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Changing Farms and Lives with Soil Health School

By Stan Wise

t's hard to know which events will change the course of a person's life. For Austin Carlson, one of those events was Soil Health School.

In 2018, a neighbor invited him and his father to attend the 3-day School. Now, he's a soil health technician with the South Dakota Soil Health Coalition and helping to plan this year's Soil Health School, Aug. 25-27, in Mitchell,

"Soil Health School was a lot of fun," Carlson said. "We were completely impressed just by how welcoming and how open the producers who were there presenting and also attending as students – just how open everybody



Participants at the 2020 Soil Health School learn how to conduct a slump test to gauge soil structure. SD Soil Health Coalition photo.

was on sharing their story on how they were implementing the soil health principles, some of the challenges they've had and some of the successes they've had. It just was very helpful for us to figure out how we were going to start implementing these practices moving forward."

What Carlson and his father learned there changed their operation.

"Before we attended School, our system looked like corn, soybeans, alfalfa, and we raised cattle, and we always did tillage before we planted the corn," Carlson said. "We went home, and we knew we wanted to implement these practices. We transitioned to 99 percent no-till. We also implemented small grains in our crop rotation. With the addition of the small grains, we always follow with a diverse cover crop. So, we've extended a lot of grazing in the fall and the winter, and even in the spring, we've put cattle out on those cover crop acres.'

When a job opportunity presented itself at the South Dakota Soil Health Coalition, Carlson knew what he wanted to do, and he hasn't looked back. Now he works to help other producers learn how to improve their soil.

"Soil health is important because that's where all our food, fuel and fiber really come from," he said. "So without soil, without growing plants, we will not survive. We need to maintain the resource and improve

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Let your experience help shape future conservation opportunities!

fyou are a landowner, take this survey to help the team at the Central Grasslands Roadmap understand the kind of conservation opportunities ranchers and landowners really need. Taking the survey enters you to win a \$100 gift card, but it must be completed by Aug. 6 to be eligible.

www.surveymonkey.com/r/roadmapworkinglands

School — Continued from page 1



South Dakota Soil Health Coalition Board Vice Chairman Shawn Freeland and SDSHC Soil Health Technician Austin Carlson display the results of a "soil your undies" test at the 2020 Soil Health School near Mitchell, SD. SD Soil Health Coalition photo.

A win-win

The desire to spread that message is what led the Soil Health Coalition to organize the first Soil Health School in 2015. Dan Forgey, SDSHC Board member and longtime agronomy manager at Cronin Farms near Gettysburg, SD, said that the Coalition wanted to offer more hands-on instruction with producers in the state.

"If you can show a few how to do the right things, and then they go home, and then their neighbors seem to catch on," Forgey said. "So, I think the School is a tremendous win-win for everybody. It's really helped."

Forgey said that participants have enjoyed their time at the School.

"The neatest part of it is when you get a chance to talk to participants at the School during off-times, like during lunch or whatever, and how excited everybody is," he said. "Everybody I've talked to thought this was a very positive School, and every year it gets better."

SDSHC partners with other organizations to make the School a success.

"Natural Resources Conservation Service has been a big help. South Dakota State University Extension, the South Dakota Grassland Coalition—it's just a team effort," Forgey said.

Packed with information

NRCS State Soil Scientist Nathan Jones said that Soil Health School is important because it teaches participants how to apply the soil health principles on their own operations.

"We have five soil health principles, but understanding how to apply those principles to your unique situation is one of the things that can come from Soil Health School," Jones said.

Participants can expect to receive in-depth knowledge on a variety soil health topics.

"You can learn the importance of aggregation. You can learn the importance of rotation. You learn the importance of cover crops," Forgey said. "The water holding capacity of the soil. The soil structure. The value of leaving some soil armor, leaving some residue. The importance of the carbon-nitrogen ratio in your cover crop mix. And you can just go on and on and on. It's eye-opening. Every time I go there, I learn something."

The School is taught by professional soil health experts and pro-

ducers who are experienced in applying soil health principles. About half the School is spent in classroom instruction, and the other half is devoted to field exercises and plot tours. Participants will learn how to perform soil health field tests, how to calculate available forage in a cover crop, and the details of manure application. There will be plots to demonstrate the effects of residual herbicides on cover crops, plots of corn and sunflowers interseeded with cover crops, a grazing plot, an oats and clover plot, and various plots of warm and cool season cover crops.

