KANSAS
Soil Health
ALLIANCE

KSSOILHEALTH.ORG

Improving and protecting Kansas soils through farmer and rancher led education and resources.

Upcoming Events

Kansas Soil Health Alliance Events Calendar

Join us for "The Kansas Soil Health Partnership Forum," a monthly one-hour webinar hosted by the Kansas Soil Health Alliance featuring farmers, ranchers, educators, and ag professionals providing insightful views and sharing personal experiences on how they are working to improve and protect Kansas's soils. It will be held via Zoom on the last Thursday of the month from noon to 1pm. If you are unable to join us live, you can view the recording by visiting the Resources Section of our website.
Follow this link or use the QR code below to register.

Stay tuned for some in-person events we'll be hosting in August. Until then, there are still several learning opportunities taking place in the next few months. Our website's events calendar contains all local and virtual events we find that are talking about soil health. The calendar begins to slow down in the spring, but there are still several great conferences and workshops to help expand your soil health knowledge and grow your peer network. Take time now to review the calendar and plan your next learning experience!

Do you know of an event that isn't on the calendar?
Contact Joanna@KSsoilhealth.org to get it added.

Upcoming Events – Kansas Soil Health Alliance (kssoilhealth.org)

Conservation District Events

Many local conservation districts are planning a variety of events this year. Here are some events that may be in your area:

- Farmer to Farmer Discussions: These are designed to be casual, farmer led discussions about water and soil conservation practices and topics.
- Management Unit events: These are collaborative events discussing soil health topics hosted by several conservation districts working together.
- Local Work Group events: These are used to help county conservation offices learn what issues are important to local residents. The identified topics help to make recommendations to state officials regarding the concerns and priorities at the local level.

Each conservation district's discussion schedule is different. To learn more about your local conservation district's meeting schedule, you can contact the office and/or follow them on Facebook. Unsure which conservation district you are in? Look here: Conservation Districts | Kansas Association of Conservation Districts (kacd.net)

Soil Health Opportunities

Kansas Grazing Exchange

The Kansas Grazing Exchange helps match available forage with livestock producers for mutually beneficial grazing relationships. If you have available grazing or you're looking for grazing, consider posting a listing. It's free and easy to use.

Kansas Grazing Exchange – Kansas Soil Health Alliance (kssoilhealth.org)

"No-Till Farmer" magazine subscription opportunity

The Conservation Ag Foundation, founded in January 2024 is a 501(c)(3) nonprofit focused on equipping farmers with the knowledge and tools to adopt conservation agriculture practices such as no-till, strip-till, and cover cropping. These practices enhance soil health, protect water quality, and ensure the long-term sustainability of agriculture.
As part of this initiative, Kansas Soil Health Alliance has been awarded a scholarship from the Conservation Ag Foundation (CAF) in partnership with "No-Till Farmer," providing our members a FREE 1-year subscription to "No-Till Farmer" magazine. To claim your complimentary 12-issue subscription, please complete this form to confirm your eligibility.

Kansas Water Office Regional Advisory Committees

Fourteen regional planning areas were established by the Kansas Water Authority (KWA) in conjunction with the Long-Term Vision for the Future of Water Supply in Kansas. Regional Advisory Committee (RAC) members were approved for each of these 14 planning areas and began to establish priority goals for their region.
Regional Advisory Committees advise the KWO and KWA on local water-related issues, serve as a link to the public, and serve as a link to water management entities. RAC members serve as the eyes and ears for the KWO and KWA in their local community, as well as ambassadors of public input. Members of RACs serve as a vital voice for their communities.
Currently, there are several vacancies on various RACs located throughout the state. In addition, several terms are ending this year,

so it's a great time to get involved! Even if the board is full, you can submit your application to have on file for when a term ends or if a mid-term position opens.
If you would like to attend an RAC meeting, apply for an RAC position or learn more about each RAC, visit the Kansas Water Office website.

Attention Ag Lenders!

Are you an Ag Lender or do you know an Ag Lender who would like to connect with other Ag Lenders to discuss soil health topics? If so, contact us and we'll help you get in touch with others like you!

FarmTender

This new service helps match farmers using regenerative practices with willing landowners. Go to www.FarmTender.us to learn more. It is free to browse, and, for a nominal annual fee, you can register and read the profiles of landowners and their land parcels, or of regenerative farmers, or post one yourself!

Kansas State University Survey on Cover Crops

K-STATE Research and Extension

CCTA

USDA Natural Resources Conservation Service

Kansas State University, in collaboration with the Colorado Conservation Tillage Association (CCTA) and the Kansas Natural Resource Conservation Service (NRCS) have created a survey evaluating the use of cover crops in the semi-arid Great Plains region. Your insights will help researchers develop innovative projects and publications exploring how cover crops affect soil health and crop productivity.

