showed that winter canola (WC) influenced the bulk soil microbial community and differentiated it from the community associated with winter wheat (WW) (see articles on page 40 and page 50). Abundance of soil fungi, including mycorrhizae, was reduced with the introduction of WC.

The objective of this research was to determine the differences and similarities in the rhizosphere microbial communities of WC and WW. Canola and wheat rhizosphere soil was collected from six dryland farms in Adams and Douglas Counties, WA. Each farm was a paired site with WC and WW grown in adjacent fields of the same soil type, landscape orientation, and crop history. Canola, or any non-cereal crop, had never been grown previously at the experimental sites. Microbial biomass and community composition, determined using phospholipid fatty acid analysis (PLFA), revealed differences that were primarily associated with landscape position at the initial fall sampling (Fig. 1A). Data from spring samples, however, showed significant differences in microbial communities between WC and WW rhizosphere soils (Fig. 1B). Data suggest that initial (fall) microbial community composition were an artifact of previous histories of monocrop wheat production and varied with expected differences in landscape position. As the crops developed, microbial communities became more dissimilar and were discriminated by crop species. Our results show that WC can have significant effects on rhizosphere microbial biomass and community structure in wheat-based cropping systems (see related article on page 36). Changes in microbial abundance and community structure can affect microbially-mediated soil processes, and potentially the performance of subsequent crops.

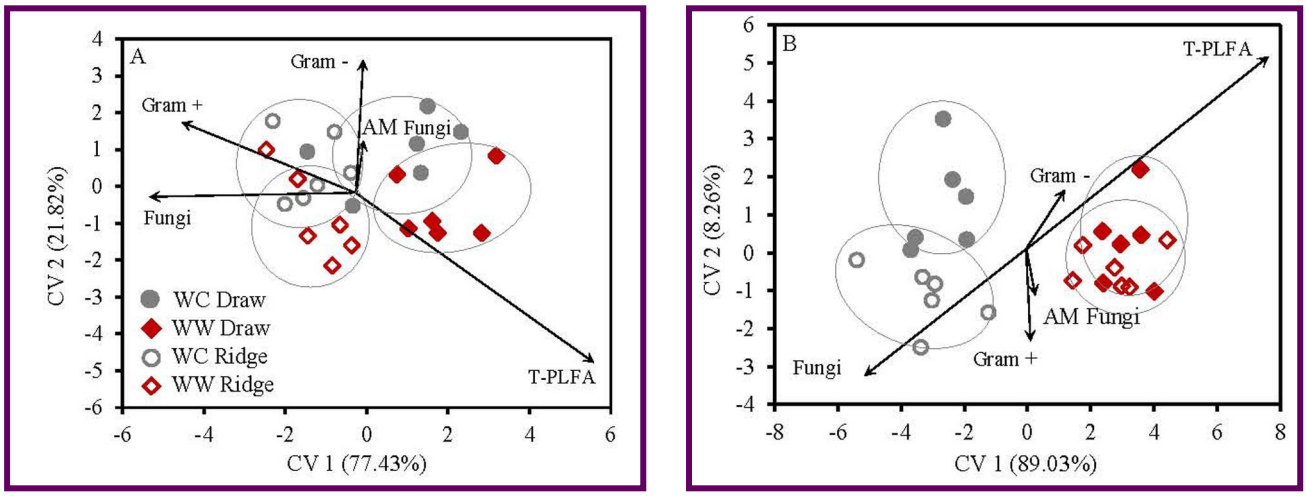

Figure 1. Canonical variates for lipid biomarker groups in winter canola (WC) and winter wheat (WW) at two landscape positions. Vectors represent standardized canonical coefficients for each biomarker group and total PLFA (T-PLFA), from fall 2015 (A), and spring 2016 (B). Vector magnitude and direction indicate the contribution of each biomarker group to each canonical variate. Each sample point is represented and cluster by treatment. Each cluster is accompanied by a mean ellipse at the 95% confidence interval (Treatments groups that differ significantly have confidence ellipses that do not intersect).

Pacific Northwest Canola Association Becomes Reality

KAREN SOWERS
DEPT. OF CROP AND SOIL SCIENCES, WSU

At this time last year there was talk of having a Pacific Northwest Canola Association (PNWCA) up and going in short order. So what has happened during the past year? A steering committee for the association comprised of PNW canola producers, industry members, and university faculty met in June 2017, and a Certificate of Incorporation was received in July, making the PNWCA official. Ten Producer Members from Idaho, Montana, Oregon, and Washington were elected to the board of directors in November. The Producer Members met in January of this year to elect officers and discuss next steps, including hiring an executive director. Another meeting was held in March, and the board approved hiring Karen Sowers as interim executive director. A membership campaign kicked off in April to gain grower, industry, and agency membership.

The PNWCA believes it can be a key player in the effort to increase canola acreage, improve production per acre, and collaborate with and educate stakeholders involved with the canola industry in the 4-state region. The PNWCA will create a united effort from PNW canola growers, universities, ag industry, and agencies to address legislative needs, generate additional canola research funding, and forward the canola industry in the PNW.

The board of directors are all looking forward to supporting the mission of the PNWCA of ***"Growing the canola industry in the Pacific Northwest through education, advocacy, and marketing."***

PNWCA Board of Directors (Producers)

Tim Dillin – Bonners Ferry, ID

Dale Flikkema – Belgrade, MT

Ray Mosman – Nezperce, ID – President

Don Nagy – Sunburst, MT

Randy Perkins – Athena, OR

Douglas Poole – Mansfield, WA

Anna Scharf – Amity, OR

Dennis Swinger – Lind, WA – First Vice President

Jon Walters – Walla Walla, WA – Second Vice President

Kyle Wasson – Whitewater, MT

Pictured here at the March 5 meeting of the Pacific Northwest Canola Association are: Anna Scharf, Randy Perkins, J.R. Swinger, Dale Flikkema, Tim Dillin, Douglas Poole, Karen Sowers, and Ray Mosman.

Spring Canola Seeding Rates

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Increased spring canola seed rates could increase crop stand establishment canopy development and ultimately, weed competitiveness and productivity by maximizing yield potential. In 2016 and 2017 studies were established in different rainfall zones to evaluate seeding rate effects on canola yields using a singulating planter. All studies were planted with spring canola variety Hyclass 930 using an eight row Monosem planter on 10" row spacing calibrated to deliver seeding rate treatments. Seeding rates in 2016 were 3 (hilldrop), 4, 5, 6, 7, 8, 10, or 12 lb A^{-1}, and seeding rates in 2017 were 4, 5, 6, 7, 8, 10, 11, and 12 lb A^{-1}. Plots were 10' by 75' long. All studies were conducted in a randomized complete block design with 3 replications. The 2016 study was harvested using a Kincaid plot combine with a 5-foot header and the 2017 studies were all harvested using a 5-foot header Wintersteiger plot combine. In 2016, the initial Pullman study was planted on April 20th, 2016 at the Cook Agronomy Farm near Pullman, WA, in a high rainfall zone with annual precipitation of greater than 17 inches. The site was in a no-till system. In 2017, the repeated Pullman study was planted a no-till system on May 9, 2017

Planting the Davenport, WA canola study on May 18, 2017.