"Dr. Lee Briese will be coming out of North Dakota, and he's a wealth of knowledge," Forgey said. "Dr. Dwayne Beck is going to talk on diversity in cropping rotations. Dr. Don Reicosky is going to talk about carbon. I get excited just talking about this School right now."

The classroom sessions will be held at the Ramada by Wyndham Mitchell Hotel and Conference Center, and the field sessions will be hosted by nearby Stehly Farm, operated by brothers Gene and Craig Stehly.

Jones said the information presented will be useful to participants regardless of where they live in the state.

"We have presenters and Soil Health Coalition members from all over the state of South Dakota," he said. "Just because you live West River doesn't mean you're not going to find something useful from someone who has been practicing soil health principles on the east side of the state."

Carlson stressed that an important part of the School is the willingness of instructors and other participants to answer questions. "A lot of the presenters and producers who speak at the event are more than willing to share how they implement some of these practices," Carlson said. "So, the students can ask specific questions. 'So how did you start doing the no-till corn? What is your fertilizer situation?' We have a whole network of people from different areas, different geographic locations in the state of South Dakota people can connect with and figure out how to implement these practices on their own operation."

"I don't know any other way where you can get that much information packed into two and a half days," Forgey said.

To learn more about the 2021 Soil Health School and register, visit www.sdsoilhealthcoalition.org/event-calendar/soil-health-school, email sdsoilhealth@gmail.com or call 605-280-4190. Space is limited, and participants are encouraged to register early.



Natural Resources Conservation Service State Soil Scientist Nathan Jones explains the importance of soil structure at the 2020 Soil Health School near Mitchell, SD. SD Soil Health Coalition photo.

Membership Minute "Conversation with Larry Wagner"

 $\textbf{Larry Wagner} - \textbf{wagner land \& livestock} \quad \textbf{irish black cattle, chamberlain, sd}$



Photo credit Barret Self

What are your long term goals?

Without good soil you can't grow any kind of crop either grass or row crop. My long term goal is to keep increasing my organic matter so I can increase my infiltration rate. I think we have less rain events but when we have one we get larger amounts so we have to be able to infiltrate it into the soil.

Describe your best day on your ranch?

Everyday I'm so lucky to live this life style.... there are so many things to appreciate! All one has to do is take a few minutes to enjoy it.

A director of SD Grassland Coalition and a life-time member of SD Soil Health Coalition Larry raises grass fed beef. Wagner Land and Livestock, a central South Dakota cow-calf operation utilizes rotational grazing with above ground pipe and electric fence. Special thank you to Larry for sharing his membership minute.

Join Spink County Bus Tour of Menoken Farm and Deep Root Ranch

South Dakota Health Coalition and Spink County Conservation District will host a bus tour Aug. 3-4 to tour Menoken Farm near Bismarck, ND, and SDSHC Founding Board Member Doug Sieck's Deep Root Ranch near Selby, SD. Participants will hear lead educator Jay Fuhrer speak at Menoken Farm and will see 60-inch corn, soybeans planted into rye, full season cover crops, grazing cover crops, rotational grazing, compost and "worm juice," wind breaks, and a garden and greenhouse tour. On the second day of the tour, participants will stop at Deep Root Ranch, featuring intensively manage rotational grazing, grazing of full and partial season cover crops, no-till practices, livestock integration on cropland, and a diverse crop rotation.

The tour is free for current SD Soil Health Coalition members and \$25 for non-members. The registration fee includes a 2021 SDSHC membership, travel, and two lunches.

The bus tour departs at 8 a.m. on Aug. 3 from the 4-H Grounds on the south side Jay Fuhrer of Redfield, SD, and returns at 3 p.m. on Aug. 4. Participants will be responsible for their evening meal on Aug. 3 and their hotel room. A block of hotel rooms have been reserved for the tour in Bismarck, ND.

To register for the tour, visit https://tinyurl.com/MenokenTour2021.

Jay Fuhrer will also speak at the 2022 Soil Health Conference, Jan. 18-19. To learn more about the conference, visit www.sdsoilhealthcoalition.org/soil-health-conference/.