For questions regarding information in this survey, please feel free to contact Dr. Augustine Obour (KSU Soil Scientist) at 785-625-3425 ext. 215 or abour@ksu.edu and Dr. Logan Simon (KSU Southwest Area Agronomist) at 620-276-8286 or lsimon@ksu.edu.

To complete the survey, click here.

This survey is not associated with the Kansas Soil Health Alliance.

Cornell University Survey on Rye

A team of researchers at Cornell University has created a survey to understand the many ways farmers are growing and using cereal rye, including for grain, forage, and as a cover crop. Their team is also developing new rye varieties and want to understand important breeding priorities for different end uses. Participation is voluntary. At the end of this project, research results will be shared through presentations, published in peer-reviewed publications, and shared with stakeholders via a white paper and farmer/industry publications.
For more information about the research, contact the project leader, Virginia Moore at vm377@cornell.edu.
To complete the survey, click here.
This survey is not associated with the Kansas Soil Health Alliance.

AWQUA: Aquifer Water Quality Assessment for Kansas

The Kansas Geological Survey's (KGS) Aquifer Water Quality Assessment Program is currently seeking wells to participate in its long-term study on groundwater quality and trends across the state. Wells enrolled in the program will be sampled every two years, with laboratory analysis provided at no cost to well owners. Results will be shared directly with participants and made publicly available through a database on the KGS website.

The groundwater analysis includes testing for nitrate, ammonia, chloride, arsenic, uranium, iron, manganese, total organic carbon, bicarbonate and several other parameters. After sampling 150 wells last year, the program is now looking to enroll the final 150 wells for their first sampling this summer.

KGS is particularly interested in adding more irrigation or domestic wells from the High Plains Aquifer in the western third of Kansas, where participation was lower in the initial round. However, wells from any region of the state are welcome to join. The program also

offers one-time sampling for domestic wells not enrolled in the long-term study.

For more information and to complete the sign-up, click here.

Not all registrations will be selected. Inquiries can be directed to Nick Schneider at Nick.Schneider@KU.edu.
This program is not associated with the Kansas Soil Health Alliance.

Featured Stories

Managing Sediment Loss Through Soil Health

What is the difference between soil loss and sediment loss, and how can improved soil health help? Sediment refers to material deposited in waterbodies or on land, often from flooding or receding water. In agronomy and geology, improved soil health is often associated with reduced soil loss caused by wind and water erosion. Soil loss can deplete essential nutrients and organic matter needed for crop production. Sediment also affects water quality and water quantity. Ponds dry up more quickly when they fill from upland erosion or continual disturbance from livestock impacts. Public resources are being used to remove sediment from lakes and reservoirs, much of which results from accelerated erosion on highly disturbed agricultural lands and streambanks. Sedimentation of a waterbody from erosion is a natural occurrence. However, human activities including agricultural practices, have increased its pace. Improving soil health can reduce this by enhancing soil structure, increasing infiltration, protecting soil from rainfall impacts and reducing runoff to slow erosion and sedimentation.

One Montana Farmer's Conservation Solution: Get Back to His Prairie Roots

Prioritizing soil health with cover crops and a diverse crop rotation is allowing Jeff Sather to save on fertilizer, enhance drought resilience and market direct to consumers.

A few years ago, Jeff Sather was dealing with burnout and the routine of doing things how they've always been done.

"Spray this chemical, put on this fertilizer and hope and pray you get a crop," he says.

Sather Farms sits in Larslan, Mont., the far northeast corner of the state. When it comes to the ranching side of his operation, Sather felt like he'd made great progress after taking a course in the art of "ranching for profit." Through that work, his 10,000 acres of pastureland was finally working for him.

What wasn't working for him? The 4,500 acres of crop ground he was farming.

He started looking for a solution. He took online courses and went to the Montana Soil Health Symposium.

"In spring 2020, I heard these guys talking about how biology in the soil works and how they could cut fertilizer and phosphorus use," he says. "That was what I wanted to do, so I went home and told everyone we weren't buying fertilizer that year."

"I knew that was our end goal so I thought we'd might as well go there now."

Partnerships That Unlock Potential

Sather had heard about farmers in his area receiving financial and technical assistance from the USDA NRCS to implement conservation. It seemed like a logical place to start.

Completing conservation enhancements through NRCS's Conservation Steward Program meant he could afford a no-till disk drill to plant seed with minimal soil disturbance.

But the dominos kept falling for Sather. The no-till disk drill could be used with a stripper header that would leave stubble standing after harvest. In Montana, stubble is critical.

"Because we're high and flat with long winters and the wind always blows, anything that'll catch snow is in your benefit," he says.

