

ONE-DAY UNIVERSITY: SOIL FERTILITY, COMPOSTING, AND ORGANIC FARMING

WORKSHOP REVIEW

Summary of the Summertime Workshop at WSU Eggert Family Organic Farm, WSU Composting Facility and Vogel Plant Biosciences

Amid the beautiful Palouse hills in Eastern Washington, 30 farmers, agricultural professionals, and community members gathered at the WSU Eggert Family Organic Farm to learn about soil fertility and composting. This all-day workshop covered a wide range of topics to help growers assess and improve the health of their soil. WSU research faculty and graduate student presentations addressed biologically improving soil, assessing soil in the field, crop rotations with quinoa, soil biotic activity measures, soil mycorrhizae, and compost teas.

Dr. Lynne Carpenter-Boggs, Associate Professor of Organic and Sustainable Agriculture, demonstrated the different types of soil assessments farmers can complete in their fields. Referred to as 'shovelnomics' in the soils world, Lynne explained that the best way to get to know your soil is to grab a shovel and simply dig. Through digging, a farmer can look at infiltration and soil texture to begin to understand what plant roots are experiencing. Soil texture is a characteristic of soil that a farmer inherits and can't easily modify through management. Aspects of soil structure can be managed and improved through practices such as growing deep root plants (to break up hard pans), cover cropping, and adding compost.

Adding to the conversation of soil assessments, manager of the WSU Eggert Family Organic Farm Brad Jaeckel spoke to the soil management strategies that they employ. Primarily a teaching farm, Eggert Farm also operates a CSA program, with the 2015 season being the first productive year since moving to its new site. To build soil fertility, Brad explained their use of green manures and cover crops. Since the site is relatively new, he says they plan to experiment more with summer cover crops and other cover cropping rotations and strategies. Bodh Paudel, Ph.D. candidate in Soil Science, was on-hand to share information about the use of green manures which, at the end of the day, increase soil biological activity leading to increased soil health.

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The workshop group then toured the nearby WSU Composting Facility. As the facility buzzed with activity, Lynne explained the composting process and the use of compost as a slow-release fertilizer. The facility produces compost at a large scale, with feed stocks coming from campus landscape services, the animal sciences department, and campus dining. She explained that



Photo credit: Angela Anegon

Dr. Lynn Carpenter-Boggs, Associate Professor of Organic and Sustainable Agriculture, explains 'shovelnomics' at the WSU Eggert Family Farm, Pullman, WA.

since they have such large windrows, the compost becomes hot enough to kill pathogens and weed seeds. The facility solarizes the compost and lets it cure for six months, to allow the compost to go thru an "acid phase" and return to a neutral pH. Lynne cautioned that farmers who do not compost on a larger scale need to be aware that they will likely not get a "hot" pile to kill sufficiently kill pathogens and weed seeds.

After seeing composting in action, everyone carpooled to the Zakarison Partnership, where Ph.D. candidate in Soil Science Rachel Wieme presented her test plots of quinoa. She is researching the potential use of quinoa in rotation with winter wheat and garbanzo, and how it affects soil biology, pest pressures, and yields.

The workshop group then spent the afternoon at the WSU Vogel Science center to listen to presentations on the use of compost tea from Ph.D. candidate in Soil Science CeCe Crosby, soil mycorrhizae from Rachel, and soil biological activity from Bodh. Time was also spent looking at various examples of mycorrhizae under the microscope as well as the microbes active in compost teas. From field to compost to microscope, attendees of this workshop certainly received a breadth of information regarding soil fertility and biology at all levels.

Summary written by Angela Anegon, Education Coordinator.

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