In what ways have you worked to improve your soil health and for how long?

For the last 15+ years I have been increasing my dung beetle population while using my grass to increase organic matter in the soil.



Upcoming Soil Health Events

August 3-4

Spink County Bus Tour of Menoken Farm and Deep Root Ranch Bismarck, ND and Selby, SD

August 10

Pasture Walk Cooper Gordon Ranch Tulare, SD

August 12

SDSHC Board Meeting

August 12

Pasture Walk Pat Guptill Ranch Wall, SD

August 14

Youth Soil Health and Management Day Nisland, SD

August 17

Pasture Walk
Duggan Bad Warrior
Ranch
Dupree, SD

August 25-27

2021 Soil Health School Mitchell, SD

September 14-16

South Dakota Grazing School Chamberlain, SD

January 18-19, 2022

Soil Health Conference Aberdeen, SD

Access Our E vents Calendar <u>HERE</u>.

Neuharths Receive 2021 SD Leopold Conservation Award

evi and Crystal Neuharth received the 2021 South Dakota Leopold Conservation Award on June 30th.

Dwayne and Ruth Beck gave an excellent presentation on the importance of conservation and soil health, and Johnathon Neuharth gave a presentation on the importance of good grassland management.

Lunch and a tour of the Neuharth operation followed the award presentation. The tour highlighted the Neuharth's diverse crops, pastures, and livestock, as well as the 17 miles of trees planted by Levi's father, David Neuharth.

Congratulations to the Neuharth Family for their outstanding conservation efforts!









2021 Johnson Farms Field Day - July 7

rian and Jamie Johnson hosted a tour of their operation near Frankfort, SD, on July 7. A large turnout showed up to see how the Johnsons manage their land with no-till practices, use cover crops, use rotational grazing, incorporate livestock on cropland, interseed crops, restore tree lines, and protect waterways from runoff to improve their soil and increase their profitability.













What to do with Saline/Sodic Soils?

o you have unproductive areas in your field with high soil salinity? Do you keep fertilizing them and planting them only to watch your crops wither and die there? Want options on how to heal these areas and how to get help to do so!

Contact your local conservation office or SD Soil Health Coalition . A variety of available programs exist aiding in the expenses to heal the affected area.





Don Nickelson placed hay bales in one saline area of his operation last fall. This summer there are growing plants and living roots seeded by his cattle. Photos courtesy of Don Nickelson and SDSHC.

Finding a creative solution similar to the bale grazing option or seeding salt tolerant plants provides an economic, soil and environmental benefit.

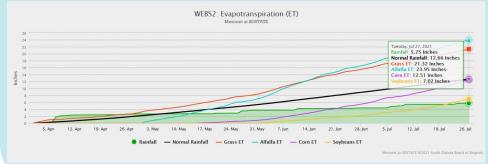
What makes sense on your operation?

As with human health, we have the ability to diagnose problems through observations and testing. There are often multiple ways and combinations to reach the same goal, depending on your personal preferences and circumstances.

Sign up for rain showers?

Oh if only an ease of a sign up right? As the summer persists to heat up and prayers continue to be lifted up, small grain harvest winds down. Now what? To plant or not to plant cover crops? As with all decisions weighing the benefits and the consequences, reading and knowing your moisture in your soil profile becomes key. Cover crops can help increase soil moisture increasing water infiltration rates through a protective mulch layer, slowing rain drop impact and allowing the water to follow root channels down into the





soil. With the list of benefits the consequences could be devastating with no precise goals and plans. Cost share maybe available for cover crop seeding.

Mesonet, DTN or other data resources provide valuable information aiding in evaluating options.

Knowledge is valuable!

Contact SDSHC with questions.

Mesonet website:

https://climate.sdstate.edu



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South Dakota Grazing Exchange

s the growing season progresses and much of South Dakota remains in drought, many producers need access to more forage. You can help them out! List any cover crops, crop residue, pastures, or rangeland you will have available for grazing this year on the South Dakota Grazing Exchange. The private grazing agreement you form will benefit your land, and you could be the reason a livestock producer is able to survive this dry year.

Check out www.sdgrazingexchange.com.



2021 Soil Health School Sign up Today

tinyurl.com/2021SoilSchool