soil microbial differences. Specifically, Dr. Hansen used phospholipid fatty acid analysis of the soil to determine treatment differences in biomarker groups of fungi, mycorrhizae, Gram-negative, and Gram-positive bacteria which may help explain our field-study results (see Hansen et al. article on page 36).

Making Connections and Making a Difference: WSU-WOCS Extension & Outreach



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The primary function of the Extension and outreach side of the Washington State Oilseed Cropping Systems (WOCS) project is to be the conduit between the researchers on the team and all stakeholders in the canola industry. At the same



Group listening to a presentation at one of the three workshops given in January 2018.

time, input from growers, crop consultants, seed suppliers, processors, agencies, and other university personnel is a key component in shaping what questions the WOCS field and greenhouse studies are designed to answer. Communication is our top priority as we share results from research and demonstration trials. This includes phone calls, emails, radio and newspaper interviews, news releases, presentations, field tours, workshops, website (www.css.wsu.edu/oilseeds), Facebook page ([WSU Oilseeds](https://www.facebook.com/WSUOilseeds)), serving as a WSU liaison to the WA Oilseed Commission, WSU Dryland Crops Team member, and the formation of a Pacific Northwest Canola Association (see abstract on pg. 46). Our field tours and winter workshops once again set attendance records in 2017-18.

We strive to involve a broad spectrum of stakeholders and presentation methods in all our events, and that has proven to be a valuable method to increase attendance. A record 317 individuals attended our 2018 Oilseed Workshops at Hartline, Richland, and Colfax, with 170 attending for the first time (Fig. 1). We also met our goal of more than half of attendees being producers at each location. Our invited speakers from the Canola Council of Canada and Kansas State University added their perspectives and knowledge about canola production and were very well received. More details

about the field tours based at our large-scale canola variety trials can be viewed on pg. 34. Record canola acreage in Washington (60,000) and the 4-state PNW region (221,000) in 2017 underscores the importance of continued education and outreach, and the WOCS team is up to the task!

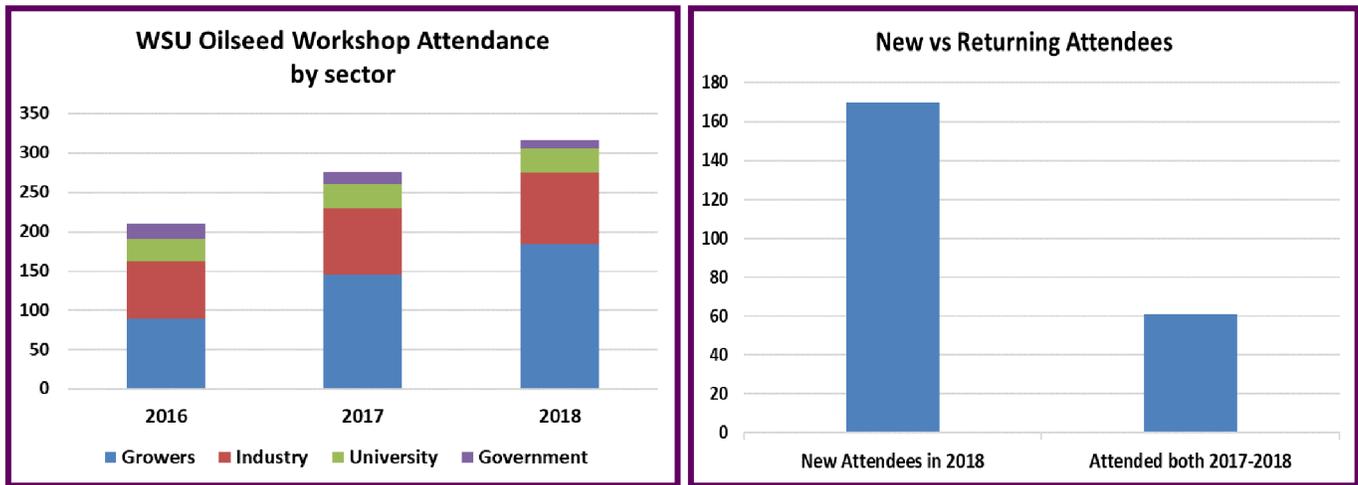


Figure 1. Attendance trends at the last three WSU-WOCS Oilseed Workshops (left), and first-time attendees in 2018 (right).

2017 Pacific Northwest Variety Trial Results

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The acreage of canola (*Brassica napus*, *B. juncea*, and *B. rapa*) in the Pacific Northwest continues to slowly increase as more growers show an interest in the crop. This is due in part to canola offering growers an alternative crop for rotations in an agricultural system that is predominated by small cereal grains. Currently depressed prices for wheat, caused by a worldwide surplus, have also contributed to the increased interest in canola.

To support the grower community, comprehensive yield trials are needed to evaluate new cultivars throughout the varied environments found in the Inland Pacific Northwest. With this objective in mind, researchers at the University of Idaho established the PNW Spring Canola Variety Trial in 1994 and the PNW Winter Canola Variety Trial in the fall of 1995. These trials have successfully attracted cultivar entries from numerous seed companies, with 176 winter varieties from 22 companies and 326 spring varieties from 33 companies submitted for testing over the lifespan of the trials. The trials are currently funded by USDA-NIFA Supplemental and Alternative Crops Competitive Grants Program and by the commercial companies that submitted their cultivars or advanced breeding lines to be tested in the PNW trials.

In 2017, 13 different commercial companies and public breeding programs submitted 52 distinct cultivars or breeding lines for testing, 21 winter types and 31 spring types. Three control varieties were included in each trial, for a total of 24 winter and 34 spring entries. Winter trials were grown at eight sites; Moscow, Genesee, Craigmont, and Grangeville, Idaho; Odessa and LaCrosse, Washington; and Pendleton and Hermiston, Oregon. Spring trials were grown at nine sites; Bonners Ferry, Moscow, Genesee, and Craigmont, Idaho; Davenport, Fairfield, and Dayton, Washington; and Pendleton and Hermiston, Oregon. The sites at Odessa and Hermiston were irrigated; the remaining sites were rainfed.

Winter cultivar yields ranged from 3,562 to 4,427 lbs. per acre when averaged across all sites. Mean seed yield varied widely between sites, with mean yields at individual sites ranging from 2,093 to 5,486 lbs. per acre, with an overall trial mean of 3,910 lbs. per acre. The five commercial canola cultivars with highest yields were 'Mercedes', 'Plurax CL', 'Edimax CL', 'Arsenal', and 'Atenzo.' The next best performing cultivars were 'Durola' rapeseed, 'Amanda' and 'Torrington.' Some winter damage was seen at the LaCrosse site, and Arsenal and Atenzo showed more mortality than the other entries.