

SOIL HEALTH MINUTE: HAPPENINGS IN SOUTHERN IDAHO

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Hello! We are Courtney Cosdon (University of Idaho Extension/Natural Resources Conservation Service) and Tasha Paul (Idaho NRCS), bringing you Idaho soil health news and information. In this newsletter, we are sharing resources to encourage the use of soil health practices and working to involve more of our community in soil health events and discussions.



Natural Resources Conservation Service



University of Idaho
Extension

Upcoming Events

It is time to get everyone back together to start talking about soil health in the Treasure Valley again. Soil Keepers will be hosting a BBQ with Ada SWCD and Idaho Center for Sustainable Agriculture (ICSA) on August 31st to share community updates in the world of soil health. More info will be sent out soon! You can check out the Soil Keepers forum here: [Treasure Valley Soil Keepers](#).

Event Recap

Magic Valley Field Day 2022

Thank you to everyone who came to the Magic Valley Field Day this June in Kimberly. Over 70 people showed up to discuss and see soil health in action. The location was particularly great for demonstrating soil health with adjacent fields under different management, perfect for viewing the differences between a more conventional management system and the other reduced tillage system. Our speakers Linda Schott (UI Extension), Shawn Nield (NRCS), and Nick Sirovatka (NRCS) presented hands-on learning opportunities, discussing active carbon (see below), comparing soil pits in contrasting fields, and showing an in-field soil health assessment. The event was rounded out with a water infiltration demonstration using a rainfall simulator, followed by free lunch. Thanks again to Todd Ballard and The Nature Conservancy for hosting and to all our sponsors for making this event happen!



NRCS employees discuss soil properties of a reduced-till field with Field Day attendees

What's the deal with active carbon? Also known as permanganate oxidizable carbon (POxC), it is a small fraction of the carbon in the soil organic matter pool. It is rapidly cycled and feeds microorganisms. Research shows that active carbon responds quickly to changes in crop management, so it may be a useful tool to monitor changes to the overall health of soil as management practices evolve. A relatively inexpensive and available in-field method for determining POxC was demonstrated by Dr. Linda Schott and her staff.

Resources

- University of Idaho Soil Health: <https://www.uidaho.edu/extension/soil-health>
- Idaho NRCS Soil Health: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/id/soils/health/>
- Soil Health YouTube: https://www.youtube.com/playlist?list=PL6g6ZYcM47s9emP2muvDV4yq_FNQwoZoJ



Get Involved!

Impromptu Field Days

Impromptu field days are not planned much in advance. They are quick, educational field visits to see and discuss how a producer is trying a practice related to soil health on their operation.

If you have any soil health related practices you would like to share with your neighbors, call Courtney Cosdon (208)364-4692

Good news!

- NRCS Idaho and Simplot commit to collaborate on soil health practices to promote sustainability and profitability for producers.
- WSU is welcoming its first Distinguished Endowed Chair in Soil Health for Potato Cropping Systems. This well-supported research program will work with farmers throughout the Columbia Basin to tackle potato production challenges with an emphasis on improving soil health.
- The Idaho Center for Agriculture, Food and the Environment (CAFE) groundbreaking occurred in Rupert this June. This site will be a research hub that will focus on many facets of Idaho agriculture, soil health among them. Soil samples have already been collected to establish a baseline so that researchers will be able to understand variability and any changes that come about with management.

Check It Out

Soil Health Website

We now have a University of Idaho Soil Health website, where we are posting any event that we are hosting as well as information about other projects we are working on. Contact Courtney if you have an event you would like to share. <https://www.uidaho.edu/extension/soil-health>

Idaho Soil Health Facebook

Join the Idaho Soil Health Facebook, to get connected with other soil health-minded folks and keep up to date on happenings and conversations. Thanks to Brad Johnson at The Nature Conservancy for creating this communication opportunity.