That's when the biggest domino fell for Sather Farms. In an effort to find financial assistance for that equipment purchase, he connected with Marni Thompson, then a NRCS soil health specialist.

In 2020, Sather Farms enrolled in an Environmental Quality Incentives Program contract aimed at solving their most challenging soil health concerns.

Sather's path to regenerative farming was now in overdrive.

On 600 acres, Sather and Thompson got to work. The partnership put these key soil health practices into place:

- Using a no-till disk drill to limit soil disturbance
- Implementing a diverse rotation with no fallow ground
- Planting diverse, full-season cover crops
- Integrating livestock through grazing cover crops
- Using a stripper header to maximize organic residue
- Testing soils regularly

Betting On Diversity

Of the soil health principles, Sather is putting his chips into diversity. He calls it intensive cropping of his cash crop rotations.

“We were growing yellow peas and spring wheat before and maybe some lentils,” he says. “Now we grow peas, lentils and spring wheat, durum wheat, winter wheat and hull less oats for gluten-free flour.”

Sathers planted some safflower and flax, and he’s looking into adding old-fashioned oats or maybe another crop.

Montana doesn’t have an extra-long growing season, so Sather has started intercropping to stack those crops into the same field in the same year.

He’s grown lentils and flax in the same field, harvested them at the same time and then used a cleaner to separate them. Last year, he intercropped flax and chickpeas.

“We are looking at adding a grass, or some kind of perennial mix in the rotation, so we can plant the grass and keep it in grass for up to six years. Then we would take it back out to farm again as a quicker way to improve soil biology and organic matter,” he explains.

By implementing his rotational matrix, he’s seeing surprising benefits, including an increase in residue material and a decrease in pathogens.

Planting lentils and peas along with flax has allowed Sathers to avoid spraying a fungicide because he’s eliminated the likelihood of blight becoming a problem.

“Peas and lentils are not a high-carbon plant, and their stubble basically disappears before winter even happens,” he says.
“But by adding in flax, when we harvest we leave more residue behind and a higher carbon that will still be there next year.”

Multiple years of experimenting with this mixture is starting to pay off, even with current drought conditions in Montana.
“The cool part about intercropping is it might be flax one year and the next year might be a lentil,” he says. “You end up with two different crops you can market.”

Reaping the Benefits

Thompson had taken some initial soil health tests prior to the pair’s work. Now, every June, she’s back at it, collecting more data to see the benefits of Sather’s intensive soil health focus.

“It’s tough in Montana because the environment is dry and it’s windy, so soil health moves pretty slow,” she says. “But we did see some really cool things happening in comparison between benchmark data and where he’s at now.”

Slake tests show Sather’s soil is staying intact and the water around is remaining clear, signs his soil biology is holding the soil together.

“In a PLFA soil test, we are keying in on the increase of mycorrhizae fungi because that is lacking in our area,” Thompson says. “In his soil test, we are seeing an increase in those, which is huge because they are very susceptible to chemical and physical disturbance.

“We are seeing the increases in mycorrhizae fungi because he is bought in to these practices and incorporating the soil health principles,” she adds.

Agronomic Armor

Coincidentally, Sather says his work with NRCS has coincided with the tap drying up for his region.

“We went into a drought in 2020 and now we are in a long-term drought,” he says.

Sather knows what the data is showing him in terms of the health of his soils, but anecdotally it’s adding up to a protective armor for his crops, which he can see every growing season.

“A couple of the years, the guys who used the heavy fertilizer with their seed, their crops really never even grew, where mine put on with biology and fish hydrolysate came up and look good,” he says. “It still ran out of moisture and wasn’t worth combining, but it looked better than some of the crops across the field or across the fence line.”

That visual confirmation made Sather feel like he’s on the right track.

“Now we’re just hoping, praying one of these days it’s going to start raining again.”

Farming for Profit

Sather feels like he’s on track to reaching a profit-centered approach on his crop acres that is yielding benefits not only for his soil but also for his brand, Prairie Roots, a brainchild of his wife, Marisa, to direct-market their food products.

“I might not have the bumper crop yields everybody else might have in the area, but I’m still making a profit on every acre,” he says.

While Sather is concerned about the health of his soil, interested in preserving a legacy and choosing to grow healthier food products for consumers, he knows none of those interests trump his ability to keep farming.

“Mom and Dad rent me everything they own, so I need to make profit to be able to pay them rent,” he says. “I need to be able to make a profit to afford to stay here.”

If the Sather legacy is going to survive in Montana agriculture, he knows he must make a profit in order to set up his sons for a future on the farm. Along the way, he’s bringing his sons on his regenerative journey, hoping they will learn how to steward the land for the future.

“I’m just working on trying to get my system figured out and learning as much as I can to hopefully continue to improve yields,” he says.

Written by Jamie Sears Rawlings in the AgWeb blog

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