Idaho Soil Health Storymap

This interactive resource is an amazing go-to location for information on general soil health topics and also info very specific to soil health in Idaho. On this page, you can take a virtual tour of soil health practices and research projects happening around the state, and find links to other great resources such as Virtual Field Day videos, soil health assessments, and NRCS programs for assistance implementing soil health practices. This Storymap was created by Shanna Bernal-Fields (NRCS Resource Soil Scientist).
Idaho Soil Health Storymap

YOU CAN SUBSCRIBE TO THE IDAHO SOIL HEALTH EMAIL LIST AND SOIL HEALTH MINUTE NEWSLETTER FOLLOWING THESE STEPS:

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2. Scroll to the bottom of the email and click "manage subscriptions"
3. Under "subscription topics", scroll down to Idaho, expand and select "ID-State NRCS Soil Health"



In The Literature

This section is for sharing recent and exciting scientific literature, boiled down to key takeaways that focus on soil health practices relevant to producers in Idaho.

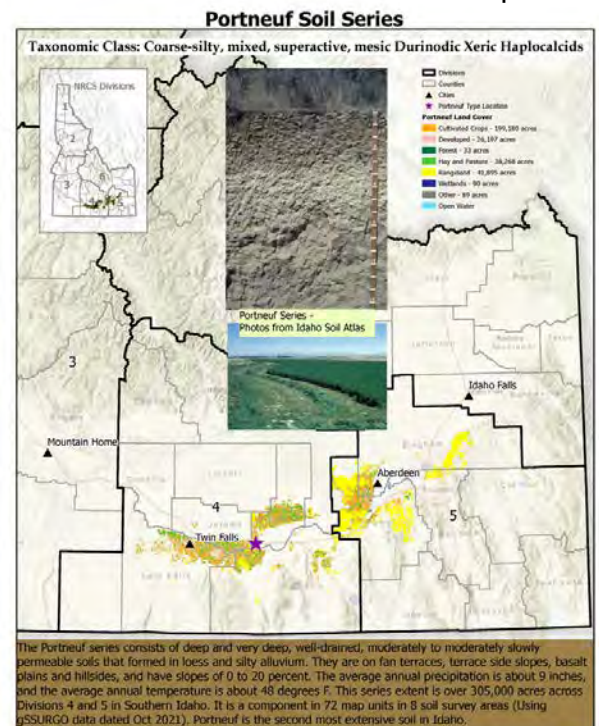
Potato production systems can be especially challenging for implementing soil health practices. This [case study](#) from PNW University Extension combines research with in-field experience of a producer who uses a mustard-arugula cover crop in an intensive potato and wheat rotation. In doing so he has found great success with improving soil health and suppressing soil pest pressure in a way that is economically viable.

- Mustard plants contain compounds that act as a biofumigant for soilborne diseases and nematodes. This producer uses far fewer expensive fumigants to produce his potato crop, even on a 2-year rotation.
- Mustard and arugula cover crops are also ideal for planting late season, growing quickly to outcompete weeds, scavenging soil N, and decomposing rapidly to supply plant-available N for the following cash crop.
- Consistency with soil health practices is important to see benefits from them. This producer saw his soil organic matter percentage double from 0.6% to 1.2% in 13 years, along with benefits such as increased soil water-holding capacity (increased ~30%) and decreased wind erosion of his coarse sandy loam topsoil.
- “Fumigation is not risk free, either”: fumigation may seem like the easier option but is not always effective. This producer feels that the biofumigant approach reduces risk overall while improving soil health and resiliency of the whole system.

More research is being done in Southern Idaho to see how mustard cover cropping works in potato production systems. We look forward to learning more about the application of this practice in Idaho. Do you think you could make this work on your farm?

Get to Know Idaho Soils

Soils underfoot are characterized and classified into named groups called series. [Click](#) to learn more about Idaho’s 2nd most extensive soil by area, the Portneuf series. The full map series (coming soon) of the 10 most extensive Idaho soils was created by Shanna Bernal-Fields (NRCS Resource Soil Scientist).



Portneuf soil series map